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2016/17 Climate Challenge Program Highlights

After six years of reporting through the Climate Challenge, we are ecstatic to announce that resorts have reduced more than 44,000 MTCO2e of greenhouse gas emissions collectively through on-site projects alone – that’s more than the total emissions from several mid-sized resorts in a given year. The cumulative impact of all on-site projects plus Renewable Energy Credit (REC) purchases by Climate Challenge participants since 2011 is 234,911 MTCO2e.

Needless to say, the Climate Challenge is crucial. The Climate Challenge allows the ski industry to have a bird’s eye view of how ski resorts’ efforts to mitigate climate change are progressing. This annual report shows that participants’ efforts are making an impact.

Of the 30 resorts participating in the Climate Challenge this year, we have seen an 18.6% decrease in average greenhouse gas emissions per resort since 2011. In addition to on-site reduction projects, in 2016/17 resorts purchased approximately 33,000 MTCO2e worth of renewable energy credits.

However, there is still significant work to be done. In 2017, total Scope 1 and 2 emissions from resorts was 204,477 MTCO2e. It would require an estimated 193,000 acres of forest in one year to absorb Climate Challengers’ emissions from 2016 alone (about 3.5 times the total acreage of all participating resorts).

The Climate Challenge has evolved dramatically since 2011. The inventory tool has been refined, the number of Challengers has grown from eight to thirty, and we have added valuable components such as “Advocacy.” In the coming year we will be adding an optional resource for Challengers to prepare for future climate adaptation scenarios, while continuing to support resorts in their greenhouse gas mitigation efforts. Significant progress has been made, but even more can be done.
The Climate Challenge Program

Introduction

This year marked the 6th year of the Climate Challenge, a voluntary program designed to recognize ski areas that are committed to reducing their climate impact. Challengers do this by inventorying and reporting on their carbon footprints, setting goals for carbon reduction, implementing at least one on-site carbon reduction strategy per year, and engaging in climate change advocacy efforts.

Each year the Climate Challenge program seeks to build upon its successes to improve the operations of existing participants while adding new members. To this end, the program will be welcoming four new members in 2017-18. The ski areas joining the Climate Challenge for the 2017-18 season are Bridger Bowl Ski Area (MT), Eldora Mountain Resort (CO), Winter Park (CO), and Tremblant (Quebec).
Why the Climate Challenge?

Climate change presents challenges to the ski industry that require proactive planning, action, and bold leadership. The Climate Challenge provides a framework for participants to engage in a multi-year process that enables them to plan and implement actions that will reduce emissions, share those successes industry wide, and collaborate with others in the industry to leverage the collective power of working together on climate issues.

A 2010 NSAA survey showed that only 10% of responding ski areas had completed a greenhouse gas inventory – though 80% were very interested in addressing climate issues.

GOALS OF THE CLIMATE CHALLENGE

- **Higher standard**: The program will raise the standard for ski areas wishing to take their sustainability performance to the next level.

- **Long-term**: The program will be multi-year, seeking to compound the benefits of actions taken by participants over many years and to grow the number of participants from year to year.

- **Cost-efficient**: The program will leverage the investment of participants and sponsorships to deliver more value to participants than their individual investments.

- **Credible**: Quantification of greenhouse gas inventories, targets, and reduction measures will be developed in alignment with a credible protocol, using boundaries consistent with industry approaches.

- **Transparent**: The approach taken by the program will be transparent to participating ski areas and the public.

- **Fair**: The program will be fair, facilitating participation for ski areas of all sizes, regions, and focuses.
Challenge Elements

Ski areas participating in the Challenge commit to a five-step process each year.

1. **Inventory**
   In order to understand the impact of their operations, Challengers inventory greenhouse gas (GHG) emissions for their ski area operations. Inventories are required to include direct emissions at the ski area (Scope 1) and indirect emissions from purchasing energy, such as electricity (Scope 2). Other emissions, such as those from waste disposal or business travel, can be included at the discretion of the Challenger. The Challenger can choose to inventory emissions for the fiscal or calendar year.

   For 2016/17, Challengers prepared inventories using a tool that follows the guidelines of The Climate Registry’s General Reporting Protocol.¹

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Target

With an understanding of the emissions generated by their operations, Challengers define a target (or goal) for reducing emissions. The structure of the target is flexible: the Challenger can select which emissions to reduce, how much they will be reduced, and over what time period the target will be achieved. Regardless of the structure of the target, Challengers define a target that will reduce GHG emissions relative to an established baseline GHG inventory for ski area operations. A number of Challengers have already achieved their targets or their target date is approaching soon; as a result, a number of ski areas are in the process of establishing new targets and commitment periods.

Targets are the means for measuring Challenger progress and hopefully will become useful planning tools as Challengers make operational decisions in years to come.

THE LANGUAGE OF CARBON

**Carbon Dioxide (CO₂):** The major heat-trapping gas whose concentration is being increased by human activities. It also serves as the yardstick for all other GHGs. The major source of CO₂ emissions is fossil fuel combustion. Carbon dioxide emissions also result from clearing forests and burning biomass. Atmospheric concentrations of CO₂ have been increasing at a rate of about 0.5 percent a year, and are now more than 30 percent above pre-industrial levels.

**CO₂e:** Carbon dioxide equivalent, a measure that is used to express the concentration of all heat trapping gases in terms of CO₂.

**MTCO₂e:** A metric ton of CO₂e. A metric ton is equivalent to 1.102 short tons or 2,204 pounds.

Reduce

Challengers commit to take one measurable step to reducing their GHG emissions each year in order to progress toward their target. Examples of reduction projects include increased energy efficiency in buildings, lifts, and snowmaking; switching to more efficient fleet vehicles; increasing diversion of solid waste to reuse; recycling or composting; or installing a renewable energy system on-site.

The Climate Challenge views purchasing a renewable energy credit (REC) or a carbon offset as a means of contractually demonstrating an emission reduction. These instruments may be used by Challengers to achieve targets, but are not recognized for the Reduce component of the Challenge. In other words, at least one reduction project must occur on-site each Challenge year.
Outsourcing or divesting emission sources is not allowed as a reduction strategy for those participating in the Challenge. For example, outsourcing a restaurant to a concessionaire during the Challenge will not be considered a reduction in emissions from a baseline that includes the restaurant.

**Advocate**

Advocacy is a core component to the Challenge’s overall goal. The advocacy element of the Challenge helps communicate important efforts made by the ski industry to leaders and legislators on a national level, and supports regional or national legislation or regulation targeting climate issues. Members are required to endorse at least two energy/climate change advocacy letters. This can include sending correspondence from the resort to its Congressional delegation on the resort’s efforts or initiatives, and the ski industry’s efforts on the Climate Challenge.

