



Lithia Motors - Case Study

Problem

With almost 200 locations nationwide, a high percentage of Lithia's stores lacked an effective EMS (energy management system) to control their HVAC.

This lack of management capability meant Lithia had many units underperforming, over working, and wasting energy.



Solution

By installing an IoT smart motors system, PEC was able to optimize HVAC blower motor performance, apply scheduling, and send maintenance notifications, ultimately saving on energy consumption.

Single (RTU) Unit Results

14,990

projected annual kWh savings

\$2,998

Saved per unit/ per year



91%

decrease in motor power draw to date



83%

reduction in projected annual kWh usage

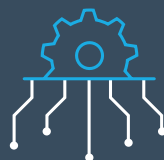


1-3 yr

payback period (ROI)



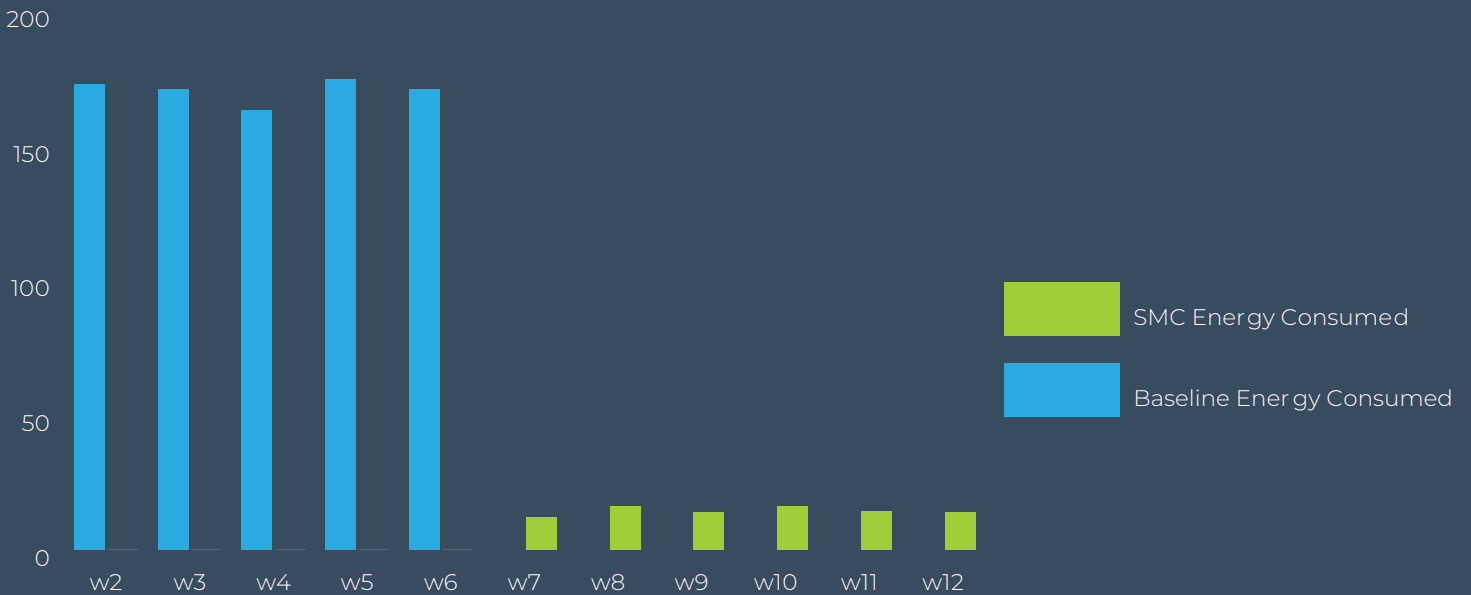
Top end reduction due to fan laws.



Cycling down to vent mode when not calling for heat/cool.



Scheduling run time to store hours. Reduced run time without sacrificing comfort or safety.



Sensors installed to monitor energy consumption of the existing system

SMC motor/ schedule applied.

Gain visibility by monitoring metrics



Avoid failures and emergency service calls by monitoring units and staying on top of key performance metrics.

Installing sensors on all units (including those ineligible for motor retrofit) will ensure you have your finger on the pulse of:

- 1) Supply and Return Air temperatures (what was set vs. what's delivering)
- 2) Heat exchanges
- 3) Coil functioning
- 4) Compression suction
- 5) Motor torque (is there enough resistance - may be an indicator that the belt is broken)