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EXECUTIVE SUMMARY

This report documents progress against Summit County Council’s Strategic Effect # 3, Environmental Stewardship and the progress made toward sustainability-related goals.

Summit County Council has embraced environmental stewardship as a guiding principal since 2009. More recently, Council recognized that aggressive action is needed to combat the impacts of climate change already being experienced in Summit County. To that end, Environmental Stewardship was elevated to one of the Council’s top 5 strategic objectives.

Leading the nation as the third county in the country to adopt aggressive greenhouse gas emissions reduction and net 100% renewable energy goals, Summit County participated in developing and passing state legislation that enables a pathway for Utah communities with similar goals to achieve them.

Specifically, Council adopted Resolution 2017-16 that established hard-hitting new sustainability and climate action goals that address two distinct areas—county government operations that are within Council’s control, and county wide goals, that County can influence:

<table>
<thead>
<tr>
<th>GOVERNMENT OPERATIONS GOALS</th>
<th>COUNTY WIDE GOALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce greenhouse gas emissions 80% below 2016 level by 2040.</td>
<td>Implement strategies to reduce GHG emissions 80% below 2014 level by 2050.</td>
</tr>
<tr>
<td>Transition to net 100% renewable energy by 2030 (50% by 2025)</td>
<td>Make net 100% renewable electrical energy obtainable, and widely adopted by residents and businesses by 2030.</td>
</tr>
<tr>
<td>Convert 50% of county fleet to hybrid, electric, and alternative fuels by 2022.</td>
<td>Implement transit and transportation alternatives that reduce transportation sector emissions.</td>
</tr>
<tr>
<td>Provide electric vehicle charging infrastructure at County facilities to charge electric fleet vehicles.</td>
<td>Pursue strategies and policies to increase energy efficiency in the public and private sectors.</td>
</tr>
<tr>
<td>Increase energy efficiency of county buildings as preferred method to reduce GHG emissions</td>
<td>Collaborate with RMP to find pathway to renewable electrical energy for residents and businesses by 2030.</td>
</tr>
<tr>
<td>Collaborate with RMP to accelerate transition of renewable electrical energy supplied for Summit County operations by 2030.</td>
<td></td>
</tr>
</tbody>
</table>
Achievements toward Council’s goals—in both government operations and county wide—are highlighted in this Executive Summary. The Annual Sustainability Report provides detailed analysis to substantiate the progress across all of the sustainability and climate action goals.

**ACHIEVEMENTS TOWARD COUNTY OPERATIONS GOALS**

**CO2e Emissions Reduction of County Operations**
- Net annual GHG emissions are **24% below 2010 Business-As-Usual.**
- **Total annual emissions, excluding solid waste, are down about 10% from 2010.**
- **Increase in total emissions (including Solid Waste) from 2016 to 2018 was held to 10%** despite the increase of square footage of county facilities (47,100 sq ft) and the introduction of all-electric transit buses.
- **Emissions from the vehicle fleet decreased 6% from 2016,** likely due to replacement with more fuel efficient vehicles.

**Transition to Net 100% Renewable Electrical Energy for County Operation**
- Executed a Renewable Energy Services Agreement to purchase near net 100% renewable electrical energy for County and Service Districts’ operations in 2023, seven (7) years ahead of the 2030 target date.
- Solar PV installations on Richins and Kamas Services building have increased the percentage of renewable energy to 23% of annual total electricity usage.

**Convert County Fleet**
- County fleet includes 7 CNG bi-fuel CNG pick-up trucks; 1 dedicated CNG sedan, 2 plug-in electric vehicles, and 7 hybrid vehicles.
- **Fuel economy increased** from 12.3 MPG in 2010 to 13.1 in 2018.

**Provide Electric Vehicles/Charging Stations for County Fleet**
- Installed two (2) Level II and one (1) DC Fast chargers at the court house in Coalville – funded by grant from Rocky Mountain Power.
- Installed two (2) Level II charging stations at the Kamas Services Buildings
- Installed two (2) Level II charging stations at Health Dept in Park City

**Improve Energy Efficiency of County Buildings**
- Upgraded to LED lights in Sheldon Richins building.

**Collaboration with Rocky Mountain Power**
- Extensive negotiations resulted in Renewable Energy Service Agreement to to purchase net 100% renewable electrical energy for Counties and dependent Special Service Districts’ operations.
NOTABLE CHANGES TO SUSTAINABILITY OFFICE

Darcy Glenn, Energy and Data Analyst joined the Sustainability Department in September 2019. Her skills in data analysis were immediately invaluable to:

- Modeling and projecting multiple cost scenarios of the county’s Renewable Energy Services Agreement with Rocky Mountain Power to purchase net 100% renewable energy for County operations and each dependent district.
- Assessed available fleet vehicle records and determined ideal approach to conduct fleet optimization study is to utilize telematics.
- Identified weaknesses in data sets and began process improvements to remedy.

As a result of filling the position late in the year, the following projects/initiatives were delayed until 2020 and will be re-prioritized into an updated Sustainability Plan:

- Fleet Utilization Study, including use of employees’ vehicles to conduct county business.
- Possible enhancements to integrate fuel providers’ transactions with various county vehicles on the asset lists.
- Climate Action Plan update to devise implementation strategies to achieve County’s new, aggressive countywide emissions reduction goal.
- Research and implementation of incentives to encourage high efficiency construction of new development in the county.
- Development of an Employee Education and Outreach Plan to help change the energy and commuting behaviors of County employees at work and at home.
In addition to the projects/initiatives not completed, numerous opportunities exist to expand Summit County’s sustainability actions and demonstrate leadership within the two target areas: government operations and county wide.

### OPPORTUNITIES IN GOVERNMENT OPERATIONS

#### CO2e Emissions Reduction
- Direct resources toward sectors of increasing emissions:
  - Solid waste – increase diversion
  - Natural gas – reduce usage
  - Employee Commute – propose alternatives

#### Renewable energy
- Install solar PV on Public Works
- Research renewable natural gas alternatives
- Evaluate feasibility of waste to energy facility

#### County Fleet
- Reconfigure fleet per results of Fleet Utilization Study
- Evaluate use of employees’ vehicles for county business
- Lease CNG refueling equipment

#### Electric Vehicles/Charging
- Obtain funding to purchase more EVs
- Secure funding and expand EV charging stations for fleet

#### Energy Efficiency
- Utilize Energy and Data Analyst to:
  - Evaluate energy consumption
  - Prioritize energy efficiency measures (EEM)
  - Secure funding to implement EEMs

### COUNTY WIDE OPPORTUNITIES

#### CO2 Emissions Reduction
- Engage partners in climate action to achieve new Council goal of 80% below 2014 by 2050
- Develop climate adaptation strategies to address changing conditions
- Increase awareness of adverse effects of human caused GHG emissions & air pollution
- Mentor PCCAPS, Earth Club students

#### Renewable Energy
- Lead participation in Community Renewable Energy program
- Participate in Fuels Reduction Advisory Group to help reduce wildfire severity and evaluate biofuels production

#### Transportation Sector CO2e Emissions Reduction
- Collaborate with local businesses to expand EV charging station network
- Secure funding to install EV charging stations at park and ride lots
- Develop and administer Idle Free education and outreach campaign

#### Energy Efficiency
- Reevaluate feasibility of Residential Energy Efficiency Loan Program
- Support Planning Department’s Development Code update to incorporate high energy performance incentives
- Expand implementation of wattSmart Community Plan
The risks to achieving the Council’s climate and emissions reduction goals are noted below.