Additional advocacy options include engaging in climate advocacy at the state level, writing an editorial about climate change, or attending a climate advocacy-related event with NSAA.

**Report**

Having completed the first four activities in the Challenge, Challengers report a summary of their results to the Climate Challenge program and the public. The summary includes the following elements:

- Total GHG emissions in MTCO₂e
- Stated reduction target
- A narrative description of reduction activities
- Documentation of advocacy requirements

Challengers are asked to be complete and accurate in reporting to the Challenge. The goals of the Challenge are larger than a single ski area and are best served when all participating ski areas make their best effort. To this end, all submitted inventories, targets, and reduction activities are reviewed by a third-party to ensure they are eligible and reasonable with respect to the program’s standards and expectations.
Program Support

To aid Climate Challengers with the program requirements, Brendle Group provides educational and technical support. In fall 2016, a kick-off seminar was held to introduce participants to the program requirements and to explain the new features of the data collection tool. Two additional seminars were held to provide a deeper dive into the different program requirements and to foster increased collaboration among participating resorts. Challengers are also welcome to email or call the Climate Challenge team to troubleshoot the tool, gain feedback on target setting, or brainstorm reduction projects. An annual program guide and newsletter were sent to Challengers for expansive program details and more helpful hints on how to maximize program success.

The second seminar of the 2016-2017 program included a presentation by the USDA on potential funding opportunities for reduction projects.
Encouraged Elements

In addition to the four program requirements, Challengers are encouraged to undertake a number of activities to reduce emissions in indirect ways that may not be reflected in their inventories but may still have a significant impact on global emissions. These activities are recognized and supported by the Climate Challenge. Some examples of these indirect activities are described here:

- Skier transportation programs – many are investing in infrastructure, providing incentives, and educating their skiers and riders to reduce single-occupant vehicle travel to ski areas.

- Environmental Partnerships – many resorts are partnering with local businesses, non-profits and municipalities to initiate impactful programs that are getting more people involved in conservation and sustainability.

- Tackling waste – A number of resorts have made strides in reducing their waste by improving and investing in recycling programs.

- Renewable energy development – many resorts have been investing in the installation of renewable energy resources - one resort has even achieved net-zero electricity by generating more electricity than they consume on-site.

Mt. Hood Meadows and Snowbird shared some of their climate and sustainability-related efforts during the second seminar of the 2016-2017 season.
Challenge Results

The following sections present the outcomes of the inventory, target, reduce, and advocate process for this year’s Climate Challengers. The Challengers represent a variety of ski area sizes, regions, and operational characteristics. In addition, the carbon intensity of the electricity they purchase varies widely. In other words, ski areas are all unique; however, they all have committed to reducing their GHG impact.

In 2016/17, Scope 1 and 2 emissions totaled 204,477 MTCO2e for all Challengers. Resorts implemented on-site projects that reduced emissions by 2,424 MTCO2e and purchased RECs equivalent to 33,024 MTCO2e. The cumulative impact of on-site projects since 2011 (which accrue annual reductions for the life of the project) totals 44,064 MTCO2e reduction. The cumulative total of all REC purchases since 2011 is 190,847 MTCO2e. Together, the cumulative impact of all on-site projects plus REC purchases since 2011 is 234,911 MTCO2e.

The table below provides an overview of the progress ski areas have been making towards reducing greenhouse gas emissions during the six years of the Climate Challenge.

<table>
<thead>
<tr>
<th>Reporting Year</th>
<th>Challengers**</th>
<th>Total Scope 1&amp;2 Emissions*</th>
<th>Average Scope 1&amp;2 Emissions*</th>
<th>Emissions Reductions Per Year*</th>
<th>Average Emissions Reductions*</th>
<th>RECs Purchased*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>8</td>
<td>65,131</td>
<td>8,141</td>
<td>172</td>
<td>22</td>
<td>2,134</td>
</tr>
<tr>
<td>2012</td>
<td>17</td>
<td>106,934</td>
<td>6,290</td>
<td>3,694</td>
<td>217</td>
<td>33,346</td>
</tr>
<tr>
<td>2013</td>
<td>17</td>
<td>103,398</td>
<td>6,082</td>
<td>1,130</td>
<td>66</td>
<td>41,819</td>
</tr>
<tr>
<td>2014</td>
<td>27</td>
<td>168,584</td>
<td>6,244</td>
<td>2,147</td>
<td>80</td>
<td>41,944</td>
</tr>
<tr>
<td>2015</td>
<td>28</td>
<td>192,055</td>
<td>6,646</td>
<td>5,588</td>
<td>200</td>
<td>38,580</td>
</tr>
<tr>
<td>2016</td>
<td>30</td>
<td>204,477</td>
<td>6,816</td>
<td>2,424</td>
<td>81</td>
<td>33,024</td>
</tr>
</tbody>
</table>

*Reported in MTCO2e, **Challengers that submitted data

Since 2011, average Scope 1 and 2 emissions have decreased by 18.6 percent. The average project reductions per ski area are generally increasing every year, except for 2012 and 2015 which saw exceptionally high reductions. Renewable Energy Credit (REC) purchases appear quite steady since 2012, even though the total number of Climate Challengers has increased. As the number of Challengers continues to increase each year, the Climate Challenge is excited to see these trends continue and to see reductions in average total emissions and increases in average project reductions.

Trends emerge when looking at the types of reduction projects that Challengers completed. Lighting upgrades were hugely popular this year, as were a number of projects focused on snowmaking efficiency upgrades. A handful of renewable energy projects were also implemented at a few resorts. One unique project uses outside air when it is cold enough, to regulate the temperature in a walk-in cooler. The result is that the walk-in does not need electricity 220 days of the year and requires less maintenance.
Challengers were also tasked with advocating for climate change or energy policies during the 2016/17 season. They accomplished this requirement in a variety of ways, which included:

- Sending direct correspondence to their Congressional delegation regarding climate change legislation.
- Endorsing the Carbon Fee & Dividend through the Citizens’ Climate Lobby.
- Signing a collective letter to President Trump in support of the Paris Agreement.
- Getting active in support of local community and municipality climate initiatives.

The remainder of this section provides the results for individual participating ski resorts in alphabetical order.
Alta Ski Area – Utah

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO₂e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>5140</td>
<td>Alta Ski Area will reduce emissions by 20%</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>318</td>
<td>percentage under 2010-11 levels by 2020-21.</td>
</tr>
<tr>
<td>Total</td>
<td>5460*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

**Reduce**

Alta Ski Area installed a 24 kW solar PV array and purchased a diesel-electric PistenBully 600 E+ grooming cat.

