



CUSTOMER CASE STUDY

Park City, Utah

DEER VALLEY RESORT × POWDER WATTS

Smart roofs. Real winter impact.

Heat tape automation across Deer Valley's day lodges



SNOW PARK LODGE | DEER VALLEY RESORT

ONE WINTER OF IMPACT

344.53

MWh saved

344,531 kWh

~\$24,000

utility savings

Energy + demand charges

85%

project cost covered

Rocky Mountain Power



Technology developed with support from
the **U.S. National Science Foundation**



Better visibility. Better winter operations.

Deer Valley paired AI-enabled heat tape controls with roof monitoring to reduce electricity use and give facilities teams a clearer view of building protection.

**EMPIRE CANYON LODGE****SILVER LAKE LODGE**

THE CHALLENGE

Ice dams, roof leaks, and costly repairs were compounded by a basic visibility problem: the resort could not readily see where heat tape was failing to work.

THE RESPONSE

Deer Valley implemented Powder Watts controls across its day lodges. Automation delivered energy savings while roof monitoring helped close the maintenance visibility gap.

HOW THE TECHNOLOGY WORKS

01 See the roof

Cameras observe snow, ice, and melt conditions.

02 Control the heat

Cloud software automates heat tape switching.

03 Stay informed

Remote visibility helps staff assess roof conditions.

SAVINGS THAT REACH THE UTILITY BILL

Approximately \$24,000

in combined energy and demand-charge savings in one winter.

Energy not consumed	\$13,976
Demand charges avoided	~\$10,000
Combined winter utility savings	~\$23,976

CLIMATE IMPACT

344.53 MWh

electricity saved

262.6 tons

CO₂ avoided

UTILITY SUPPORT

85%

of Deer Valley's project cost was covered by
Rocky Mountain Power.

Rocky Mountain Power · 85%

Deer Valley · 15%



FROM RESEARCH TO RESORT OPERATIONS

Powder Watts' vision-enhanced heat cable control R&D; received **\$274,922** through **U.S. National Science Foundation SBIR Phase I Award 2224907.**

[NSF award record ↗](#)

Winter results: Deer Valley project narrative by Victoria Schlaepfer. Total utility savings combine \$13,976 in energy savings with approximately \$10,000 in avoided demand charges.

In Victoria's words

Victoria Schlaepfer

Former Head of Sustainability, Deer Valley Resort

Torus Clean Energy Project of the Year

Project: Deer Valley Resort X Powder Watts Heat Tape Automation

Lead organization: Deer Valley Resort | Additional partners: Powder Watts

DESCRIPTION & CLIMATE IMPACT

"In the age of technology and AI, we are seeing more and more that sustainability and automation can go hand in hand. Nothing makes this point more evident than the AI-heat tape controls of Powder Watts. With technology now mounted on the roof of your building, you have maintenance, cost-savings and energy-savings all in the palm of your hand. This is the idea that brought the full automation of Deer Valley Resort's heat tape to life. The Resort had been struggling with ice dams and the inability to see where areas of heat tape were not working, causing roof leaks and expensive repairs. Powder Watts not only was able to show substantial energy and cost savings through the installation of their project but they also helped fill a gap in maintenance visibility at the Resort. Deer Valley Resort implemented heat tape controls across all of their day lodges, saving an estimated \$13,976 in energy and 344,531kWh in just one winter. The best part of the project? Rocky Mountain Power views heat tape controls as a major grid resilience play and helped to cover 85% of the cost to Deer Valley, helping them bring the project to life. As grid resilience becomes a major conversation for utilities across the country, this project is a key example of how new, innovative technologies can help to reduce demand on the grid in colder climates. It is also an important example of how Mountain Towns are innovating to help solve problems in their unique environments."

DATA / OUTCOMES

"In a winter time period the project saved 4,380 hours of runtime and included a 344.53 MWh saved. This equates to 262.6 tons of CO₂. Also equates to a \$13,976 savings in energy not consumed and about \$10,000 in demand charges avoided through the utility."

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Photography: © Deer Valley Resort. Snow Park, Empire Canyon, and Silver Lake lodges.

Snow Park photo source

Empire Canyon photo source

Silver Lake photo source