### RISKS TO ACHIEVING
**GOVERNMENT OPERATIONS GOALS**
- Staffing
- Funding
- Other county priorities
- Over reliance on partners

### RISK TO ACHIEVING
**COUNTY WIDE GOALS**
- Resources to implement programs
- Voluntary municipal, business and resident engagement
- Private sector investment
- Partners’ ability to leverage county resources

For a comprehensive report of the sustainability accomplishments and full analysis of the information summarized above, the complete 2018-2019 Sustainability Report is provided on the following pages.

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Environmental stewardship is synonymous with Summit County Sustainability. All of Sustainability’s notable achievements cover a wide range of activities that support Summit County Council objectives and result in long-lasting positive social, economic and environmental impacts.

Measurement and verification of progress toward achievement of Council’s Environmental Stewardship and sustainability-related goals is extensive and costly. It is critical to continue to identify and report progress toward the goals that can be controlled and counted by County versus those that are beyond the County’s direct control. That distinction is highlighted in the executive summary and carried throughout this report.

Specifically, this report will:

1. Substantiate the achievements highlighted in the Executive Summary (page 2).
2. Describe Sustainability staff’s action toward achievement of Council’s Strategic Effect #3—Environmental Stewardship (page 8).
   - Reduce CO2e emissions from county operations (page 9).
   - Countywide CO2e emissions reduction (page 23).
   - Transition to net 100% renewable energy for government operations (page 25).
   - Make renewable electrical energy available countywide (page 26).
   - Convert 50% of Summit County passenger fleet vehicles to alternative fuel, hybrid, and electric vehicles by 2022 (page 29).
   - Provide electric vehicle recharging infrastructure necessary to charge electric fleet vehicles (page 30).
   - Implement strategies to increase energy efficiency of county operations (page 30).
   - Implement strategies and policies to increase energy efficiency countywide (page 31).
   - Collaborate with Rocky Mountain Power to accelerate the transition to renewable sources and minimize dependence on carbon-based fuels (page 34).
   - Collaborate with the Utah Legislature to facilitate progress on the energy initiatives (page X).
4. Provide recommendations to be considered by Council (page 36).

ENVIRONMENTAL STEWARDSHIP

Environmental Stewardship is Summit County Council’s Strategic Effect #3 - Through environmental stewardship and leadership, the County will implement plans and policies to secure, preserve, and protect our water, land, and air quality for the present and future.

Summit County staff worked interdepartmentally to define departmental responsibilities, specific objectives and metrics to measure progress Council’s toward Environmental. Although a lens of sustainability informs all county decisions and services provided by balancing resources with
environmental impacts and taxpayers desires, Sustainability staff leads Summit County’s pursuit of environmental stewardship as conveyed in this report.

**CO2E EMISSIONS INVENTORY OF GOVERNMENT OPERATIONS**

The annual greenhouse gas emissions inventory remains a key tool for setting goals and measuring progress toward emissions reduction from county facilities and operations. The indicators generated during the annual emissions inventory update are provided to guide decision-making in support of emissions reduction projects that further Council’s environmental stewardship objectives.

Resolution 2017-16 passed in October 2017 established the goal to decrease greenhouse gas emissions of county government operations 80% below 2016 level by 2040. Quantification of this formulae goal provides a fixed target:

*Summit County will reduce CO2e emissions from 16,391 MT in 2016 to 3,278 MT by 2040.*

The fixed target allows Summit County to measure the results of concrete actions taken to decrease the consumption and combustion of fossil fuels that erode natural resources and when combusted, contribute to harmful health impacts and global temperature increase.

To measure progress toward achievement of that goal, and to prioritize resources, annual assessment and management of the county’s greenhouse gas emissions as measured through its Carbon Dioxide Equivalent (CO2e) continues. Data is collected and reported through ClearPath™, an online software platform for completing greenhouse gas inventories, forecasts, and monitoring at the government operations scale.

**Understanding the Greenhouse Gas Inventory**

Summit County’s official GHG inventory uses the Intergovernmental Panel on Climate Change (IPCC) 2nd Assessment values for its Global Warming Potential. Each specific greenhouse gas (GHG) exhibits a unique Global Warming Potential (GWP) that is measured as one unit (a Metric Ton or MT), over a defined time horizon (usually 100 years).

The term “Carbon Dioxide Equivalent (CO2e)” is the universal reporting standard to quantify the varying impacts of the “radiative forcing” of different greenhouse gases (GHG) in relation to climate change. CO2e is the standard unit used to compare and to quantify the various human and natural drivers of climate change.

For consistency throughout this report, the designation of CO2e will be used to refer to carbon dioxide equivalent and GHG emissions, interchangeably.

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1. Global Warming Potential (GWP) refers to the total contribution to global warming over a certain time horizon resulting from the emission of one unit of gas relative to one unit of carbon dioxide.
2. Radiative Forcing (RF) is a concept used for quantitative comparisons of climate change impact between different greenhouse gases. Positive RFs lead to a global mean surface warming and negative RFs to a global mean surface cooling; the greater the radiative forcing, the more potent the greenhouse gas, with respect to its impact on surface warming.
EMISSIONS SUMMARY

Historical Goals:
In 2010, Summit County’s original Greenhouse Gas Emissions Goal for county operations was to reduce emissions 13% below Business-As-Usual (BAU). A Business-As-Usual baseline case, as defined by the IPCC, is the level of emissions that would result if future development trends follow those of the past and no changes (reduction measures) take place. Until recently, Summit County used 2010 as its baseline year. Although no longer used as a reference point, this report often includes 2010 data for the purpose of illustrating changes over time.

2018 Emissions Results:
- There was a **10% increase in total emissions from 2016 to 2018** (shown in Table 1.0) primarily due to the addition of all electric transit buses and increased amount of solid waste.
- Net annual Greenhouse gas emissions remained well below Business-As-Usual, at 8,000 MT CO2e or **24% below BAU** (excluding solid waste, as historically reported).
- The **increase in emissions is expected to be reversed in 2023** when near net 100% renewable electrical energy displaces the standard-utility electricity currently used to charge all-electric bus batteries.