**Other Progress**

Our summer stewardship and education efforts would not be possible without the help and dedication of volunteers and partners: Cottonwood Canyons Foundation, Friends of Alta, TreeUtah, ACE, HawkWatch International, Town of Alta, Tracy Aviary, Utah Conservation Corps, University of Utah—ENVST and GCSC, US Forest Service Salt Lake Ranger District, and Salt Lake City.

- With 22 stewardship events we had a total of over 450 volunteers that provided over 2,000 hours of very hard and dirty work.
- We planted 1,520 Douglas Fir seedlings and over 2,000 native flowering plants grown from handpicked seed.
- This summer we were pleased to host over 750 students from a variety of schools and age groups incorporating stewardship and completing over 2,400 hours of environmental education—assuring our future stewards.
- Bird watching is an educational hit each summer with Tracy Aviary and HawkWatch surveying over 40 miles. Winter birding opportunities will continue in December with Tracy Aviary on the 2nd Monday each month.
- Our AEC crew and partner staff from FOA and CCF put in 100s of hours surveying and pulling invasive weeds over 88+ acres around Alta.
- AEC crew applied Verbenone, a special insecticide, on 300 limber pines throughout Alta, continuing to protect them from infestation by the mountain pine beetle.
- This season we began an employee investment effort by providing professional development opportunities to build skill sets in management, customer service and other cross-cutting areas. Not only has this been fun, but it has brought an enlightened influence to our staff and teamwork - new training was brought to over 50% of our workforce.
This summer was year two of a three year post-restoration commitment for Corkscrew and Nina’s Curve runs. The 2014 project included widening and filling of the runs, as well as the removal of a mine overburden disturbing about 4.7 acres, requiring soil stabilization with native revegetation. With a projected completion of 2017 we will put an equal level of revegetation efforts each year to facilitate in the native restoration of the two runs and the reestablishment of a riparian area where the mine overburden once stood. The following is a rundown of the work completed this summer:

- Hand collection of native seed in 2015, grew and planted over 3,000 native flowers and shrubs (yielding over 6,000 plants since 2015).
- Worked with about 25 volunteers to restore the riparian zone where the mine overburden once laid (yielding over 50 volunteers since 2015).
- Surveyed for invasive weed species and pulled from less than a 1/2 acre, which is down 35% since 2015.
Arapahoe Basin Ski Area – Colorado

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO₂e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>3710</td>
<td>Arapahoe Basin Ski Area will reduce emissions by 3 percent under 2008-09 levels by 2019-20.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3830*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

In December of 2015, Arapahoe Basin installed an innovative refrigeration economizer to address the high energy usage associated with our walk-in coolers. The FreeAire system, as it’s called, uses simple sensors and circulation fans to monitor the temperature inside the cooler, as well as outside the building, and cycles cold, outside air into the cooler whenever temperatures allow. This saves energy by eliminating the need to use evaporator and condenser motors to cool air we’ve already used energy to heat. By cycling cold, clean outside air, which is plentiful in Colorado at 10,800’, into our walk-in we are able to run the cooler without using electricity (with the exception of a very small circulation fan) for about 220 days a year. By running the condenser so rarely we also avoid the need to run energy intensive defrost cycles for the machinery and have reduced wear and tear and associated regular maintenance drastically.

Other Progress

In addition to these yearly sustainability projects, Arapahoe Basin is constantly striving to reduce greenhouse gas emissions in any way we can. There are a number of programs we undertake at the mountain to further this goal through education, policy, and planning.

One such program is our carpooling initiative for both employees and guests. Arapahoe Basin is privileged to have service to and from the mountain by the Summit Stage, a free bus system that links most ski areas and major destinations within Summit County. Guests are encouraged to ride the bus or carpool with a number of incentives, including significantly discounted lift tickets and reserved parking spaces in prime locations closest to our chairlifts and base lodge. Employees are also encouraged to ride the bus or carpool every day of the year. However, carpooling is made mandatory for employees on weekends during the spring months. In addition to the free bus and encouraging employees to bring three or more people per car, the Basin also runs shuttles from employee housing and a few other central locations on these days. These efforts save on parking stresses, as well as limiting the number of cars on the road, gallons of gas burned, and any associated emissions.

Another step Arapahoe Basin is taking to further our sustainability message and goals is partnership with a number of local nonprofits and conservation groups. Arapahoe Basin’s Employee Environmental Fund benefits two conservation groups, Friends of the Eagle’s Nest Wilderness and the Continental Divide Land Trust, with more than $2,000 donated each year. Employees have the option to donate $1 or more from
each paycheck, which The Basin matches and splits between the two groups. We also work very closely
with our local conservation center, High Country Conservation, which provides the community with
sustainability solutions from composting tips and energy audits to sustainability curriculums in local schools.
Every year in the spring we host the Save Our Snow event as a fundraiser benefitting the conservation
center. The event brings many of our partners and local companies together to highlight sustainability, and
between the sale of raffle tickets and a portion of each lift ticket, raises quite a bit of money to help with
their programming.

In addition to our fundraising efforts, carpool incentives and projects, Arapahoe Basin has also integrated
sustainability into all of our training and orientation materials and built environmental awareness into every
department’s daily activities. There is a no-idling policy in place for all company vehicles, as well as for
guests. There are even sustainability purchasing guidelines that empower purchasers to make responsible
decisions, even at the cost of the company. All of these efforts and more combine to make Arapahoe Basin
as sustainable as it can be despite the often resource and energy intensive nature of our business. We
know we aren’t perfect yet, but we feel that every effort, no matter how small, is a step in the right direction.
Arapahoe Basin is committed to walking lighter on the planet, even in our ski (and snowboard) boots!
Aspen Skiing Company – Colorado

<table>
<thead>
<tr>
<th>INVENTORY CY 2016</th>
<th>MTCO₂e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>23400</td>
<td>Aspen, Aspen Highlands, Buttermilk, Snowmass plus all ancillary operations will reduce emissions by 18 percent under 2014 levels by 2020.</td>
</tr>
<tr>
<td>Scope 3 (Water)</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23,400*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Aspen Skiing Company continues to implement projects including: Elk Camp Vehicle Maintenance Shop conversion of T8HO to LED Direct Wire, Variable Frequency Drives at Snowmaking operations for Aspen Mountain and Snowmass, and T8 Linear Fluorescent to T8 LEDs at The Little Nell Back of House, Two Creeks Locker Room, Snowmass D&E, Riverside Garage, Buttermilk Rental Shop moving from 32w to 13w-16w lamps. Additionally Aspen has retrofitted 300w metal halides to 100w LEDs at Limelight Hotel – Aspen Pool and spa, and Club Commons exterior, conducted a Riverside Offices renovation with T8 Linear Fluorescent to T8 LEDs moving from 32w to 13w-16w lamps while also installing free cooling.

