

THE CLIMATE CHALLENGE:



Taking Sustainability to the Next Level

With NSAA's Sustainable Slopes program celebrating a decade of accomplishments in 2011, the ski industry can reflect on the significant progress it's made in its environmental stewardship and sustainability efforts. When the Sustainable Slopes Environmental Charter was first published in 2000, 172 resorts signed on to show their support. That number has now grown to over 300. More and more ski areas have developed initiatives to reduce their energy and resource use and to generate electricity onsite with wind and solar projects. Still other areas have stepped up their advocacy for climate change legislation, with 71 resorts signing a 2009 letter of ski industry support for a federal climate change bill that was then being considered in the U.S. Senate. ▶

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Yet with all of this progress, the scientific community largely agrees that climate change continues to accelerate, and given the potential consequences to the ski industry, continued leadership and bold steps are required. What's more, many people working in the ski industry already realize that proactive environmental management is ultimately more cost-effective than compliance-based environmental management. And while some may argue that the industry's contributions to climate change pale in comparison to the burning of coal by large energy plants, the visibility of the ski industry to millions of skiers and boarders every year provides a tremendous opportunity to lead by example, leveraging the industry's contributions several times over.

That's where NSAA's Climate Challenge comes in: As NSAA's newest initiative, the Challenge is engaging ski areas across the country to take action and fight climate change. The Challenge will

Example Ski Area Greenhouse Gas Reduction Targets

Jackson Hole Mountain Resort: Reduce emissions 10 percent on a per guest visit basis by 2015.

Park City Mountain Resort: Reduce emissions by another 7,000 metric tons of CO₂ by 2012.

not only result in measurable, quantifiable results and benefits, it will also help participating ski areas make tangible progress each year to fight climate change while reducing utility bills, and convey results for the benefit of skiers and riders, ski areas, resort communities, and our planet.

Why a Climate Challenge?

Even though there have been national policy failures to reach consensus on a game plan to confront climate change, that hasn't stopped many organizations and industry associations from forging their own path and taking action. Like many other climate and sustainability initiatives spearheaded by both the public and private sectors – from the Green Sports Alliance for professional sports to the California Sustainable Winegrowers Alliance and the U.S. Mayors Climate Protection Agreement – the Climate Challenge was developed to provide ski areas with a higher bar for sustainability performance and a formal program through which ski areas could

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

HOW NSAA'S CLIMATE CHALLENGE WORKS

Ski areas that pledge to participate in the Climate Challenge acknowledge the opportunity to recognize and reduce their own contributions to climate change in a transparent, credible way. Informed by a program development Steering Committee that comprises ski areas, NSAA, and other stakeholders, the Challenge was built around four required steps: Inventory, Target, Reduce, and Report. Beyond these steps, resorts are encouraged and supported in their efforts to advocate for climate change action, link to and support climate action planning in their communities, educate, and mentor other resorts. Ski areas wishing to participate in the Challenge must simply be an endorser of NSAA's Sustainable Slopes charter and willing to commit annually to the Challenge's four program steps.

After a ski area has signed up for the Challenge, it will receive technical support and is invited to participate in an introductory orientation and training session with other participating areas – held this year during NSAA's Winter Conference at Squaw Valley, Calif.

"The Challenge is really meant to provide a simple, cost-effective, streamlined four-step process for resorts to inventory their emissions, set reduction targets, and move to taking action," says Judy Dorsey, president of Brendle Group, a Colorado engineering firm providing program development, training, and technical support for the Challenge.

Step 1: Inventory

The first step for resorts in the Challenge process is to compile a greenhouse gas inventory for their area's operations. This includes picking a baseline year for the inventory, collecting the necessary data, and entering data into the customized Inventory and Reporting Tool provided to each resort. Conducting a greenhouse gas inventory offers participants many benefits beyond just knowing their major sources of emissions. An inventory helps set a baseline from which to measure progress in reducing emissions from year to year. It's also useful in setting a target for reducing impacts on climate change, for prioritizing opportunities to reduce emissions, and for tracking the aggregated impacts of participant efforts. Applying emission factors from The Climate Registry's General Reporting Protocol, an established third-party reporting protocol, the inventory includes emission sources under operational control of ski areas – from natural gas, propane, fuel oil for buildings and diesel, and gasoline for fleets – to purchased electricity for snowmaking, lifts, and lodges. At their discretion, resorts may also track emissions from solid waste, commuting, and business airline travel.

"With 10 to 20 inputs into the tool, resorts can get a pretty good sense of their greenhouse gas emissions," notes Seth Jansen, an engineer at Brendle Group who is helping provide technical support to Challenge participants. "We tried to make



the inventory process as straightforward and easy as possible."

