ENVIRONMENTAL CASE STUDIES

Overview –

Snow-Bright™ lighting from Tesla Induction Lighting Co™ uses proprietary LUMENTEC® technology to provide a high color temperature spectrum with a color rendition index (CRI) of .95 without excessive glare or light pollution. This unique approach combines a wide area magnetic induction light source with specialized nano-particle reflectors to create a rapidly dissipating "light field" that can refract through the snow surface and comply with Dark Sky guidelines for ecologically sensitive areas. The LUMENTEC® System addresses serious problems associated with high intensity LEDs that have a substantial blue bias as well as the energy efficiency drawbacks of metal halide (MH) and high pressure sodium (HPS) fixtures.

Visual acuity is essential for ski area venues. Conventional lighting like MH and HPS requires very high powered fixtures from 400W to more than 1,500W. This is because the unbalanced spectrum wastes light that is outside of the most effective range for human sight known as visually effective lumens (VEL). Both MH and HPS emit significant heat that registers as infrared, but cannot be seen. New LED fixtures are cold at the light source which is not appropriate for slope venues because they are subject to ice and snow obstruction. Unshielded LEDs are dangerous for direct viewing because they can damage the retina. High intensity LED lights emit too much glare to meet Dark Sky guidelines and the projection of blue light is a major drawback.

A 300W Snow-Bright™ fixture can replace a 1,000W MH or 1,200W HPS while also eliminating 95% of the in-rush current. At the same time, the higher quality light increases visual acuity with less intensity, solving Dark Sky concerns. Snow-Bright™ technology has been installed at the following example locations:

Snow King	Jackson Hole, WY
Snowy Range	Laramie, WY
Powder Mountain	Eden, UT
Steamboat Springs	Steamboat Springs, CO
Campgaw	Mahwah, NJ
Mt. Peter	Warwick, NY

Each location had specific challenges and requirements regarding Dark Sky goals and/or environmental issues.

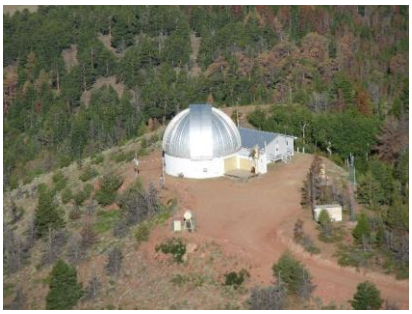
Snow King –

Snow King Mountain is located at the southeast boarder in the Town of Jackson Hole, Wyoming. Founded in 1939, it is one of the oldest western ski areas. The mountain is known for the "steepest slope" in the continental U.S. and hosts a variety of competitions. Race training for the local residents is usually conducted into the night and the mountain sought to upgrade its MH and HPS lighting to something more energy efficient and environmentally friendly. Since the mountain is a not-for-profit organization, Snow King needed grants to help cover upgrade costs. After investigating available energy efficient lighting alternatives, management decided to install Snow-Bright™ 300-watt fixtures to replace 1,000-watt MH and HPS lamps.

To gain environmental approval and obtain grants from the Teton Conservation District, Snow-Bright™ technology was reviewed and evaluated by the Land Stewart and Staff Biologist for the Jackson Hole Land Trust as well as the Town Board and the National Forest Service. After extensive review and a field trip to the Snow-Bright™ installation in Steamboat Springs, CO, the retrofit was approved. There was a 75% reduction in operating energy and a 96% drop in in-rush current. The project received Conservation District grants as well as incentives from Rocky Mountain Power.

Snowy Range –

Snowy Range is located within the Medicine Bow-Routt National Forest in Laramie, Wyoming 20 miles away from the University of Wyoming Infrared Observatory on Jelm Mountain. Snowy Range management wanted to install a new tubing park with nighttime operations requiring lighting. The project faced many challenges that included getting approval from the Observatory Director, the National Forest Service, the Town Council, and several environmental advocacy groups. Of primary concern was the approximate 6,500K color temperature that implied a high concentration of ultra-violet and near ultra-violet light as well as blue spectral bias. The Observatory Director was concerned that the light would be detected by, and interfere with studies conducted by their facility.



The National Forest Service required that the light would not intrude beyond tubing park boundaries with any concentration. There was also concern about the potential impact upon wildlife. A bat advocacy group insisted that the ballasts could not emit sounds from 12,000hz to 22,500hz. The lamps needed to be silent with <20dB at a distance of 2.54cm.

Tesla Induction Lighting Co™ Lighting agreed that if the fixtures did not meet all requirements of the various groups, it would accept the return of the fixtures. Field visits were made to Steamboat Springs to conduct initial light level and sound level tests. After passing preliminary review, the installation was completed. There was no detection of blue spectrum light above pre-installation ambient levels by the Observatory and there were no objections to the use of Snow-Bright™ fixtures. Noise levels were appreciably less than 20dB at 2.54cm distance from the ballast housing. Light levels fell below ambient levels of a full moon on a clear night beyond the tubing park boundaries. The installation was approved by the Town Council and is up and operational.

