

Small Building Controls Operations & Maintenance Success Story

LUSH

LUSH is a retailer of fresh handmade cosmetics made with ethically sourced ingredients and minimal packaging with over 400,000 square feet of retail space across North America. In the US, LUSH shops are primarily located in malls and lifestyle centers with around 14 additional high street locations. Following a rapid expansion in 2018-2020, LUSH was eager to add HVAC controls to improve customer and staff comfort, protect products sensitive to high temperatures, and reduce energy and emissions from retail stores.



Controls Upgrade Project

Championed by the Sustainability Team, LUSH uses SiteSage by Powerhouse Dynamics across 183 stores (>300,000 sq. ft.) to streamline maintenance, enable energy-efficient operations, and mitigate occupant comfort complaints. LUSH completed measurement and verification at a sample of their sites and saw an average electricity savings of 17%. The controls have been so beneficial, that LUSH installs them at all new stores.

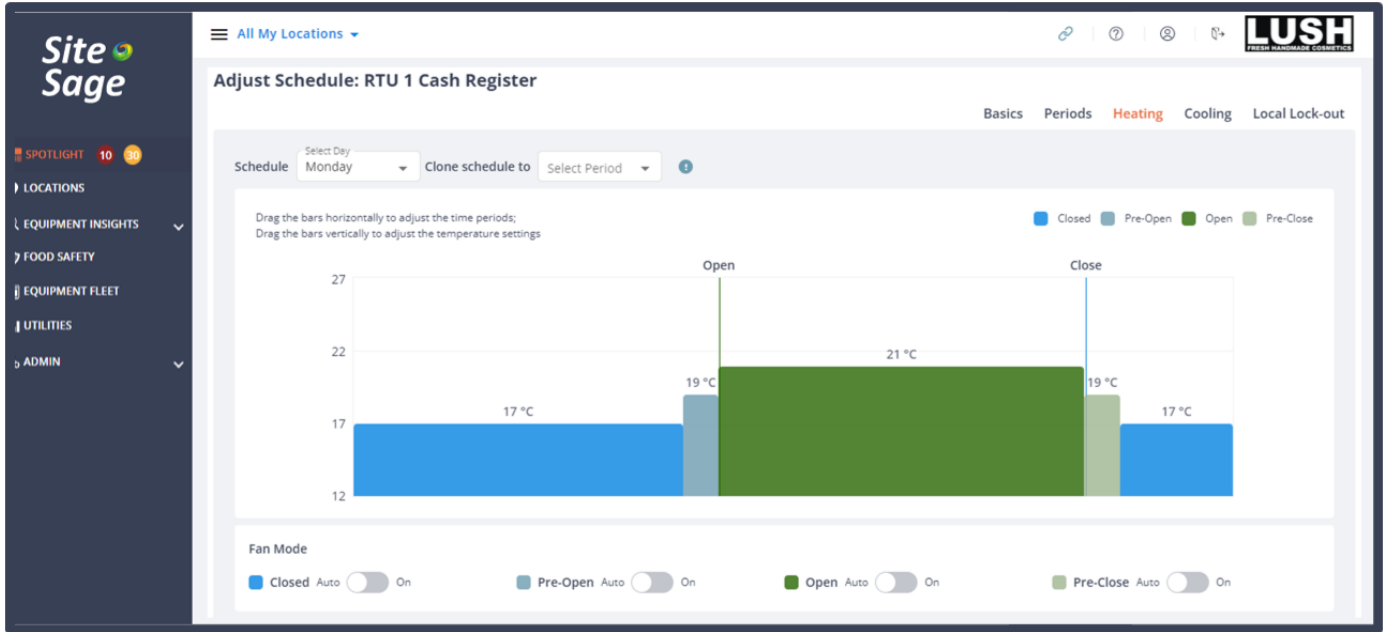
"Opportunities for energy savings in small retail spaces can be challenging. The SiteSage system has enabled us to achieve energy savings through effective use of setpoints and schedules, as well as improving staff comfort and providing increased insight into repair and maintenance issues".

*- Nicky Arthur, LUSH
Energy Management &
Sustainability Specialist*



Lessons Learned

For all new stores, LUSH installs controls at the end of construction. It can be challenging to provide a controls installer with an accurate two-week advanced notice for them to start when construction schedules change frequently. Good communication is key, liaising with the project manager, general contractor, and installation contractor to ensure the system is installed prior to store opening. For future installs, LUSH is considering requiring the general contractor to oversee the timely installation of controls by connecting them directly with the controls installer. In this way, LUSH hopes to remove the challenging coordination step and standardize the installation of controls.



LUSH utilizes the Set Points and Schedules in Site Sage to align their HVAC operations to business hours.

Co-Benefits

In addition to energy savings, the centralized controls:

- Allowed for more efficient operations of exhaust fans that were previously running 24/7 and better temperature control.
- Led to ease of trouble-shooting – the maintenance team can remotely trouble-shoot issues before heading to site and resolve occupant comfort issues faster.
- Automatically generate a monthly 'HVAC Fix List' forwarded to the maintenance team for review and proactive action. For example, an alert was triggered when a store had unusual electrical draw and the maintenance team was able to determine one of the rooftop units was short cycling.

Educational signs are posted next to the control hardware to support staff engagement. Staff can see the LUSH commitment to 'power down to reduce energy waste'.

Quick Facts

Controls Provider:	Powerhouse Dynamics
Project Location:	LUSH stores
Building Type:	Retail
Average Building Size:	1,687 ft ²
Buildings With Controls:	183
Average Energy Saved:	17% electricity

The Smarter Small Buildings Campaign is a program sponsored by the US Department of Energy to promote the implementation of enhanced controls and monitoring for small and medium commercial buildings. The Campaign accelerates the deployment of improved HVAC to advance comfort and savings through technical assistance, best practice resources, and peer exchange. Find out more at [SmarterSmallBuildings.lbl.gov](https://www.smarter-small-buildings.gov)