Other Progress

To learn more about Aspen’s sustainability efforts check out our 20th anniversary sustainability report – released in 2016: https://www.aspensnowmass.com/~media/aspensnowmass/pdfs/environmental/sustainability-reports/2016_sustainability_report.ashx and our website: https://www.aspensnowmass.com/we-are-different/take-action

Other sustainability links include:

https://www.aspensnowmass.com/we-are-different/protect-our-winters

https://www.aspensnowmass.com/we-are-different/supporting-the-local-community

https://www.aspensnowmass.com/we-are-different/programs-and-practices

In 2017 we celebrate the 20th anniversary of our Environment Foundation having donated over $3 million to more than 500 project across the Roaring Fork Valley to protect the environment: https://www.aspensnowmass.com/we-are-different/the-environment-foundation.

Also check out our green operations section for an ever growing list of our work: https://www.aspensnowmass.com/we-are-different/programs-and-practices/green-operations.

We constantly update our followers via our Sustainability Facebook page: https://www.facebook.com/groups/AspenSustainability/.
Beaver Valley Ski Club – Ontario, Canada

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>306</td>
<td>Beaver Valley Ski Club will reduce emissions by 6 percent under 2011-12 levels by 2020-21.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>318*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

**Reduce**

Beaver Valley did not have any reduction projects this year. Their significant greenhouse gas reduction this year from previous years is the result of recent “greening” of the regional electricity resource mix.

**Other Progress**

Beaver Valley Ski Club continues to maintain programs that reduce the club's environmental impact, energy consumption and greenhouse gas emissions. The club is often featured in local and industry media in regards to its sustainability programs which encourages fellow local resorts to integrate sustainability into their operations and culture. School groups and corporate groups often comment on the visible eco-efficiencies in the clubhouse.
Boreal Mountain Resort & Soda Springs – California

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_{2e}$</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>1380</td>
<td></td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>99</td>
<td>Boreal Ridge Corp. will reduce emissions by 20 percent under 2014 levels by 2020.</td>
</tr>
<tr>
<td>Total</td>
<td>1,480*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Boreal Ridge Corp. continued LED lighting upgrades mountainside and at their Shop. Additionally, they better managed their fire pit and schedule.

Other Progress

From our website and our Sustainability Message Board in Main Lodge: Snow is our livelihood. It’s our responsibility to protect our natural resources and make sure that we can enjoy winter sports for years and years to come. Boreal, along with our parent company Powdr Corp, is committed to reducing carbon emissions produced through our operations, educating guests, and advocating for sustainable policy and regulation.

Boreal Ridge Corp is proud to consider the environment as one of our key pillars in our culture and business. This means that we consider the environmental impact of our decisions and operations alongside the enjoyment and safety of our staff and guest communities, and our financial performance. Boreal Ridge Corp, along with the other POWDR Corp Resorts has joined NSAA’s Climate Challenge. The NSAA Climate Challenge is engaging ski areas across the country to take action and fight climate change. We have pledged to reduce our footprint by 20% below 2014 levels by 2020. This is in addition to reductions of over 500 annual tons, or approximately 30%, in the last 10 years through specifically targeted investments and decisions. We track our energy use on a monthly basis and consistently look for areas of improvement or investment.
Copper Mountain Ski Resort – Colorado

INVENTORY FY 2016 | MTCO₂e | TARGET
---|---|---
Scope 1 & 2 (Req) | 24,400 | Copper continues its absolute reduction goal of 12,000 MTCO₂e using 2011-2012 as a baseline.
Scope 3 (Solid Waste) | 787 |  
Total | 25,200* |  

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Copper Mountain Ski Resort installed LED and florescent lighting upgrades to their Base Area to reduce consumption, installed additional insulation at main snowmaking control building, installed electric vehicle charging station and installed additional occupancy sensors in several restroom facilities.

Other Progress

Copper Mountain continues its participation in the NSAA’s Climate Challenge and efforts to reduce its carbon footprint. During this reporting period, Copper Mountain initiated a major lighting retrofit program across its base area buildings. This effort has taken advantage of LED technology to decrease our energy consumption. Commercial lighting is everywhere across our base area buildings. Many of these applications used T8 and T12 linear fluorescent tubes. This existing equipment was replaced with new linear LED bulbs. These bulbs offer a 50-75% energy savings when compared to the original equipment. This efficiency upgrade has been applied to more than one thousand lighting fixtures, adding up to significant energy savings.

In addition to base area lighting upgrades, Copper continues its conservation efforts in other ways. For this reporting period, we doubled our recycling compared to the previous year. An alternative lift shack heating system, using wind and solar power generation, saved more than 500 gallons of propane. During this reporting period Copper installed its first electric vehicle charging station. To encourage use of electric vehicles we offered free charging and free parking in one of our premium parking lots.

Copper Mountain remains dedicated to NSAA’s Climate Challenge program and our goal of reducing our carbon footprint. We are continuing our lighting efficiency project into the next year and look forward to additional energy savings. Our resort Green Team remains engaged in finding new conservation opportunities. With the support of our parent company Powdr Corporation, we are optimistic about our conservation future.
Crystal Mountain – Michigan

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO₂e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>1,480</td>
<td></td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>397</td>
<td>Crystal Mountain will reduce emissions by 5 percent under 2014-15 levels by 2019-20.</td>
</tr>
<tr>
<td>Total</td>
<td>1,880*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Crystal Mountain installed two water bottle filling stations with drinking fountains, a BV golf course irrigation control system, LED lighting in overflow skier lot, a golf course bunker rake, and a Tier 4 golf course mower.

Other Progress

- We hosted a 5K & Fun Run to benefit "Wings of Wonder" Raptor Rehabilitation Center. Participation of nearly 100 individuals provided a $1100 donation to Wings of Wonder non-profit.
- School ski groups take bus transportation to and from the resort, reducing the number of cars on the road for individual transportation (precise number of trips and students transported not available).
- Partnered with the Bay Area Transportation Authority (BATA) bus system to provide skiers/riders & staff a public transportation option for traveling to Crystal Mountain this season from the Traverse City area (precise number of trips and skiers/riders transported not available).
- On premise complimentary resort shuttle encourages "parking" individual cars in favor of walking or group shuttle to other resort amenities.
- In year two of a three year contract with Renewable Choice Energy to purchase 100% electricity usage Green-e Certified American Wind credits = 360,000 Kwh. This offsets the carbon footprint of operating our Clipper Chairlift (175,000) and our Peak/Spa (185,000). Saving 522,000 pounds of CO₂ annually from entering the atmosphere.
- Crystal Mountain continues to purchase electricity from Cherryland Electric Cooperative and has long advocated to them our desire for renewable energy. In recent years, Cherryland's supplier, Wolverine Power, has added Michigan Wind 3 to its portfolio, which positions Wolverine favorably with significant renewable generation. When Michigan Wind 3 is complete, Wolverine expects to have more than 350 MW of wind generation in its portfolio, meaning Michigan cooperatives (Cherryland Electric Coop) will achieve close to a 30% renewable portion of the electricity mix.
Deer Valley Resort – Utah

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_{2e}$</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>10,100</td>
<td>Deer Valley Resort will reduce emissions by 5% under 14-15 levels by 20-21.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>451</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10,500*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Using the Rocky Mountain Power Lighting Incentive program Deer Valley was able retrofit some of their lighting and reduce their electricity consumption by an estimated 80,307 kWh.