Step 2: Target

The second step of the Challenge process is to set a specific greenhouse gas reduction target. Participating ski areas are encouraged to establish targets based not just on the results of their inventory, but also to look at other considerations such as their projected growth, other climate initiatives in their region, and how aggressive they wish to be in pursuing reductions. "We encourage resorts to take a

top-down and bottom-up approach in establishing their targets," says Jansen, noting that there are a variety of ways to look at reduction targets – from percent reductions over a baseline to absolute tons of greenhouse gas emissions to emissions per square foot of building space.

Step 3: Reduce

To encourage action, ski areas participating in the Challenge are asked to commit to implementing at least one onsite greenhouse gas reduction project each year. Projects can range from energy reductions in buildings to increasing efficiency in fleets, snowmaking, or lift operations. While the purchase of renewable energy credits (RECs) or carbon offsets are considered a means of reduction, these purchases are not recognized as a reduction project within the confines of the Challenge. This is intended to encourage resorts to implement projects onsite.

Step 4: Report

For the final step of the Challenge process, participating resorts report on their progress over the previous year using the summary of results provided in the greenhouse gas reporting tool. Each report includes the ski area's greenhouse gas emissions in metric tons carbon dioxide equivalent, the stated reduction target, a description of the reduction activities, and the total reduction achieved in terms of the stated goal. NSAA will provide participants with an online record of reduction activities in 2012 to facilitate sharing and learning opportunities.

Climate Challenge reports also provide participating ski areas additional advantages. Participating areas, for example, will have a greenhouse gas inventory developed in alignment with an accepted greenhouse gas inventory protocol and reviewed for consistency with industry norms, as well as a method for disclosing those emissions along with a target and reduction efforts. Should a ski area wish to pursue third-party verification, certification, or additional disclosure of its emissions – such as the Climate Registry – the Climate Challenge inventory and reporting system forms a good foundation for such additional efforts. –DW ■



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2011 Climate Challenge Participants

Alta Ski Area
Arapahoe Basin
Canyons Resort
Jackson Hole Mountain Resort
Jiminy Peak Mountain Resort
Mt. Hood Meadows Ski Resort
Park City Mountain Resort
Telluride Ski & Golf Resort

contribute their efforts to address one of the most pressing issues facing the industry.

The concept of a "challenge" was inspired by many similar programs that other industry associations, local governments, and higher education institutions have used to inspire and motivate action. The goal of the Climate Challenge, structured to be a continuing, ongoing program that will allow an increasing number of ski areas to participate, is not just to raise the standard for ski areas wishing to take their sustainability performance to the next level. It's also intended to build on established and credible greenhouse gas inventory protocols and ensure a transparent, data-



Climate Challenge Goals

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 for participating ski areas and the public.

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

Easy: The program will provide participating ski areas with guidance and tools to make participation as simple as possible.

Well-recognized: The program will provide recognition for participating ski areas and for high performance.



Beyond Requirements: Encouraged Elements of the Challenge

There are numerous ways to reduce greenhouse gas emissions. While not all of these are reflected in the ski area's inventory, they may still have a significant impact on global emissions. These activities will be recognized and supported by the Climate Challenge and include the following:

Skier transportation programs

Skier education/communications

Mentoring local community

Mentoring of other ski areas

Supporting legislation (i.e., through NSAA efforts)

Other public disclosure or reporting

Adaptation planning

Forest management, sequestration, and land use

Purchase of renewable energy credits or offsets

driven inventory, emissions reduction plan of action, and reporting process for both the ski industry and the public. From the perspective of the ski areas, participating in a collaborative challenge process also provides a cost-efficient approach to greenhouse gas reduction, leveraging the investment of ski area participants and sponsorships to deliver more value than would otherwise be possible with individual investments. Finally, the guidance and tools provided to participants help to create an easy path for ski areas to participate, while recognition helps boost the visibility of high-performing ski areas and provides leadership by example for peer ski areas, communities, and visitors to follow.

"Ski areas have been practicing formalized sustainability for a decade through NSAA's Sustainable Slopes program, but this is the first time we've offered a more cohesive strategy and tools to quantify and prioritize impacts, set goals, and monitor progress," notes Geraldine Link, NSAA's public policy director.

Tangible Benefits To Participating Resorts

In addition to participating in a credible inventory and emissions reduction process, participating ski areas receive a range of tangible benefits from committing to the Challenge. Ski areas are provided free and ongoing access to a custom Excel-based greenhouse gas inventory and reduction planning tool – the only such inventory tool customized specifically for ski areas that provides

FIRST YEAR OF PROGRESS

It the inaugural year of the Climate Challenge, a total of eight resorts signed up to participate in the initiative. Some ski areas such as Oregon's Mt. Hood Meadows saw participation in the Challenge as a way to jump-start their climate efforts.