Table 1.0 – Total County Government Operations CO2e Emissions by Sector 2016-2018

<table>
<thead>
<tr>
<th>EMISSIONS BY SECTOR (MT CO2e)</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2018 vs. 2016 Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streetlights &amp; Traffic Signals (Electricity)</td>
<td>63*</td>
<td>75</td>
<td>68</td>
<td>7%</td>
</tr>
<tr>
<td>Vehicle Fleet</td>
<td>2,032</td>
<td>1,965</td>
<td>1,920</td>
<td>6%</td>
</tr>
<tr>
<td>Transit Fleet</td>
<td>908</td>
<td>1,465**</td>
<td>1,575</td>
<td>73%</td>
</tr>
<tr>
<td>Employee Commute</td>
<td>1,010</td>
<td>1,025</td>
<td>1,048</td>
<td>4%</td>
</tr>
<tr>
<td>Total Emissions (without Solid Waste)</td>
<td>7,297*</td>
<td>7,801</td>
<td>8,000</td>
<td>10%</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>9,131</td>
<td>9,608</td>
<td>10,025</td>
<td>10%</td>
</tr>
<tr>
<td>Total Emissions (MT CO2e)</td>
<td>16,428*</td>
<td>17,409</td>
<td>18,025</td>
<td>10%</td>
</tr>
</tbody>
</table>

*2016 Streetlights & Traffic Signals emissions was corrected in 2018 (from 57 to 63) which increased Total Emissions slightly.
**Beginning in 2017, the addition of six (6) all-electric transit buses to the Transit Fleet significantly increased Transit Fleet emissions associated with increased electricity consumption. The sharp increase was expected and will decrease in 2023 when Summit County transitions to net 100% renewable energy.

The ability to achieve 80% below 2016 level emissions reduction by 2040 will be dependent on significant financial investment in further emissions reduction projects and programs.
**TOTAL EMISSIONS OVER TIME**

Until 2016, an old reporting tool was used to quantify Summit County’s greenhouse gas emissions without the land fill emissions (illustrated in blue on the graph in Figure 1.0). In 2016, the blue trend line ends and a green trend line begins showing the difference in results of implementing ClearPath, a new, more reliable industry-standard emissions quantification tool. As shown in Figure 1.0, the difference between the emissions total of each tool is approximately 660 MTCO2 making direct comparison between the two tools difficult.

**Figure 1.0: Emissions Trajectory of County Facilities and Operations (excluding Solid Waste)**

What is apparent is the county’s action toward emissions reduction over time. It is clear that without Council’s appropriation of resources toward emissions reduction (illustrated in red as Business as Usual), Summit County’s carbon footprint would be increasing more dramatically as shown in Figure 1.0.

**CHANGE IN EMISSIONS BY SECTOR**

Taken together total emissions were up 10% in 2018 over 2016. It is important is to understand how each sector contributes to the total emissions inventory so that resources can be allocated to the most critical need. Figure 2.0 and 3.0 are provided to show the contributions to the carbon footprint increase.

Buildings and Facilities’ total electricity and natural gas emissions increased 3% between 2016 and 2018; emissions from electricity alone decreased 1% during this period, while natural gas emissions rose about 13%. Emissions from the Transit Fleet increased about 73% and employee commute was up 4%. Emissions from Solid Waste increased 10% due to a cumulative affect of emissions caused by biodegradation over time.
Figure 2.0 Contributions to ClearPath Emissions Increase (2016-2018)

![Contributions to ClearPath Emissions Increase (2016-2018)](image)

Figure 3.0 Changes in Emissions 2016 – 2018

![Changes In Emissions 2016 - 2018](image)
Further complicating direct comparison of emission totals year-over-year are several factors that influence annual emission totals in any given year. These “independent variables”, most of which are beyond control, impact (favorably or unfavorably) total emissions. Some of the independent variables include:

(1) **The amount of data** (meters, vehicles, etc.) included increases each year exceeds due to the addition of building meters (gas and electricity) that had not previously been included in data sets provided by utility companies, addition of fleet vehicles, the expansion of services demanded by residents and the number of employees and facilities required to deliver services.

(2) **Collecting data sourced from multiple vendors and records** with varying formats and sometimes erroneous and incomplete information.

(3) **Weather Variations** show a correlation with emissions during periods of temperature extremes when additional cooling and heating of facilities and indoor spaces is required. The amount of snowfall can also impact energy usage and resulting emissions that correlate to the amount of snow available to create a blanket of insulation on roofs.

(4) **Building Occupancy and hours of operation** correlate with energy usage and emission trends. Anecdotally, after hours’ usage of County buildings has continued to rise, most notably since completion of the new Ledges Event Center, although specific data regarding occupancy and season of use is not readily available for analysis.

(5) **New County Buildings** added 47,100 square feet to bring the total of county-owned and operated facilities to nearly 300,000 square feet that require energy to pump water, heat, cool, and light:
- The new Kamas Library/Services Building (18,000 sq. ft) opened for business in April 2018.
- The Ledges Event Center (11,600 sq. ft.) and new Barn/Livestock Buildings (3 barn areas of 17,500 sq. ft.) opened in August 2018.

It is recognized that the addition of new data makes direct year-over-year comparison less accurate. However, a higher value is placed on continually improving accuracy and reporting emission totals than being able to make year-over-year comparisons. Most important is the ability to monitor results and report progress toward Council goals that continues with greater accuracy each year.

**EMISSIONS BY SECTOR**

The primary sources of County emissions are from the use of electricity and natural gas in County Buildings and Facilities; fuel consumed by on and off-road vehicles in the County fleet, public transit, and employee commuting to and from work; and solid waste (Figure 4.0). A detailed analysis of each emissions sector follows.
BUILDINGS & FACILITIES

**Emissions for buildings and facilities increased 3%**. Quantification of Buildings and Facilities emissions includes both emissions from electricity and natural gas (Figure 5.0). However, natural gas consumed by natural gas vehicles in the county fleet is included in the data. At this time, staff is unable to measure and reliably distinguish between the two natural gas uses. Regardless, natural gas emissions have been consistently quantified and presented this way.

**Figure 5.0 – Building & Facilities Emissions 2016-2018**
Electricity Emissions of Major Buildings

When isolating Major Buildings, there was a 21% reduction in electricity emissions between 2010 and 2018 (see Figure 6.0). This reduction is likely the direct result of investments made in LED retrofits and solar photovoltaic systems installed to reduce the amount of utility-provided electricity purchased. It should also be noted that the 2010 total Emissions of Major Buildings was likely higher than previously reported due to the omission of utility data that, if included, would show a greater emissions reduction percentage.

Figure 6.0 – ELECTRICITY EMISSIONS of MAJOR BUILDINGS

Figure 7.0 is provided to show the change in distribution of emissions of Major Buildings and Facilities as a result of investment in energy efficiency measures and focused on electricity reduction, such as LED retrofits and the use of renewable energy to displace the high-emissions of utility-provided electricity.

Figure 7.0 Distribution of Major Buildings and Facilities Emissions (2010 to 2018)
Natural Gas Emissions of County Operations

Natural gas is used in the County’s operations primarily for space and water heating. A small amount is used to fuel natural gas vehicles. Since 2016, natural gas emissions increased 13% (See Figure 8.0).

However, it must be noted that several meters were discovered and added in 2018 that had not been previously included in utility data. In addition, 47,100 square feet of building space was added to county facilities to also contributed to the increase in natural gas emissions.

**Figure 8.0 Natural Gas Emissions**

![Natural Gas Emissions Chart]

**Action Going Forward**

Additional resources will be needed to address increasing natural gas emissions, investigation into the feasibility, available equipment and technologies and the cost of retrofitting buildings to a form of renewable energy to displace natural gas as the primary heating fuel.