Other Progress

- Deer Valley implemented a project to improve the Resort open space land around one of the resort's snowmaking ponds.
- Trails are being enhanced with signage provided for hikers. Dog waste receptacles were installed as well.
- Bags are recycled by staff members. Natural game fish were also reintroduced into the pond by the Utah Division of Wildlife Resources.
- SNOWsat technology was installed on one cat.
- The resort donated mountain uniforms to outfit 1,410 porters in Nepal.
- The resort provides employee shuttle busses for staff living at its employee housing units in Heber. Deer Valley offers its own shuttle service for guests, worked to increase city bus routes for staff, and a new Utah Transit Authority bus route from Salt Lake City.
- A resort committee worked together to offer digital signatures for liability releases throughout the Skier Services Division greatly reducing paper use.
- Almost 80% of resort staff utilize direct deposit for payroll checks.
Grand Targhee Resort – Wyoming

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO₂e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>2,770</td>
<td>Grand Targhee Resort will reduce emissions by 2 percent under 2013-14 levels by 2020-21.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>113</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2,880*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

**Reduce**

Grand Targhee completed multiple LED lighting retrofits in various locations, installed a new Doppelmayr Fixed Grip quad chairlift, and installed new filters at the on-site waste water treatment facility.

**Other Progress**

Grand Targhee Resort (GTR) completed several base area improvements with upgrades to lighting and water consumption. The lighting in our main lodge and base area lodging units was upgraded with LED fixtures. The resort worked with Fall River Rural Electric Cooperative on the lighting retrofit project which had an estimated payback time of less than one year and an estimated 172,000 kWh per year savings.

Improvements and upgrades to the main lodge bathrooms included sensor lights, low flow toilets and efficient sensor blade-design hand dryers. Our Waste Water Treatment Plant installed new filters and we saw an immediate decrease in the kWh usage at the plant after installation. The resort has also purchased 2 more water bottle filling stations to be installed this summer.

GTR is dedicated to recycling across the resort, and now offers recycling bins in every lodging unit at the resort, and off-site vacation rentals. GTR diverted over 25 tons of recycling from landfills this past season including over 265 lbs of lift tickets. This past winter all resort employees and lodging guests rode the shuttle for free, resulting in over 25,000 riders this winter season, up from 17,400 riders last winter. GTR promotes carpooling and departments have success with competitions like the ski patrol “clown car” program. The timers on lift house heaters and lights continues to minimize unnecessary electricity use.

Human Resources had some large success decreasing their paper waste stream by moving all Supervisor Handbooks online, signing up 66% of employees for paperless paychecks this winter, and having all hiring and employee paperwork available online.

Guest and employee education participation is still strong with our Resort Naturalist led snowshoe tours and summer hikes, and staffing a year-round Nature Center. Resort Naturalists host field trips with local schools and offer natural history training for all mountain employees.

The Protect Our Winters partnership program has donated over $80,000 to local organizations and to support sustainability projects in the community and at the resort.
Jackson Hole Mountain Resort – Wyoming

<table>
<thead>
<tr>
<th>INVENTORY CY 2016</th>
<th>MTCO$_{2e}$</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>7,230</td>
<td>Jackson Hole Mountain Resort will reduce emissions by 5% under 2009 levels by 2020.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>NR</td>
<td></td>
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<tr>
<td>Total</td>
<td>7,230*</td>
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</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce
Jackson Hole switched from a B10 to a B20 to reduce fuel consumption in their off-road vehicles.

Other Progress
Please check out Jackson Hole Mountain Resort’s “Environmental Responsibility” page if you are interested in learning more about their environmental efforts: https://www.jacksonhole.com/environment.html
Jiminy Peak Mountain Resort– Massachusetts

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>2,740</td>
<td>Jiminy Peak Mountain Resort, LLC will reduce emissions by 7% under 2011-12 levels by 2019-20.</td>
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<tr>
<td>Scope 3 (Solid Waste)</td>
<td>NR</td>
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</tr>
<tr>
<td>Total</td>
<td>2,740*</td>
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</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Jiminy Peak retrofitted LED lighting on 9 ski trails with ROAMview and replaced 366 snow gun heads with more energy efficient snow gun heads.

Other Progress

Jiminy Peak Mountain Resort has achieved its goal of net-zero electricity. Jiminy Peak now receives the equivalent of 100% of its electricity from self-developed local renewable energy installations. With a longstanding history and leadership in environmental stewardship, Jiminy has made major investments in both conservation efforts and renewable energy development. Conservation efforts have reduced Jiminy's power consumption by 35% over the past 10 years.

These projects have included building and mountain lighting retrofits, heat and oil recycling, SnowSat installation (a snow depth measure system developed by Piston Bully) and most notably a recent conversion of the entire snowmaking fleet to a new technology. This technology reduces the amount of compressed air by 50% while increasing snowmaking production by 62%, arguably one of the most efficient systems in the industry. Renewable energy projects include a 1.5 MW turbine installation, a 400kw co-gen installation and most recently a 2.3 MW solar installation.

Jiminy is not meeting this goal by purchasing credits from a third party renewable energy producer but rather self developing conservation and renewable energy projects. The combination of these efforts, and many more smaller initiatives, have helped Jiminy Peak achieve net-zero electricity generation.
INVENTORY FY 2016 | MTCO\textsubscript{2e} | TARGET
\hline
Scope 1 & 2 (Req) | 15,800 | Killington will reduce emissions by 5% under 11-12 levels by 16-17.
Scope 3 (Solid Waste) | 436 | 
Total | 16,200* | 

*Scope 1, 2, and 3 may not add up to Total due to rounding

**Reduce**

Killington Resort installed more efficient lighting upgrades around their facilities.

