



Better air. Lower costs.

Learn how this unique solution uses IoT technology to transform HVAC performance - saving businesses big

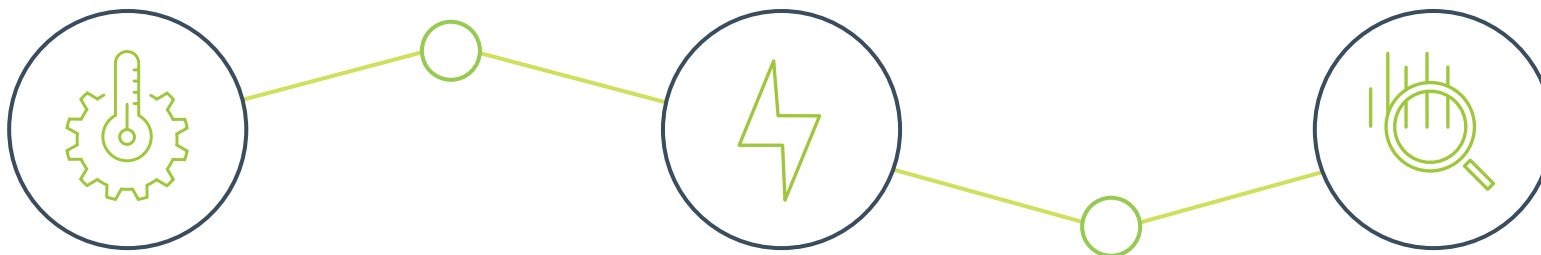


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Why upgrade?

Improve air quality & reduce energy consumption

Your HVAC system can run more effectively. Smart motors have simplified HVAC systems to run more efficiently. Using a design trusted in “zero-fault-tolerance” applications (like nuclear and mining facilities) these software-driven motors include built-in controls that help you avoid failures and emergency service calls by monitoring units and staying on top of key performance metrics.



Unprecedented efficiency

This drop-in replacement has a 3 year guarantee, operates on low temperatures, and is designed with quality components that **ensure long-life and fewer failure points.**

Reduce electric bills

50-75%

This ultra-efficient solution ensures you **don't sacrifice energy savings** while adhering to ASHRAE 62.1 building codes requirements.

Gain visibility with FDD

Built-in fault detection diagnostics software real-time monitoring and alerts enable predictive and preventative maintenance to **reduce faults and maintenance costs.**

How it works?

This innovative smart motor is a next-gen leader in energy use & management.

Over 50% more efficient than high-efficiency fixed speed motors and 25% more efficient than high-efficiency motors with variable speed drives.

This system uses a patented high rotor pole switched reluctance motor to optimize HVAC motor performance and maximize energy savings.



75%

Annual energy savings have been recorded with smart motors and controls



Motor efficiency

Switch reluctance motors don't sacrifice savings or air exchanges per hour. **Optimizing energy use** across full-rated and operating speed range these motors handle variability more effectively than induction motors with variable frequency drive (VFD).



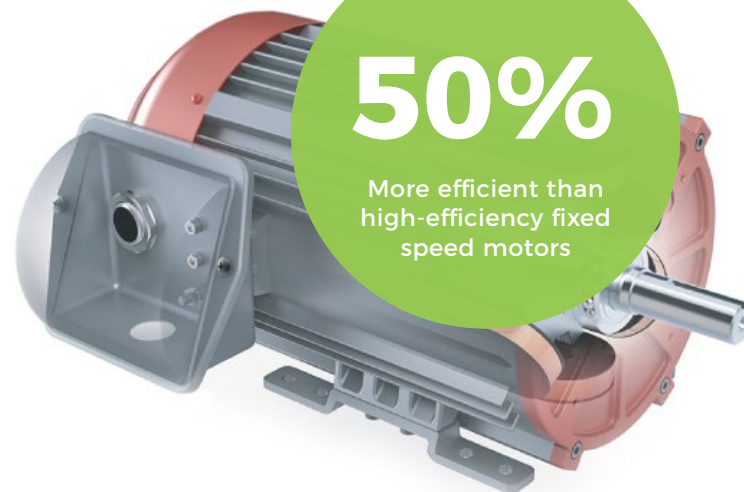
Reliability

Designed for rigorous variable speed operation over a 30-year life a simpler internal design ensures this motor runs cooler, eliminating overheating failures, contributing to **longer life** and **lower energy use**.



Intelligence

Intelligent systems give you **complete control** over your equipment. Continually monitoring for signs of degradation or faults allowing the ability to take action anytime from almost anywhere.