**STREETLIGHTS AND TRAFFIC SIGNALS**

Electricity consumption by county streetlights and traffic signals is tracked separately from Major Buildings and Facilities. See Figure 9.0 for total Streetlight and Traffic Signals Emissions over time.

**Figure 9.0 Total Streetlights and Traffic Signals Emissions**

![Streetlights and Traffic Signals Emissions Chart]
VEHICLE FLEET

There was a 6% reduction in fleet emissions from 2018 to 2016 as shown in Figure 10.0. The emissions reduction corresponds to a 5% decrease (10,430 gallons) of fuel consumption. However, the 2018 assessment of fuel economy and emissions is not completely reliable due to an increased incidence of incorrect mileage entry by employees when fueling vehicles.

Figure 10.0 Vehicle Fleet Emissions (2016-2018)

Data-related issues:
- Erroneous odometer readings continue to make the quantification of annual vehicle miles travelled difficult and unreliable. However, careful analysis and assumptions are used to rectify human error.
- Complete quantification of CNG consumption is not possible at this time due to incomplete records from fuel card vendors.
- Currently, emissions associated with electricity consumed by electric vehicles is quantified in the County Buildings and Facilities sector as electricity supplied to electric vehicle charging stations is measured and billed to the County building meters and not reflected as vehicle fleet emissions.

Action going forward
- Effective January 2020, actual odometer readings every county fleet vehicle will be physically recorded to obtain accurate total miles traveled annually, eliminating reliance on employees.
- The use of telematics will be piloted in 2020 to conduct the initial phase of a Fleet Utilization Study. Telematics technology provides detailed, accurate fuel consumption, mileage and trip data for the purpose of optimizing vehicle usage, reducing fleet operating costs and decreasing county fleet emissions.
• The Energy and Data Analyst will be monitoring EV electricity usage, vehicle mileage using telematics and fuel records better to understand the short-term and long-term impacts of switching from gasoline and diesel to alternative fuels, hybrids and electric vehicles.

**TRANSIT FLEET**

Summit County reports only transit miles driven within its jurisdiction, and not inside Park City limits, to avoid double counting emissions. With the addition of all-electric transit buses in 2017, Transit Fleet Emissions include those from diesel/biodiesel fuels as well as electricity, as shown in Figure 11.0

**Figure 11.0 Total Transit Fleet Emissions**

![Transit Fleet Emissions Chart]

**Diesel Bus Emissions**

2018 Diesel Bus Emissions compared to 2016 resulted in a 13% increase at 1,026 MT CO2e (compared to a 26% increase in 2017). The increase in emissions is due to the corresponding increase in total miles and fuel consumption associated with expanded transit service in 2017 and 2018 (Table 2.0). Due to the retirement of older buses, the diesel buses are more efficient in 2018, yielding higher MPG than in previous years.

**Table 2.0 – 2016-2018 Transit – Diesel Bus Summary**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Miles</strong></td>
<td>429,090</td>
<td>574,646</td>
<td>564,325</td>
</tr>
<tr>
<td><strong>Total Fuel Gallons</strong></td>
<td>99,821</td>
<td>125,351</td>
<td>112,836</td>
</tr>
<tr>
<td><strong>MPG</strong></td>
<td>4.3</td>
<td>4.6</td>
<td>5</td>
</tr>
</tbody>
</table>

**Electric Bus Emissions**

Six (6) electric buses were deployed in June 2017 and two (2) in 2018. Total Transit Fleet Emissions are expected to increase proportionate to transit bus miles increase as more electric buses are deployed in the future. (See Table 3.0 for an Electric Bus Summary.) However, Electric Fleet Bus Emissions missions will essentially be eliminated when the transition to net 100% renewable electricity is complete.
Table 3.0 –2018 Electric Bus Summary

<table>
<thead>
<tr>
<th></th>
<th>Total Transit Miles from Electric Buses</th>
<th>Total kWh consumed to charge Electric Buses</th>
<th>Total Cost of kWh charging</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>248,292</td>
<td>441,000 kWh</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>339,214</td>
<td>744,166 kWh</td>
<td>$115,562</td>
</tr>
</tbody>
</table>

**Action going forward**

As all-electric buses replace diesel buses, transportation sector emissions attributable to fuel usage will decrease and electricity emissions will increase. The ClearPath GHG Inventory tool is expected to modify the tool in the near future to quantify emissions to these sectors accordingly.

**EMPLOYEE COMMUTE**

Employee commute emissions have increased each year since 2016 presumably due to the addition FTEs year to year. (See Figure 12.0)

**Figure 12.0 Employee Commute Emissions**

A commuter survey was not administered in 2018. Thus 2018 Employee Commute Emissions and vehicle information was extrapolated from 2017 data.

A key result of the 2017 Employee Commute Survey is that during the work day, respondents claim they use their personal vehicles to conduct government business. These miles are not included in the inventory.
Data Related Challenges

Employees’ use of their personal vehicles for work purposes is not included in the Transportation Emissions Sector because not all employees seek mileage reimbursement for the use of their vehicle and mileage reimbursement records have not historically been available to quantify.

Action going forward

In conjunction with Regional Transportation Planning Director, staff plans to develop an Employee Education Plan to encourage employees to share rides, use transit and active transportation modes when possible.

A Fleet Utilization Study will be conducted in 2020 that will begin to evaluate the use of personal vehicles as well as to optimize the use of county fleet vehicles.

**SOLID WASTE**

Solid Waste makes up more than half of total emissions, making it the largest single source of County Emissions. **Total Solid Waste Emissions are 9.6% higher in 2018 than 2016 (see Figure 13.0).** Despite a reduction in solid waste tonnage each year since 2016, emissions are increasing due to the *residual emissions of the landfill that* reside from previous reporting years (Table 4.0).

**Figure 13.0 Total Solid Waste Emissions**

![Solid Waste Emissions](image)

**Table 4.0 –2016-2018 Solid Waste Tonnage**

<table>
<thead>
<tr>
<th>Year</th>
<th>Solid Waste (Annual Tonnage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>57,801</td>
</tr>
<tr>
<td>2017</td>
<td>51,584</td>
</tr>
<tr>
<td>2018</td>
<td>49,541</td>
</tr>
</tbody>
</table>
To categorize GHG into those that County can control (e.g. Scope 1) versus those that County can influence (e.g. Scope 2 and Scope 3), the GHG Protocol devised distinct reporting categories called “Scopes”, refered to as Scope 1, Scope 2, and Scope 3 (Figure 14.0).

**Scope 1: Direct Emissions** from the combustion of fuel for the Vehicle Fleet, Transit Fleet, Buildings & Facilities and Solid Waste (County owned and operated landfill).

**Scope 2: Indirect Emissions** from Purchased Electricity.

**Scope 3: Indirect Emissions** from Employee Commuting.

Summit County’s Solid Waste emissions are included in Scope 1 (Direct Emissions) because the landfill is owned and operated by the County (Figure 15.0).

**Figure 15.0: County Government Emissions Inventory By Scope (2016-2018)**
**ACTIONS GOING FORWARD**

The new goal to reduce emissions 80% below 2016 levels by 2040 is shown as Figure 16.0 below.