"At Mt. Hood, we have wanted to calculate our carbon footprint for several years and this opportunity was too good to pass up," says Heidi Logosz, sustainability manager for the ski area.

For others, the Challenge was a perfect fit with their ongoing climate and sustainability initiatives. According to Jon Bishop, risk and safety manager environmental coordinator for Wyoming's Jackson Hole Mountain Resort (JHMR), the ski area pledged to participate in the Challenge because environmental responsibility is intrinsic to the culture of the resort and its staff.

"Jackson Hole Mountain Resort has a strong desire to work with industry partners to develop inventories, set goals for reduction, and measure our and other mountain resorts' successes in reducing the industry's overall carbon footprint," says Bishop. He also notes that the Challenge's requirement to establish a reduction goal fit well with JHMR's already established quantitative environmental goals, which include reducing electricity, fuel, propane, water, waste, and CO₂ emissions by at least 10 percent per guest visit by 2015 compared to its 2009 baseline.

As an example of specific projects and initiatives that JHMR has developed to further its reduction goals, its vehicle maintenance department has modified a Ford Excursion and a Chevy 3500 delivery truck to operate on waste vegetable oil, which recycles 100 percent of the used oil from all JHMR dining facilities. Its mountain facilities department also successfully modified a number of heating furnaces and also added programmable building automation controls, which have resulted in a 20 percent reduction in propane use in one year. All JHMR employees are also now invited to identify next steps for their department based on their particular environmental impacts. At Utah's Park City Mountain Resort, Director of Environmental Affairs Brent Giles notes that projects for the summer of 2011 included installing a 12kw vertical axis wind turbine and a 5.7kw solar array, and purchasing 17 more energy efficient snowmaking towers – all to help pursue a further reduction in greenhouse gas emissions of 7,000 tons of CO₂ equivalent by 2012. "Considering the environment whenever we are making decisions is one of our core values," notes Giles.

Utah's Alta ski area has been tracking its greenhouse gas emissions since 2007, but as a Challenge participant, it recognizes the avenue for which to take its efforts to a higher, more challenging level, says Maura Olivos, Alta's sustainability coordinator.

"The Climate Challenge timing fit perfectly with our desire to better understand our greenhouse gas emissions as well as to receive guidance on reduction goals," says Olivos.

Meanwhile, Sha Miklas, environmental manager for Colorado's Arapahoe Basin, sees similar opportunity in the Challenge.

"We strive to continually improve our environmental performance in order to provide enjoyment of Arapahoe Basin for future generations of snow and mountain enthusiasts," says Miklas. "It will be really interesting to see how this Challenge affects our environmental culture as well as our environmental impact." –DW ■

a very cost-effective alternative for expensive off-the-shelf greenhouse gas accounting software options. They also receive a Climate Challenge Guidebook to help with decision-making and strategies, and have access to on-call, customized troubleshooting support from a consultant. Training for a main point of contact as well as middle and upper management is also provided along with materials for raising awareness and educating ski area middle and top management to build their support for the program. Finally, participating ski areas receive recognition through NSAA and have access to mentoring and general collaboration with peer resorts.

Financially, the benefits of Challenge participation are also compelling for ski areas. For an up-front investment of \$2,000, participants receive the equivalent of more than \$10,000/year in software tools, consulting, and technical assistance services. Financial benefits also include free marketing through a number of channels, along with recognition in the *NSAA Journal* and on NSAA's website. Participants may also use the Climate Challenge logo in their promotional efforts, are recognized in NSAA press releases, and receive a press kit to support marketing of participation and results.

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ENROLL NOW FOR CLIMATE CHALLENGE 2012

With the Challenge's first-year participants completing their 2011 greenhouse gas emission inventories and implementing projects, the initial round of reporting on progress toward reduction targets will take place in the first quarter of 2012, with awards for outstanding performance presented at NSAA's National Convention and Tradeshow to be held May 6–9 at the Grand Hyatt San Antonio, San Antonio, Tex. Results will also be published in NSAA's 2012 annual report. For other resorts interested in joining the Challenge, new enrollments will be accepted from February to April 2012, with training taking place at NSAA's National Convention.

"We're very excited to see the first year's results and the overall impacts of the Challenge," notes NSAA's Geraldine Link, public policy director. "We hope this will set in motion long-standing commitments from a growing number of resorts helping to lead by example and save our snow for future generations." –DW ■

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