50%

More efficient than high-efficiency fixed speed motors

See for yourself

Additional benefits

- 1-4 Year return
- Reduced stress on RTU as opposed to continuous volume systems
- 3 year vs 1 year motor warranty
- Lite BMS capabilities. EMS integration ready
- Predictive/preventive monitoring capabilities
- Reduce transmission of airborne pathogens

Major savings

Installations of IoT connected smart motor systems have demonstrated RTU fan cost reductions of more than



60%

Amounting to to total RTU savings of

35-45%



The cost of inaction

Wasted funds are trapped in your outdated equipment. Old RTUs use



50%

 More energy

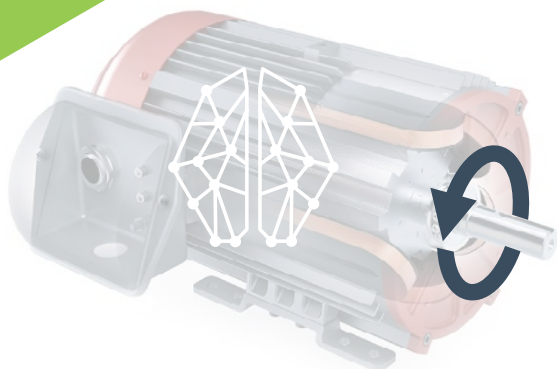
Accross multiple RTUs this is leading to a significant drain



Take action today

www.pecnw.com

How does it work?



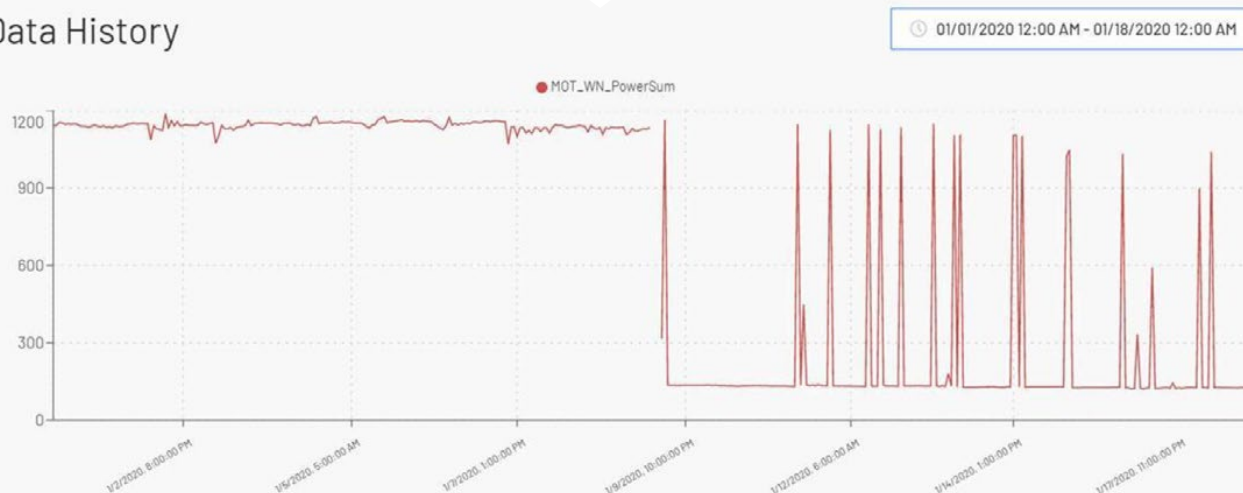
Cycling

Motor speed ramps up to coincide with calls for heat & cool. Remainder of time in ventilation mode.

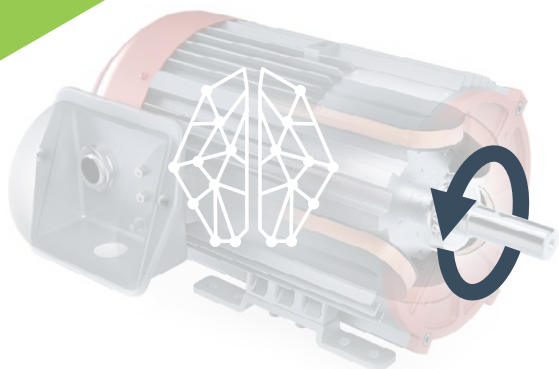
Provides 45-55% savings

Arco -
Davis, CA

Data History



How does it work?

