



Balancing Long Operating Hours, Sustainability Goals, and Customer Comfort

See how H&M leveraged advanced rooftop controls to achieve sustainability goals and improve customer comfort while reducing energy costs.



ABOUT H&M

H&M is a Swedish multinational clothing retail company known for its fast-fashion clothing for men, women, teenagers, and children. H&M and its associated companies operate in 62 countries with over 4,500 stores. The Folsom, California, location is in the Palladio at Broadstone Shopping Center, a premier Northeast Sacramento shopping destination.

THE CHALLENGE

Retailers use a lot of energy due to their extensive hours. Add to this the need for a comfortable ambient temperature that allows customers to shop happily, and you've got a recipe for high utility bills. The Folsom H&M needed an approach to heating and cooling that would factor in the store's unique operating needs and the comfort of its customers.

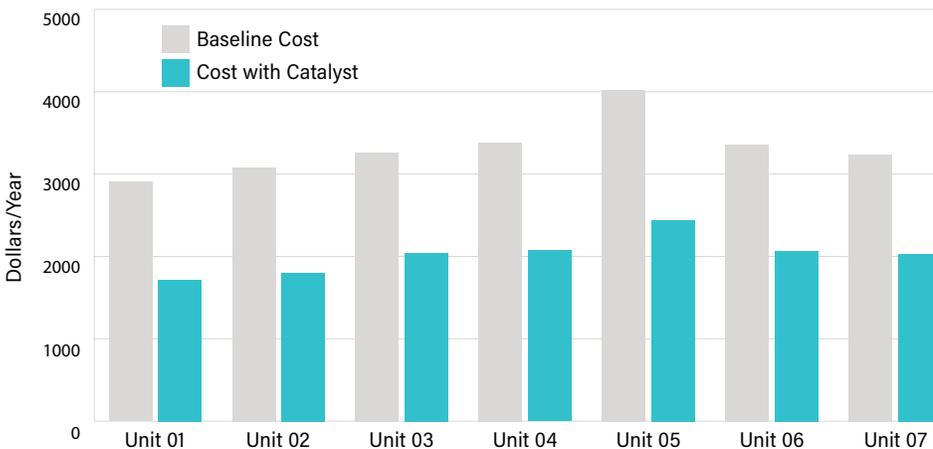
Additionally, H&M has set ambitious sustainability goals covering areas such as manufacturing, circularity, climate resilience, and renewable energy. In fact, H&M has set its sights on being climate positive by 2040, and in order to achieve this goal, the clothing retail company has keyed in on four areas involving [energy efficiency](#): "We aim to be [energy efficiency] leaders in our industry through investments in our own operations and by developing, training and supporting our business partners."

THE SOLUTION

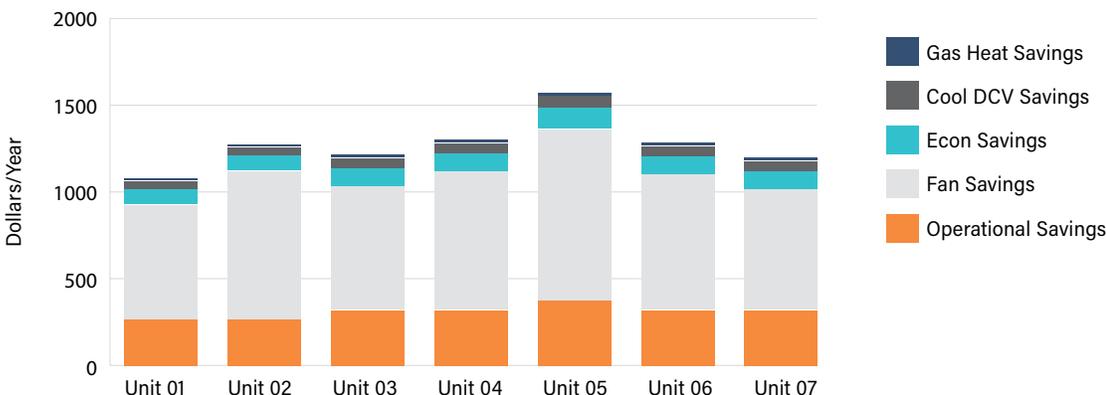
H&M needed to meet its sustainability goals and reduce the amount of energy the Folsom, California, store was using. H&M needed a company to provide a full-store audit in order to identify areas that had the potential for increased efficiency.

H&M identified Taper as a potential candidate. After a comprehensive walkthrough, Taper's field staff recommended advanced rooftop controls (ARC), which are a combination of a demand control ventilation (DCV) system, advanced digital economizer controls (ADEC), and variable frequency drives (VFD). This offered H&M the largest potential for meeting its energy-efficiency and sustainability goals, thereby reducing monthly energy costs while maintaining if not improving customer comfort.

Equipment Energy Usage - Baseline vs. w ARC



Equipment Energy Savings by Category



DCV is paramount to customer comfort and energy savings. The [DCV system](#) is designed to optimize building ventilation on the basis of the number of occupants in a store. When there are more occupants—for example, during a weekend sale—more ventilation is needed to maintain a low level of indoor pollutants. When there are fewer occupants—for example, while the store is closed—less ventilation is needed.

ADEC integrate outside air free cooling with mechanical cooling over a wider range of outdoor air temperatures. These controls provide electricity savings by decreasing the need for compressor energy.

VFD on the supply fan convert it from single speed to multispeed. This feature saves electricity because reducing fan speed reduces fan power consumption.

THE BENEFITS

The costs of these savings solutions were partially covered through incentives available via our Sacramento Municipal Utility District (SMUD) partnership. Additionally, this is one of the only rebated retrofits that can extend the life of existing equipment. All in all, the final project benefited the business as well as the environment, and the results speak for themselves.



1

Initial Locations



3,700

Combined
Annual KWh
Saved



\$8,962

Annual Utility
Savings



2.2

Simple Payback
(Years)



ABOUT TAPER

Taper is a B-Corp subsidiary of Ecology Action that provides mission-driven building-efficiency solutions and specializes in holistic building optimization for HVAC, refrigeration, interior and exterior lighting, and water systems. Our services also include energy audits and incentives management. We've provided value to a broad range of grocery, retail, franchise, and hospitality customers. Our tailored approach to meeting the needs of each client ensures seamless project management and delivery of large-scale building-efficiency solutions that yield dependable ROI and reduce carbon emissions.