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The new County CO2e emissions target to reach by 2040 is 3,276 MT CO2e.

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Figure 16.0 – Emissions Trajectory of County Operations with 80% Below 2016 by 2040 Target

Utilizing the expertise of the Energy and Data Analyst who was added to the Sustainability Office in September, 2019, staff will focus on analysis of energy and fuels consumption, impact of energy efficiency measures implemented to date to priorities next steps to bring increased efficiencies and emissions reductions to the County:

- Prioritize capital investments for inclusion in the 2021 Capital Budget that will produce life-cycle reductions in the amount of utility-provided energy required and their associated emissions.
- With Council approval, increase availability of workplace EV charging stations for use by employees and fleet vehicles as proposed in *Summit County’s EV Charging Station Infrastructure Report and Strategic Plan*.
- Review and possibly launch an employee education plan to change energy behavior and minimize wasteful energy use.
Summit County has lead climate action in the community for the past decade and maintains data to substantiate the progress made toward countywide GHG emissions reduction. The 2005-2009 Summit Countywide GHG Inventory estimated the emissions within the County boundary as could reasonably be identified in 2009 at a total of 1.62 million MTCO$_2$e.

Five years later, a countywide GHG Inventory indicated total emissions decreased 16%, from 1.62 M MTCO$_2$e to 1.36 MMT CO$_2$e. The distribution of 2014 countywide emissions by sector is shown in Figure 17.0.

Figure 17.0 Countywide Emissions by Sector (2014)

The 2014 countywide GHG emissions inventory was used by staff and stakeholders to develop the 2015 Climate Action Plan (The CAP). The CAP identifies short- and long-term implementation strategies toward the reduction of GHG emissions countywide with emphasis on ensuring an economically vibrant, environmentally healthy, and socially responsible future for Summit County residents.

Climate action performance

Many of the countywide emissions reduction strategies currently underway are mentioned elsewhere in this report. A summary of activity follows:

- **SCPW Solar Program**: A third round of the county’s bulk purchase, discounted solar program was launched in spring 2019. Residents signed 42 contracts to install 320 kilowatts (kW) of solar PV. The program is being continued into the spring of 2020 to encourage more residents to take advantage of the simplified process and discount offered by a vetted, reputable solar installer.
• **SCPW Challenge:** Through a service agreement with Utah Clean Energy, an action-based, challenge website was launched in 2018 that provides details about hundreds of actions that residents can take to reduce their environmental impact and possibly save money. The actions range from simple everyday things to big investments in energy efficiency measures and renewable energy. Promoted throughout 2018 and 2019, the website quantifies the expected cost savings and emissions reductions that can be used by residents, business and students to take action and compete for prizes.

• **Residential Outreach Campaign** – The wattSmart Community Energy Plan was developed by stakeholders from throughout the county with support from Rocky Mountain Power, facelifted by Brendle Group. Over the course of (4) stakeholder meetings that reviewed the energy usage data by sector, the group developed an outreach campaign to reduce energy consumption and associated greenhouse gas emissions.

• **Coordinated the 2018 Climate Action Week main event: 3 Tenors of Climate Change.** A leading climate scientist, a physician, and a documentary filmmaker presented the impacts of climate change from their individual professional perspectives to an audience of more than 100 people.

In 2018, staff re-convened stakeholders to review the progress being made on the implementation strategies outlined in the CAP. As a result, staff redirected resources to support interdepartmental staff in reducing emissions from the largest sectors—buildings and the transportation sector. Specifically, the stakeholders’ recommendations that have been implemented in 2018 and 2019 include:

• **Focus on reducing transportation emissions:** Summit County has installed a total of 24 Level II charge ports and three (3) DC fast charge ports at county facilities in Kamas, Coalville, Kimball Junction and Park City to support the transition to electric vehicles that minimize or eliminate tailpipe emissions.

• Mobilized community partnerships who developed and implemented the wattSmart Community Energy Plan to improve energy efficiency in the residential, small business and large energy users.

• Expanded delivery of Summit Community Power Works (SCPW) countywide energy efficiency programs by partnering with Utah Clean Energy to administer the programs.

• Sought increased opportunities to “tell the story” of Summit County’s many climate action successes that residents and businesses can replicate. Staff provided numerous interviews on local radio and television programs and issued numerous press releases.

**Action Going Forward**

The next countywide greenhouse gas emissions inventory is scheduled to be conducted in 2020, consistent with the historical five-year interval of evaluation and progress reviews to date. Following the inventory, the 2015 Climate Action Plan will be updated in response to the emissions changes observed and toward achieving Council’s more aggressive goal of 80% emissions reduction below 2014 level by 2050.

Aggressive climate implementation strategies and resources will be necessary to achieve Council’s goal to reduce countywide emissions 80% below 2014 level by 2050 (from 1,260,000 to 272,000 MT CO2e).
TRANSITION GOVERNMENT TO NET 100% RENEWABLE ELECTRIC ENERGY

Summit County participated in extensive research and collaboration over a period of several years to procure utility scale renewable energy to eventually power all government operations. The procurement model that resulted is being replicated by other large businesses and municipalities in Utah.

Renewable Energy for County Government Operations

An Engineering Professional Services Agreement (EPSA) executed in March, 2018 laid the foundation that enabled Sustainability staff to quantify the county’s and its dependent districts’ total annual electricity usage and work with Rocky Mountain Power to procure the expected future electricity needs with renewable energy. Summit County, in partnership with Park City, Salt Lake City, Utah Valley University, Vail Resorts, Deer Valley Resort and Rocky Mountain Power, issued a Request for Proposals (RFP) that included an assessment and determination of the optimal renewable energy resources to meet the parties’ combined requirements and the estimated costs to deliver that projected electrical supply.

The results of the RFP process resulted in the selection of an 80 MW solar project near Toole that is permitted and scheduled to begin construction in 2020. Extensive negotiations with the utility led to the execution of a 15-year Renewable Energy Service Agreement with Rocky Mountain Power to procure net 100% renewable energy to supply the total aggregated electrical demand (80 MW) of all six (6) entities. Upon completion, Summit County and its partners will be able to procure near net 100% of their measured annual electricity needs from clean renewable energy, nearly seven (7) years ahead of the 2030 target date.

County Solar PV Systems

Summit County continues to demonstrate leadership in the areas of electrified transportation and renewable energy. To showcase the future of transportation, a total of 380 solar panels were installed at the highly-visible Transit Center/Summit County library in Kimball Junction to power electric bus chargers, electric vehicle chargers and electric bikes. Located at the intersection of Interstate-80 and Hwy 224, one of two transportation corridors into Park City, the solar panels are visible to thousands of residents and visitors each day.

In 2019, solar PV was installed on bus canopies in the new Ecker Hill Park and Ride lot to help power the lights, electric vehicle charging stations, and automatic gate openers. And 72 solar panels were installed on the roof of the new Kamas Services building in Kamas, UT (2018-2019). Staff obtained 37% of the total solar PV installation costs to date from competitive grant awards. Summit County supplies 23% of its total 2018 electricity demand for government operations and facilities with its own clean, renewable energy.
The remaining county building with optimal solar exposure suitable for rooftop solar PV is the Public Works building, as identified in the 2016 Renewable Energy Study that evaluated and prioritized all county-owned facilities for maximization of renewable energy.