Powder Mountain –

Located in Eden, Utah between Weber and Cache counties, Powder Mountain relies upon natural snowfall within a variety of nature reserves. New management decided to add lighting to slopes serviced by the central lift and various facilities. Powder Mountain relies upon expanding resort real estate and was concerned about the environmental impact of lighting as well as the potential disturbance to adjacent residential complexes.

Snow-Bright™ was selected and approved based upon the experiences in Jackson Hole and Steamboat Springs. The lighting has had no adverse impact upon observed wildlife or any objectionable encroachment on residential areas within viewing range of the mountain.

Steamboat Springs Ski Resort –

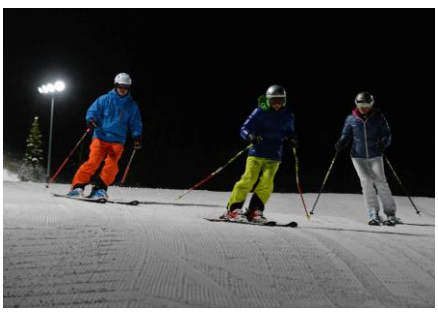
Steamboat Springs faced a wide range of challenges for plans to add night skiing to their venue. Part of the mountain borders on National Forest land while a large condominium and private home community exists on the east and west side of the intended nighttime slopes. Steamboat Springs has a very active environmental advocacy population.

A presentation and demonstration of Snow-Bright™ technology was scheduled for the Town Council in March of 2013 using a single fixture mounted to a snow-gun tower. After proving light dispersion and dissipation could be controlled, the technology was presented to adjacent property owners and the town at large. After weighing the research and demonstration, the project was approved by the Town Council. Representatives from the National Forest Service withdrew objection to the project.

The grand opening was December 20, 2013 with an installation covering 5 trails with 1,100 vertical feet. Terrain includes beginner, intermediate and advanced slopes as well as a half-pipe and snow park. Unaltered pictures taken from the town show the slopes are almost imperceptible from a modest distance. Even as close as the base area, light pollution is essentially non-existent.

Since the more advanced slopes were to be used for race training and competitions, high visual acuity was an essential requirement. Although stars are visible from the top of "See Ya" and "See Me" trails, the clarity of terrain is uncompromised and substantially better than conventional metal halide or sodium lighting. There is no flicker or intense glare like LEDs which were rejected as a potential alternative technology.

The project proved so successful that Steamboat Springs embarked upon a new exclusive race venue in conjunction with the Winter Sports Club. A new trail called "All Out" was excavated during the summer of 2015 and illuminated with Snow-Bright™ technology. This new venue is the host of the NCAA Championships held on March 9th, 2016. Racers have

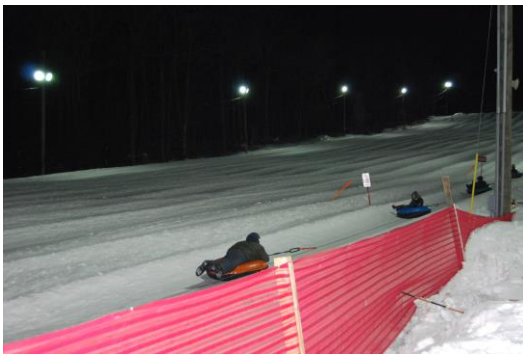


clocked downhill speeds exceeding 80mph at night and competitors claim Snow-Bright™ lighting is *far superior* to daylight because the sun position is not a factor in visual perception and cloud induced flat lighting does not occur.

The extremely high .95 CRI and full diffusion science eliminates forward shadowing for a clear visual perspective with sharp color distinction and contrast. The installation was featured on the front page of the *Denver Post* and full coverage articles in *NSAA Journal* and *SAM* (Ski Area Management) *Magazine.*

Campgaw –

Campgaw is located within a New Jersey State Park area with new strict light pollution guidelines. The original installation consisted of 1,000W metal halide and high pressure sodium fixtures. Campgaw was implementing a new tubing area that came under new regulations requiring 1 foot candle (fc) of emergency light on all access and egress areas for the magic carpet and lifts. Campgaw uses diesel generators to power emergency lighting infrastructure. The new regulations would have required a substantial investment in upgraded lighting and power; however, any retrofit would need to fall within Dark Sky guidelines.



Snow-Bright™ lighting provided the solution with ample light on all entrance and exits to lifts and magic carpets as well as walkways to snow venue areas. The lights were approved by the Park Service and Town Council after submitting photometric layouts for the newly designed areas. As the picture illustrates, the park area beyond the tubing boundary is completely dark and unaffected.

Mt. Peter –

Mt. Peter was the first Snow-Bright™ installation. Mountain owners wanted to respond to concerns that lighting was not optimal for night skiing and race training. Mt. Peter had installed generic magnetic induction lighting that failed to provide sufficient visual acuity due to low color temperature and poor dispersion.

Snow-Bright™ fixtures were initially installed on the advanced slopes for training and competitions. The quality was viewed as so exceptional that lighting has been expanded to include beginner and intermediate areas and a new tubing park. Snow-Bright™ lamps are also deployed in the outdoor seating area for their bar.

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