**Other Progress**

Please check out Killington Resort’s “Environment” page if you are interested in learning more about their environmental efforts: [http://www.killington.com/site/culture/environment](http://www.killington.com/site/culture/environment).
Lutsen Mountains – Minnesota

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>4,910</td>
<td>Lutsen Mountains will reduce emissions by 2% for the facilities and terrain that existed in our baseline year over the next 10 years. We will concentrate our efforts on our lodging facility.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>NR</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4,910*</td>
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</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

**Reduce**

Lutsen Mountains reduced their emission by adding insulation to the attic of Papa Charlie’s to increase the envelope’s R-value by 10, implementing an LED lighting retrofit of two lodging buildings, and replacing old PTAC units with more efficient models (converting from propane to electric).

**Other Progress**

An emphasis on stewardship ensures the natural assets that make Lutsen such a special place remain the cornerstone of a North Shore vacation for generations to come. In recent years, we have installed innovative wastewater treatment systems, formed the Poplar River Management Board which has invested $2.5 million in water quality improvements, installed a pipeline from Lake Superior as a sustainable source of water for our snowmaking and potable water for resort facilities and homeowners, worked to minimize the impact of summer maintenance by implementing best practices for trail clearing and work vehicle access, and partnered with Conservation Minnesota to create a ‘Favorite Places’ website to foster a connection to the natural environment throughout the state. Joining the Climate Challenge allows us to continue our efforts in environmental stewardship. This year we will be retrofitting old systems and increasing insulation values in order to make our buildings more energy efficient and reduce our greenhouse gas emissions.
Mammoth & June Mountain – California

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>14,400</td>
<td>Mammoth and June Mountain will reduce emissions by 6% under 2013-14 levels by 2019-20.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>NR</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14,400*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Mammoth and June Mountain continued lighting retrofits throughout its ski area resulting in an estimated 14,717 kWh electricity reduction. In addition, upgrades were also made to snowmaking pumping systems.

Other Progress

Mammoth and June Mountain (MMSA) completed phase one of upgrades to our snowmaking pumping system. This included retrofitting three of our main booster pumps with new bowls and impellers. This upgrade will bring our average overall plant efficiency per pump from 33.5% up to 72%. This can save an average of 116,389 KWh per pump in an average snowmaking year. These KWh savings translate to a 50.67-ton average decrease in CO2 emissions per pump. MMSA also replaced a diesel emergency standby generator with a more efficient, cleaner burning, propane powered unit.

MMSA has replaced six old, Tier 1 and Tier 2 engine snowcats with a new, more efficient Tier 4 engine snowcat. The Tier 4 standards set by the EPA require that emissions of PM and NOx be reduced by 90%.

Mammoth Mountain works in conjunction with the Town of Mammoth Lakes to offer a free bus system to both employees and guests. Employees from the surrounding towns are offered carpooling options and a bus that provides them with transportation to the mountain. MMSA also does a Bike to Work Week, where employees are encouraged to bike to work.

MMSA encourages its guests to recycle and participate in utility conservation within our hospitality venues. One of our lodging facilities now provides a kids eco-kit which focuses on educating the next generation.
Mt. Bachelor – Oregon

### INVENTORY FY 2016

<table>
<thead>
<tr>
<th>Scope</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>6,370</td>
<td>Mt. Bachelor will reduce emissions by 3000 MTCO$_2$e by 19-20 from 11-12 levels, RECs included.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>NR</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,370*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

**Reduce**

Mt. Bachelor installed an oil filter crusher at the maintenance shop to get 98% of the oil back out of the filter for reuse, added an additional bus to the shuttle fleet for employee commuting, and implemented a carpooling program for vehicles with four or more people inside.

**Other Progress**

December 17th, 2016 marked the grand opening of our newest lift, Cloudchaser. The installation of this lift can account for larger energy consumption numbers in the tracking inventory.

On April 22, 2017, Mt. Bachelor held the first Earth Day Celebration event. We hosted several eco-friendly and local companies including Protect Our Winters, Patagonia, Discover Your Forest, REI, and more. The event was a huge hit and we plan on making it an annual event.

Through the Protect Your Playground grant program, Mt. Bachelor and Powdr awarded $3,500 to two individuals in the community to pursue their outdoor and eco-conscious projects. The first grant will go to The Broomsmen, for their Recycle Your Butts project aimed at reducing the amount of cigarette butts on our streets and in our parks. The other grant is awarded to Kim for her Park Pad project, aimed at protecting trees and equipment.

Over the summer, additional lighting upgrades will take place and will be reported on for the 2017-18 season for the most accurate information. In the summer we are open and provide a lift served bike park, sunset dinners and scenic chairlift rides.

We want to thank the Brendle Group Climate Challenge Team, NSAA and CLIF Bar for organizing this year’s Climate Challenge and awarding Mt. Bachelor the Sustainable Slopes CLIF Bar cash grant!
Mt. Hood Meadows – Oregon

<table>
<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_{2e}$</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>3,600</td>
<td>Mt. Hood Meadows will reduce emissions by 6% under 2010-11 levels by 2019-20.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste &amp; Reimbursed Mileage)</td>
<td>35</td>
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<tr>
<td>Total</td>
<td>3,640*</td>
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</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Mt. Hood Meadows Replaced twelve 1,000 watt metal halide light fixtures with twelve high efficiency 300 watt Snow-Bright light fixtures.

Other Progress

We have undergone a massive LED conversion. We have increased the volume of our food waste diversion program significantly over last year.

We have removed ten 1000 watt metal halide light fixtures and replaced them with ten Snow-Brite 300 watt SNBT-FL-300wb2 fixtures.
Pico Mountain – Vermont

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<thead>
<tr>
<th>INVENTORY FY 2016</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
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</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>1,700</td>
<td>Pico will reduce emissions by 5% under 11-12 levels by 16-17.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,710*</td>
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</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

**Reduce**

Pico Mountain installed more efficient lighting upgrades around their facilities.

**Other Progress**

Please check out Killington Resort’s “Environment” page if you are interested in learning more about Pico/Killington’s environmental efforts: [http://www.killington.com/site/culture/environment](http://www.killington.com/site/culture/environment).
Snowbird Ski and Summer Resort – Utah

### INVENTORY FY 2016

<table>
<thead>
<tr>
<th></th>
<th>MTCO₂e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>18,100</td>
<td>Snowbird Ski and Summer Resort will maintain emissions at 2013-14 levels through 2024-25.</td>
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<tr>
<td>Scope 3 (Solid Waste)</td>
<td>664</td>
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</tr>
<tr>
<td>Total</td>
<td>18,800*</td>
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</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

### Reduce

Snowbird is committed to finding and implementing measures to reduce our carbon footprint while upgrading and expanding the resort, ultimately resulting in a net decrease in existing operations to compensate for existing lifts, buildings, and service facilities. The Snowbird Center, in particular, will be undergoing a renovation in the coming years, and Snowbird is already looking into efficient heating, lighting and electrical usage reductions with Rocky Mountain Power. This is why we have a target of maintaining emission levels for 2013-14 into the future, even as we expand.