**Action Going Forward**

- Compare the cost and benefits of installing solar PV system on the Public Works building against the anticipated cost of the renewable energy to be procured through the Renewable Energy Services Agreement. Present findings to Council and budget accordingly.

**MAKE RENEWABLE ELECTRICAL ENERGY AVAILABLE COUNTYWIDE**

Resolution 2017-16 stated Council’s goal to make renewable energy available and adopted broadly by residents and businesses by 2032. In 2019, the target date was amended to 2030 in order to meet the deadline to participate in the Community Renewable Energy Program.

**HB411 - Community Renewable Energy Act**

Summit County, in partnership with Salt Lake City, Park City, Rocky Mountain Power, Division of Public Utilities, the Office of Consumer Services worked for over three years leading up to the passage of H.B. 411, the Community Renewable Energy Act. Governor Herbert signed it into law on March 29, 2019.

The legislation identified a deadline of December 31, 2019 for Utah communities to adopt a local resolution and formalize their interest in a net-100% renewable electricity portfolio by 2030.

The unique innovation with H.B. 411 is the partnership between communities and an investor-owned utility (Rocky Mountain Power) that will tailor the renewable electricity generation portfolio to meet the aggregated communities' total clean energy targets.

Rocky Mountain Power will facilitate the transition to a net-100% renewable electricity portfolio and the continue to provide standard electricity service for customers. The financial costs and benefits of the program will be isolated to participating communities so that no costs are shifted to other utility customers. Additionally, individual customers in participating communities have the ability to stay on standard electricity rates through an opt-out process to be defined in by Administrative Rule.

Since passage of the bill, staff has continued work to ensure the Community Renewable Energy program remains available in Summit County, as outlined below:

- Partnered with Utah Clean Energy to present the Community Renewable Energy Program to municipal Mayors during two (2) Council of Governments meetings in 2019; presented the mechanics of the Community Renewable Energy Program to the city councils of Oakley, Francis, Kamas and Coalville.
• Provided draft resolutions and remained available for questions and answers during each city council meeting during review and approval of the resolution required to participate in the program.
• Worked with stakeholders and regulators to draft administrative rules that will govern the program. The draft rules will be circulated for public comment, reviewed and hopefully approved by the Public Service Commission in 2020.

**Action Going Forward**

• Staff is participating as a core team leader to facilitate collaboration among the 20 communities and 3 counties to negotiate with Rocky Mountain Power.
• Staff will continue to provide assistance to local municipalities in Summit County, as requested, to ensure transfer of information, critical dates and actions are taken at key decision points.
• Staff will continue to monitor the finalization of the Administrative Rules, subsequent steps and communications with Rocky Mountain Power as the Community Renewable Energy Program is implemented.

**SCPW Solar Program**

Summit County offered the SCPW Solar through a Service Agreement with Utah Clean Energy who administered the community renewable energy program in Summit County for the third time. This highly successful program offers discounted solar PV installations through a simplified, streamlined process. A community-led selection committee issued a Request for Proposal, interviewed qualified respondents, and selected a highly qualified solar contractor to install solar PV systems at 30-40% below the average Utah solar market cost.

**Distributed Generation**

The rate of growth in the amount of distributed Generation (solar PV systems installed) in Summit County stalled in 2018, presumably in response to the highly-publicized Rocky Mountain Power net-metering case and reduction of solar incentives.

**Net Meter Rate**

Rocky Mountain Power’s compensation rates for homeowners who have excess energy production is expected to change in 2020. Currently, homeowners receive a credit of 9.2 cents per kilowatt-hour for any excess energy produced by their solar system, which roughly offsets the cost of purchasing energy from the utility. All Rocky Mountain Power customers who install solar before 2020 will be grandfathered into the current price until 2032.

**Tax Credits**

The Bipartisan Budget Act of 2018 reinstated the federal tax credit for certain residential renewable energy technologies, including residential solar PV systems, as follows:
- 30% for systems placed in service by 12/31/2019
- 26% for systems placed in service after 12/31/2019 and before 01/01/2021
- 22% for systems placed in service after 12/31/2020 and before 01/01/2022
- There is no maximum credit for systems placed in service after 2008.
- The home served by the system does not have to be the taxpayer’s principal residence.

The Utah Renewable Energy Systems Tax Credit provides 25% percent of the total equipment and installation costs, up to $1,600 as a credit on the next year’s income tax to reduce the solar system cost. However, the Utah tax credit will be reduced in value by $400 each year and expires in 2022.

Net meter installations

The amount is solar PV installed each year in Summit County over time is shown in Figure 18.0. The total amount of all residential and commercial solar PV systems installed in Summit County increased from 3.5 MW in 2016 to a countywide total of 3.8 MW in 2018. Summit County continues support of rooftop solar and the SPCW Solar program by waiving solar building permit fees in 2018 and 2019.

Figure 18.0 New Solar PV Installations in Summit County Over Time
CONVERSION OF FLEET TO ALTERNATIVE, HYBRID AND ELECTRIC VEHICLES

Progress toward Council’s goal to convert 50% of the County vehicle fleet to alternative fuels, hybrid and electric vehicles occurs as vehicles are replaced. As of December 2018, the following alternative-to-gasoline vehicles are part of the Summit County passenger vehicles fleet:

- **Eight (8) Compressed natural gas vehicles**
- **Seven (7) Hybrid vehicles**
- **Two (2) Electric vehicles**

**Compressed Natural Gas Vehicles**

Staff updated the cost analysis of leasing a CNG refueling system and submitted cost proposals for consideration in the 2019 and 2020 capital budgets. Neither was approved due to the rapid pace of electric vehicle technology and other Council priorities.

**County Vehicle Efficiency**

Fuel economy, emissions, and vehicle miles traveled fluctuate from year to year, as shown in Table 5.0. Due to erroneous odometer readings entered when refueling vehicles, the reliability of the data is inconsistent with the actions taken to date.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Miles</strong></td>
<td>2,950,940</td>
<td>2,976,794</td>
<td>2,737,561*</td>
</tr>
<tr>
<td><strong>Total Fuel Gallons</strong></td>
<td>224,084</td>
<td>218,600</td>
<td>211,614</td>
</tr>
<tr>
<td><strong>MPG</strong></td>
<td>13.2</td>
<td>13.6</td>
<td>12.9*</td>
</tr>
</tbody>
</table>

*Total Miles and MPG reported are unreliable.

**Fleet Optimization Study**

The Energy and Data Analyst hired in September, 2019 quickly discovered that inaccurate fleet mileage and fuel records were insufficient to conduct the Fleet Optimization Study that was scheduled in 2019.

Consultation with State of Utah Fleet Services recommended and demonstrated the necessity of telematics to conduct a comprehensive analysis of vehicle allocation, actual hours and days of use, trip destinations, and potential for inter-departmental vehicle sharing and/or use of motor pool vehicles.

