

KING SOOPERS — 1650 30TH STREET

Boulder, CO



Rating and reporting reveals no- and low-cost path to high performance

King Soopers supermarket at 1650 30th St. has undergone several renovations since it was originally constructed in 1982, including enclosing the atrium area near the front entrance, upgrading all interior lighting to more efficient T8s, and retrofitting refrigeration case lighting to LED technology. The store has central refrigeration and recycles much of the excess energy to condition the surrounding space.

In partnership with the city's Boulder Building Performance Program (BBP), King Soopers received support to interpret the energy metrics, such as energy-use intensity (EUI), derived during the rating and reporting (R&R) process and to identify no- and low-cost efficiency measures based on building energy use data.

Review of the R&R results revealed the hours of operation were not accounted for correctly in the reporting tool, ENERGY STAR Portfolio Manager. Emphasizing the importance of accurate data entry, simply correcting the operating hours entry to reflect true operating hours increased the building's ENERGY STAR score from 59 to 66.

Review of the energy metrics also revealed a peak in winter electric use and a building walkthrough identified opportunities for no- and low-cost energy efficiency improvements. The improvements include heater controls, cooler case doors and retrocommissioning, which could be paid for in part by incentives provided by the current utility provider Xcel Energy. The impact of implementing these measures is estimated to increase King Soopers' ENERGY STAR score to 72.

A list of these recommended no- and low-cost efficiency measures as well as their anticipated results are reflected on the right.

Additional opportunities for upgrading interior and exterior lighting to LEDs, which King Soopers has expressed interest in, could further raise the building ENERGY STAR score up to 85. In addition to cost savings from improved efficiency, a score of 85 would be high enough to apply for ENERGY STAR certification and would result in an exemption from the remaining BBP ordinance requirements.



BUILDING DATA

- Gross floor area: 61,317 square feet (sf)
- Site EUI: 187.1 kBtu/sf
- National median site EUI: 209.2 kBtu/sf
- Building type: Supermarket/Grocery store
- ENERGY STAR® score: 66

BENCHMARK ANALYSIS

- ENERGY STAR® score indicates opportunity to save energy
- Monthly energy data correlation to Boulder climate shows high base electric energy use and peak in winter – leading to search for causes
- Quick building walkthrough identified other recommended measures listed below

RECOMMENDED MEASURES

- HVAC retrocommissioning to identify cause of electricity increase in winter and identify other operational savings such as better control of infrared heating elements on mezzanine
- Retrofit of open multi-deck cooler cases with solid glass doors

ANTICIPATED RESULTS

- Current electric use: 2,770,000 kWh/yr
- Estimated energy savings: 91,600 kWh/yr
- Estimated savings percent: 3.3%
- Estimated cost savings: \$7,300
- Estimated measure cost: \$27,000
- Simple payback: 3.6 years
- ENERGY STAR score: 72