Snowbird is currently testing out a Tier 4 Snow Cat which has reduced emissions, exploring alternative fuel options such as biodiesel and installation of electric vehicle charging for customers. Additionally, Snowbird has gotten recommendations for building a highly efficient new Snowbird Center through the WattSmart Program, improved the recycling program around the resort, diverted battery waste, implemented a multitude of initiatives to promote cleaner air quality, and implemented various projects focused on improving water quality and access.

### Other Progress

Snowbird has led and engaged in myriad sustainability and climate-related efforts including:

- **Air Quality**
  - On-air interviews with Snowbird about air quality and skiing in Utah
  - “Turn Your Key Be Idle Free” signage and advocacy
  - University of Utah Air Quality Monitors installed on top of Tram tower on Hidden Peak
- **Snowbird’s RIDE Program**
- **Employee Commuting**: UTA Ski Bus Ridership, UTA Rideshare and Canyon Transportation
- **Protect Our Winters Carpool Day at Snowbird**
- **TreeUtah**
- **Watershed Improvements**
  - Water conservation in the Cliff Lodge
  - Installed Water Bottle Fill Stations
  - Wander Your Watershed
- Snowbird Spill Prevention, Control and Countermeasure Plan (SPCC Plan)
- Creekside Cleanup
- Cottonwood Canyon Foundation and Snowbird Invasive Weeds removal Education, Advocacy & Memberships Education
- Snowbird Green Week! (June 19th - 23rd, 2017)
- Environmental Program Internship Program
- Partnership with University of Utah Atmospheric & Trace Gas Laboratory
- Tram Jam at Snowbird
- Low Carbon Commitment
- Utah Climate Action Network (UCAN) “Paths to Positive” Memberships
- Protect Our Winters
- Breathe Utah
- Utah Clean Cities Coalition
Squaw Valley & Alpine Meadows – California

<table>
<thead>
<tr>
<th>INVENTORY CY 2016</th>
<th>MTCO$_{2e}$</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>13,100</td>
<td>Squaw Valley</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>NR</td>
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<tr>
<td>Total</td>
<td>13,100*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Solar installation on Squaw Kids Building to reduce purchased electricity consumption and lighting retrofit of tram locker room and hallway lighting with T8 and LED fixtures.

Other Progress

Our biggest push this last year for climate change was hosting the first ever carbon neutral Audi FIS World Cup here at Squaw Valley. The carbon footprint included all emissions related to hosting the event: all dedicated mountain operations, snowmaking, dedicated lifts and groomings, emissions from all athletes, coaches and FIS Officials' travel, and accommodations/meals during the event. The total footprint came out to be 406 metric tons of CO2 and was verified by a third-party, Terrapass. This entire footprint will be offset over the next 16 years by a solar panel installation on the Squaw Kids building, to be constructed in the Summer of 2017. The solar project will include 52 panels and provide 32.2 megawatts annually (2,681 kWh per month).

Although this project will not offset the event's footprint right away, we felt it was a more powerful message to guests and employees that we spend money on an on-site project to demonstrate that solar can be incorporated into the mix to help reduce monthly electricity costs, instead of just purchasing offsets or RECs. Clearly, this will not eliminate the need for Squaw Valley Alpine Meadows to purchase electricity each month, but it will definitely reduce a portion of our usage which we feel is progress and another step in the right direction. We want our resort to incorporate renewable energy sources as much as it is feasible to operations so that we can remind our visitors that renewable energy is the key to a more sustainable future. Completing the carbon footprint for the Squaw Valley Audi FIS World Cup was also a test to create a template and show the entire FIS Organization that this is something that is readily achievable for each event they host in countries around the world. All it takes is some work behind the scenes and we can make a public stand against climate change and show the rest of the world we are trying to do something and encourage others to follow suit.
Steamboat Ski & Resort Corp. – Colorado

<table>
<thead>
<tr>
<th>INVENTORY CY 2016</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>12,400</td>
<td>Steamboat will reduce emissions by 5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>under 2014 levels by 2020</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>542</td>
<td></td>
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<tr>
<td>Total</td>
<td>12,900*</td>
<td></td>
</tr>
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</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce
Steamboat Ski & Resort Corp. installed a new shop light system which was more efficient and installed electric vehicle charging stations.

Other Progress
Our current electrical use does not clearly represent the existing conditions on the mountain. A number of meters were eliminated, relocated or combined. We are expecting to have a much better system in place next year with Yampa Valley Electric putting in smart meters. This will allow us to monitor our use in much greater detail.
Stratton – Vermont

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<tr>
<th>INVENTORY FY 2016</th>
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<th>TARGET</th>
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<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>8,160</td>
<td>Stratton Mountain Resort will reduce emissions by 10% under 2013-14 levels by 2019-20.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>368</td>
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<tr>
<td>Total</td>
<td>8,530*</td>
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</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Stratton improved and expanded their recycling program, installed occupancy sensors, performed various lighting retrofits, worked on reducing wood burning volume, and worked on sourcing wood locally.

Other Progress

Stratton Mountain Resort continues to keep the environment our top priority. Stratton is a member of the Vermont Green Hotel Program where we encourage guests to recycle, turn off lights, turn down thermostats and reuse towels and linens. We have seen a decrease in our hotels energy consumption which we feel this program has aided in.

Being a member of the EPA’s WasteWise program we track, as close as possible, the recycling of all products. The recycling program was reviewed, expanded to new categories and improved to encourage more recycling. There was also a focus on our composting and recycling efforts at large events that were not in line with our normal operations. As a result, our combined recycling tonnage increased 19% and our solid waste tonnage decreased 9% for 2016.

The energy committee continues to use our energy monitoring software to help in educating building managers on their consumption as well as identifying reduction possibilities. Meeting biweekly and reviewing the data, comparing it to previous years and discussing with the Facility Maintenance team has been a great success for us. We are excited about several projects that we have planned for the next two years that will take us closer to our reduction goals.

We are working diligently towards identifying and decreasing our footprint.
Sugarbush – Vermont

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<tr>
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<th>TARGET</th>
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</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>3,480</td>
<td>Sugarbush will reduce emissions by 5% under 2011-12 levels by 2019-20.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,680*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce
Sugarbush continued snowmaking compressor upgrades, resort-wide lighting upgrades, reducing solid waste production, and finished construction of a lift shack and water treatment facility that will reduce electricity consumption.