Staff vetted the recommendation and submitted a 2019 budget request to pilot the use of telematics to identify possible efficiencies in fleet management and reduce fleet operating cost. The use of telematics is scalable. However, to fully optimize vehicle utilization, telematics will need to be implemented on every passenger vehicle in the fleet.
**Action Going Forward**

- Conduct an employee education program introducing the limited use of Telematics.
- Implement telematics on a cross-section of County fleet vehicles to conduct phase I of the Fleet Optimization Study.
- Determine if telematics is a suitable fleet management system for the entire fleet.
- Continue to evaluate available alternative fuel, hybrid and electric vehicles available and recommend during Fleet Review Committee of vehicle purchase requests.
- Conduct analysis of the electricity costs of electric vehicle charging and record cost impacts to fuel and fleet records.

**ENERGY EFFICIENCY OF COUNTY OPERATIONS**

The county has a history of investing in energy efficiency improvements although funding was limited to LED lighting upgrades of the Richins building in 2018 and the addition of LED lights to the softball field lighting at the Fairgrounds in Coalville in 2019.

**LED Lighting Upgrade**

Staff utilized Rocky Mountain Power’s Small Business Direct program to reduce the cost of a lighting retrofit project by nearly $10,000 and obtained a rebate of $3,984 that reduced the project cost to $10,500 dollars and a simple payback term of less than 2 years.

**LED Athletic Field Lighting**

LED lights were added following upgrades to the Summit County fairgrounds in 2019.

**Utility Costs**

As shown in the graphs above, energy consumption is decreasing as a direct result of investment in energy efficiency upgrades. What is less clear is the impact to utility costs. Total annual energy costs are shown in Table 6.0.

**Table 6.0 – Annual Expenditures on Natural Gas and Electricity**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas ($)</td>
<td>$131,467</td>
<td>$144,250</td>
<td>$104,732</td>
</tr>
<tr>
<td>Electricity ($)</td>
<td>$272,482</td>
<td>$260,231</td>
<td>$288,798</td>
</tr>
<tr>
<td>Total ($)</td>
<td>$398,256</td>
<td>$404,481</td>
<td>$393,530</td>
</tr>
</tbody>
</table>

Energy efficiency upgrades reduce energy consumption and energy charges. However, demand charges make up approximately one half of the total electricity cost. Energy management of buildings and facilities systems coupled with changes in building occupants’ energy behavior are necessary to reduce demand charges and decrease overall utility costs.
Energy-Related Costs

An Energy and Data Analyst has been hired to, in part, analyze building energy usage, energy costs and report the impacts of energy efficiency measures and renewable energy installations to the overall utility costs. Continual monitoring of mechanical operating systems, building occupancy, and time of use is necessary to increase the efficiency of existing buildings. It is anticipated that the position will be funded by revenue attributable to utility cost reduction that would otherwise expended as wasted energy costs.

The first year result of the County’s 3-year purchase agreement to deliver natural gas directly to the Justice Center Complex resulted in a cost reduction of $19,554.62 (July 2017 through June 2018). A cost reduction of $5,050 was realized in year two (July 2018-June 2019).

Data Related Challenges

- Many factors affect total energy consumption and further analysis of the Summit County’s energy infrastructure system is required to isolate the effects that efficiency improvements have made on energy consumption.
- Analysis does not account for other variables and unknowns such as fluctuations in hours of building operation, numbers of employees, occupants’ behavior, and plug loads of personal and required electronic equipment.

Action Going Forward

To continue increasing the efficiency of County buildings and reduce the emissions associated with energy usage, staff continues to:

- Examine energy usage and analyze results of energy efficiency improvements made to prioritize and budget for capital projects in the 2021 budget to improve energy efficiency, reduce utility costs and decrease GHG emissions.
- Evaluate employee education and engagement platforms that utilize education and gaming/competition to help change the energy and commuting behaviors of County employees.

RESIDENTIAL, COMMERCIAL ENERGY EFFICIENCY

Multiple community collaborations are underway to address residential energy efficiency throughout Summit County, in both the residential and commercial sectors.

Summit Community Power Works (SCPW) Challenge

- SCPW program delivery by Utah Clean Energy, under the direction of Sustainability staff, was delivered throughout the County during 2018 and 2019. Residents and students in all three school districts are engaged in The Challenge.
• The number of households participating (407) exceeded the goal to engage 300 households. Participants exceeded the goal to reduce 150 tons of CO2 by December 2019 by 132%.

**wattSmart Community Energy Plan**

Staff actively recruited representatives from agriculture, local governments, Home Owner Associations, nonprofits, businesses and school districts to utilize the wattSmart Community Energy Planning process offered by Rocky Mountain Power. Stakeholders designed and implemented an energy action plan that reflects the vision for Summit County communities have for shaping future energy use and supply.

The initial 4 months were dedicated to developing a strategic energy action plan that was adopted by Council resolution in August 2018.

Briefly, the plan targets three sectors via outreach efforts: residential, small businesses and large energy users for energy efficiency. Success stories for each sector were planned to be developed and shared with others in the sector through social media, events, presentations, and the stakeholders. Woven throughout each sector was the goal to encourage the installation of electric vehicle charging stations.

Since then, staff and a few dedicated stakeholders and non-profit partners implemented aspects of the plan as time and resources allowed. Implementation strategies and results are listed below:

**HOAs and Neighborhoods (Residential Sector)**

Staff partnered with Utah Clean Energy to increase energy efficiency project counts through the use of education and outreach “House Parties” and HOA networks that encouraged households to participate in the SCPW Challenge.

**Small Business Sector**

- In partnership with Recycle Utah’s Green Business Program, small businesses who focused on energy efficiency as one of the 3 required ‘green’ goals to participate in the Green Business Program were interviewed and evaluated to use as Success Stories. The actual Success Story flyers have not yet been created or distributed. However, Recycle Utah and the Green Business Program continually promote and celebrate the business successes.
- Rocky Mountain Power’s Small Business Direct Install Program offered to Summit County businesses. As a result, 192 Summit County businesses upgraded their lighting to LED and are projected to decrease their electricity consumption by approximately 1.25 kWh annually. The results of the wattSmart Small Business Direct Install Program are shown in Table 7.0.

<table>
<thead>
<tr>
<th>Table 7.0 wattSmart Small Business Direct Install Program Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># Projects</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Total kWh Reduced</td>
</tr>
<tr>
<td># Businesses</td>
</tr>
</tbody>
</table>

**Large Energy Users**

Large commercial energy users (exceeding 1 MW in electrical demand) such as local governments, school districts and major employers in the county were targets of outreach efforts to improve energy efficiency.
improvement, increase the use of renewable energy and install EV charging stations. The stakeholder who led implementation of the Large Energy Users implementation strategy moved that left insufficient resources to fully execute this action. However, the foundation is well-established for future outreach endeavors as described below:

Mountain Regional Water Special Service District’s energy reduction results was the success story featured and shared with other businesses and through circulation of a poster and presentations at various sustainability-related events in 2019.

A Large Energy Users Energy Efficiency Planning Tool was created, along with a “pitch deck”, to facilitate discussion with commercial business regarding the value of developing and implementing an Energy Efficiency Plan. The Energy Plan Tool was developed that simplifies the process of collecting energy data and pertinent facility information needed to set energy reduction goals, track progress and report results.