Other Progress
Sugarbush Resort is committed to preserving and improving the natural environment in which it is located. The resort has undertaken many projects to combat climate change and reduce our environmental impacts, from making significant financial investments in low-energy snow guns and LED lighting to utilizing toxin-free cleaning supplies across the resort as well as implementing storm-water remediation projects. We partner with many local, state and federal organizations including the U.S. Forest Service, VT Agency of Natural Resources, Friends of the Mad River, Mad River Path Association, Green Mountain Club and the Catamount Trail Association. Timbers Restaurant is a member of 1% for the Planet, a collection of business pledging one percent of revenues to environmental causes.

Our environmental initiatives include:

Energy
In addition to many lighting upgrades, in 2014 Sugarbush completed a 5 year, $5 million upgrade to its snowmaking system. This upgrade replaced the resorts traditional snowmaking technology with low-energy snowmaking guns. This upgrade has resulted in a reduction in energy consumption supporting ski area operations of approximately 24%.

In 2016 we entered into a partnership with Green Lantern Capital of Waterbury, Vermont to support the development of solar arrays in Vermont. Sugarbush’s purchase of the net-metering credits from Green Lantern provides an economic incentive for clean solar power generation in the state, and allows Green Mountain Power to provide clean energy to its customers, instead of having to import traditional coal generated power from outside the state.

Solid Waste Reduction
Sugarbush has seen a significant reduction in solid waste over the past few years. In addition to trash and recycling, composting is available in our food and beverage outlets, and in many of our administrative
offices. Since 2013 we have seen our diversion rate increase from 30% to 35%. We also continue to recycle waste oil, rubber, electronic waste and scrap metal.

**Public Transportation**
Sugarbush continues its partnership with Green Mountain Transit by providing free winter public transportation between our two mountains and throughout the Mad River Valley via the Mad Bus. Supporting Mad Bus encourages guests to choose local public transportation and lower CO2 emissions, reduce wear and tear on roadways and parking lots.

**Green Housekeeping**
The resort housekeeping team introduced non-toxic cleaning supplies in 2005. Resort-supplied shampoo, soap, conditioner, and lotion is biodegradable, and packaged in biodegradable and/or recyclable material. The resort linen program offers an optional reuse program for guests to eliminate unnecessary laundering. Housekeeping staff is trained to turn down thermostats, and turn off lights and televisions in unoccupied rooms.

**Safety/Environmental/Wellness (SEW) Committee**
In 1999, Sugarbush created a team of employees, supervisors, and resort management to aid in the implementation of a specific environmental management philosophy. The mission of this group, the Green Team, was to initiate environmental quality enhancements throughout the business operations by preventing pollution and environmental degradation. This goal needed to be met without compromising business objectives, while improving resource efficiency, materials management and handling, and environmental quality resort-wide. Programs such as Resort Green-Up Day and participation in the Way to Go Commuter Challenge were initiated by this group. In 2016 alone, 100 employees spent (collectively) 224 hours “greening up” resort property and the surrounding area. 2016’s Way to Go Challenge logged 34% of employees biking, carpooling, walking, and telecommuting their way to a savings of 5,822 commuting miles and 3,603 pounds of carbon saved.

In 2014, the Green Team was reorganized into the Safety/Environmental/Wellness Committee. This committee has made great strides in supporting resort recommendations to improve its three areas of focus. SEW has installed a water-bottle filling station in Gate House lodge. There have been improvements to waste management, such as the implementation of “Trash Talkers,” volunteers and staff who coach guests on how to recycle/compost/and dispose of their trash properly. There has been a formalization of a resort-wide no-idling policy and purchase and distribution of reusable water pouches for all staff. In the 2016-2017 winter season, the water bottle fill station was accessed over 5,000 times. The resort hopes to install more water-bottle filling stations in main base lodges for the 2017-2018 season.
Taos Ski Valley – New Mexico

<table>
<thead>
<tr>
<th>INVENTORY CY 2016</th>
<th>MTCO$_2$e</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
<td>3,600</td>
<td>Taos Ski Valley will reduce emissions by 20 percent under 2014 levels by 2020.</td>
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<tr>
<td>Scope 3 (Solid Waste)</td>
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<tr>
<td>Total</td>
<td>3,600*</td>
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</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce

Taos Ski Valley added 25 high efficiency HKD snowguns to the fleet, five of which were funded from the Sustainable Slopes Grant that Taos received. In addition, Taos continued replacing lighting with LEDs throughout the resort, most notably in the Vehicle Maintenance Facility.

Other Progress

This season we implemented a speaker series through our Welcome Center in connection with serving our Mountain Collective guests. We did two talks relating to environmental concerns: The Nature Conservancy and the USFS did a presentation on our collaborative effort with the Rio Grande Water Fund and we did a presentation on becoming the first ski area in the world to achieve B Corp certification. Additionally, we had an environmentally dedicated series scheduled in December that was cancelled due to weather. We also pushed our education through our Facebook page.
Telluride Ski Resort – Colorado

<table>
<thead>
<tr>
<th>INVENTORY CY 2016</th>
<th>MTCO$_{2e}$</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope 1 &amp; 2 (Req)</td>
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<td>Telluride Ski Resort will reduce emissions by 5% under 2011 levels by 2016.</td>
</tr>
<tr>
<td>Scope 3 (Solid Waste)</td>
<td>NR</td>
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</tr>
<tr>
<td>Total</td>
<td>16,200*</td>
<td></td>
</tr>
</tbody>
</table>

*Scope 1, 2, and 3 may not add up to Total due to rounding

Reduce
Telluride Ski Resort replaced boilers in the Ski School and Ticket Sales building with a highly efficient version. The old version was 70% efficient and the new version is 95% efficient.

Other Progress
We are making progress in reducing emissions, though a large hotel acquisition has skewed the tracking of our total MTCO$_{2e}$. Excluding hotels and focusing on Mountain and Resort Operations will give us a better gauge of our progress moving forward. We will be establishing a new baseline next season that excludes hotels, better reflecting our efforts to reduce emissions within Mountain and Resort Operations.
Next Steps for the Climate Challenge

The Climate Challenge continues to grow with new Challengers participating each year.

As always, the Challengers continued to collect data across their organizations, implement an emission reduction project, and many engaged management and staff in setting a reduction target. Meanwhile, the Challenge program has sought to provide the best support to Challengers as they undertake these tasks. Support from the Sustainable Slopes Grant Program to individual challengers has helped reduce carbon emissions as well.

As the Challenge enters its seventh year, Challengers and the program each will continue to seek to improve and grow. For example, there are four new Challengers participating in the 2017-18 season. The quality of information collected for inventories will also continue to improve, awareness of the target will increase, and reduction projects will be a more integral aspect of the planning and budgeting process for Challengers.

To boost media presence of both the Climate Challenge and the amazing efforts the Challengers are making towards climate emissions reductions, Brendle Group will have student interns when available to help resorts communicate their efforts through social media outlets.