**EV Charging Stations**

Although no EV charging stations were installed as a direct result of implementing the Community Energy Plan, Summit County installed 11 EV charging stations during the program period that are available for public and private use at county-owned facilities throughout the County in Kamas, Coalville, Kimball Junction, and Park City.
**Action Going Forward**

Staff will lead a review of the wattSmart Community Energy Plan implementation review and evaluation of program results and consider modifications and program continuation if resources allow.

**COLLABORATION WITH ROCKY MOUNTAIN POWER**

Summit County Sustainability has a long history of successful collaboration with Rocky Mountain Power. Reliability of project completion has enabled staff to obtain 41% of total energy efficiency and renewable energy project costs from various Rocky Mountain Power incentive programs.

Summit County collaboration with Rocky Mountain Power advances both the county goals and countywide goals. Most recently, three (3) such working agreements defined specific goals and outcomes that are presently in various stages of achievement as described below.

**Joint Clean Energy Cooperating Statement**

A Joint Clean Energy Cooperating Statement with Rocky Mountain Power was executed by Summit County in March 2018. The Cooperation Statement detailed the intent of the parties to partner collaboratively to develop renewable energy options, energy efficiency programs, and make electric vehicle projects available for all energy users in the County.

Summit County participated in a ground-breaking collaboration with an electric utility, multiple stakeholders and the Utah State Legislature to provide a pathway for all residents and businesses in Summit County to easily obtain renewable energy and participate in the global energy transformation. A rapid transition to renewable energy is critical to help mitigate the most harmful impacts of climate change.

A multi-year cooperative endeavor with numerous stakeholders, policy makers, electric utility regulators and Rocky Mountain Power representatives culminated in the passage of H.B. 411, the Community Renewable Energy Act during the 2019 General Session. The legislation not only achieves Council goal to make renewable electrical energy obtainable by residents and businesses in Summit County, but expands that possibility to ALL Utah communities served by Rocky Mountain Power.

In order to participate in the Community Renewable Energy program, Utah Code Section 54-17-903(2)(a) requires adoption of a resolution no later than December 31, 2019, that states a goal of achieving an amount equivalent to 100% of the annual electric energy supply for participating customers from a renewable energy resource by 2030.

In addition to Summit County, five communities within the county (Coalville, Francis, Kamas, Oakley and Park City) have passed a resolution, completing the first step toward providing their residents and businesses with a choice of standard-offer electricity and a new standard renewable electricity.

Two other counties (Grand and Salt Lake County) and 16 other communities (Bluffdale, Castle Valley, Cottonwood Heights, Emigration, Holladay, Ivins, Kearns, Millcreek, Moab, Ogden, Orem, Salt Lake City,
Springdale, West Jordan, and West Valley City) have also passed resolutions to pursue renewable energy for their communities.

Several decision points remain for Summit County and participating communities to continue evaluating participation in the Community Renewable Energy Program:

1. Enter into an agreement with a qualified utility to pay for the costs of:
   (a) third-party expenses to the Division of Public Utilities and the Public Service Commission for expertise and assistance with activities associated with initial approval of the community renewable energy program; and
   (b) providing notice to the county’s customers;
   (c) determining the obligation for the payment of any termination charges if not paid by a participating customer and not included in participating customer rates; and
   (d) identifying the replaced asset cost.

2. Obtain commission approval for the community renewable energy program.

3. Adopt a local ordinance within 90 days after the date of the commission order approving the Community Renewable Energy Program that establishes participation in the program consistent with the terms of the agreement entered into with the qualified utility and that comply with any other terms or conditions required by the commission.

Summit County is poised to achieve a huge milestone for residents and businesses: providing residents and businesses with the power to choose between standard renewable energy and a new standard renewable energy.

The “co-benefits derived by Summit County choosing 100% renewable energy by 2030 include avoided CO\textsubscript{2} emissions, avoided SO\textsubscript{2} and NO\textsubscript{X} emissions, avoided water use, and economic impacts.”

Engineering Professional Services Agreement/Renewable Energy Service Agreement

Extensive collaboration with Rocky Mountain Power occurred even before execution of an Engineering Professional Services Agreement (EPSA) that was executed in March, 2018. Described on page 25, the collaboration led to the execution of a 15-year Renewable Energy Service Agreement with Rocky Mountain Power to procure net 100% renewable energy to supply Summit County and its dependent districts with near net 100% of their measured annual electricity needs from clean renewable energy, nearly seven (7) years ahead of the 2030 target date.

Summit County entered a Memorandum of Understanding (MOU) with Rocky Mountain Power that confirmed Summit County’s intent to participate in the initial plan development phase of the wattSmart Communities Program. The primary objective of this phase of the program is to develop a community energy action plan desired by stakeholders throughout the Summit County community. Staff worked with together with stakeholders and nonprofit partners, Rocky Mountain Power and the Brendle Group (Plan Facilitators) to develop and implement the wattSmart Community Energy Plan (explained in more detail on page 32).

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1 Summit County, Communities Renewable Energy Study (April 25, 2017) Energy Strategies, LLC
FOR COUNCIL CONSIDERATION AND DISCUSSION

Despite all of the resources and actions taken to reduce Summit County’s carbon footprint, Total County GHG Emissions increased 10% from 2016 to 2018. However, several significant “wins” occurred in 2019 that are expected to reverse the rising emissions trend in the near future, if terms and conditions remain agreeable:

- Procurement of near net 100% renewable electrical energy in 2023 through the Renewable Energy Services Agreement with Rocky Mountain Power.
- Implementation of the Community Renewable Energy program that will make clean renewable energy available to residents and businesses in Summit County and other Utah communities served by Rocky Mountain Power.
- PacifiCorp’s draft resource plan calls for increases in lower-cost wind, solar and storage to manage phased coal transition. The plan includes about 7,000 MW of new renewables and storage by 2025 that will contribute significantly contribute to the national transformation to a

Summit County’s leadership in the transition to electric transportation has also added to the increase of the county’s carbon footprint.

Yet, progress has been made in the emissions sectors (Vehicle Fleet and Electricity for Major Buildings) where most of the resources have been focused. As reported in 2018, “we have harvested the low-hanging fruit.” Allocation of significant resources devoted to retrofitting natural gas heating fuels to cleaner sources and possibly utilizing renewable energy produced from landfill waste should be considered in the near future.

Local and scientific evidence of the impacts of greenhouse gases on climate change are already being evidenced: changing the local climate; increasing severe weather events; altering natural cycles; changing growing seasons; affecting water supplies and stream flows; altering vegetation and habitats; and causing harm to human health.

To date, Summit County’s sustainability activities have focused on mitigation – taking action to reduce greenhouse gas emissions. Going forward, the critical need is for Summit County to devote resources to developing adaption strategies: actions to lessen the impacts of climate change that cannot be prevented through mitigation. Both mitigation AND adaptation strategies are essential to respond to the near-term and long-term effects of climate change.

Whatever the goals or initiatives prioritized by Summit County Council, continued measurement and verification will be critical to monitoring the GHG emissions that can be controlled, and to evaluating the effectiveness of climate adaptation and mitigation strategies desired by Council.