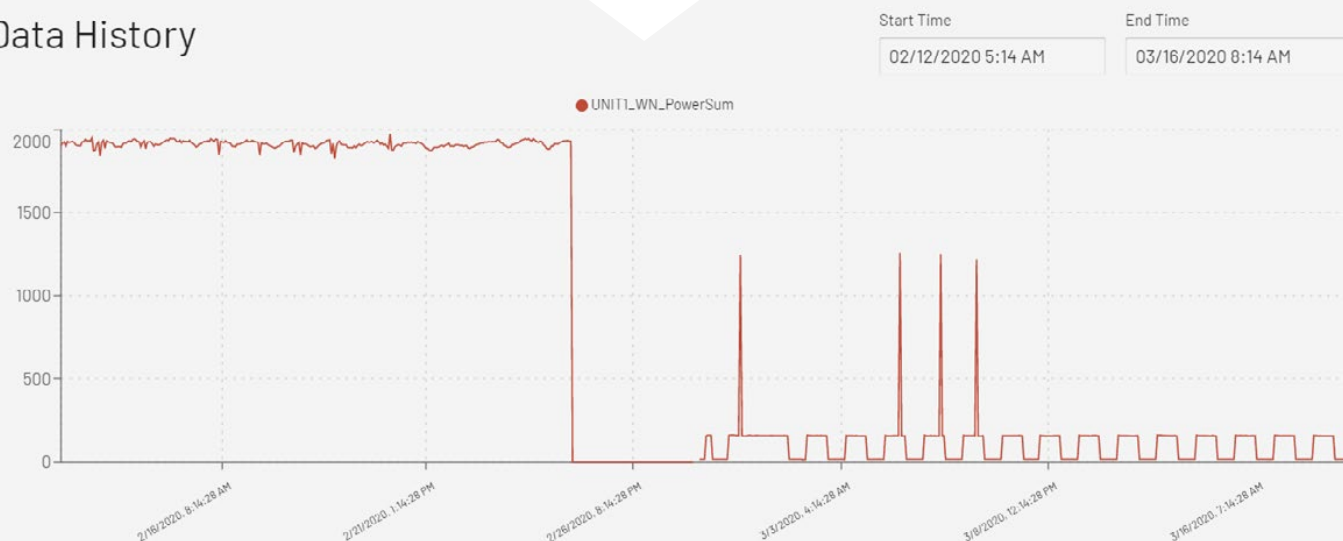


Cycling + Scheduling

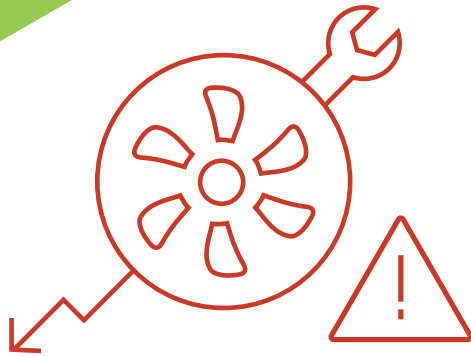
Potential savings **80%+**
in optimal situation

Arco -
Davis, CA

Data History



How does it work?



Value beyond savings

- Most RTUs lack visibility/ comms on equipment status (catastrophic failure, diminished performance, excessive maintenance costs)
- FDD (Fault detection diagnostics) adds RTU asset visibility

Alerts

All Sites

5

Lithia Motors - Fresno
Subaru

5

Arco - Davis, CA

Lithia Medford, OR (Chrysler -
Jeep - Dodge)

☐ Include closed alerts

ALERT	CREATED	STATUS	ACTION
27C001222560 cloud communication interrupted PECNW / Lithia Motors - Fresno Subaru / 27C001222560	Jun 1, 2020 11:49am 9 days ago	ACKED	⋮
27C001222560: Condenser 1 Fan Status PECNW / Lithia Motors - Fresno Subaru / 27C001222560	May 30, 2020 5:21pm 11 days ago	TRIGGERED	⋮
27C001222560: Delta T: Return/supply air : Heat PECNW / Lithia Motors - Fresno Subaru / 27C001222560	May 30, 2020 3:45pm 11 days ago	TRIGGERED	⋮
27C001222560: Delta T: Return/supply air : Cool PECNW / Lithia Motors - Fresno Subaru / 27C001222560	May 29, 2020 6:07pm 12 days ago	TRIGGERED	⋮
27C001222560: Compressor 1 Status PECNW / Lithia Motors - Fresno Subaru / 27C001222560	May 29, 2020 5:36pm 12 days ago	TRIGGERED	⋮

Case Study: Lithia Fresno

By combining cycling and scheduling features, we were able to deliver over **83%** RTU savings!

Problem

With approximately 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 under-performing, over working, and wasting energy.



Solution

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



Single RTU unit results

14,990

Projected annual kWh savings



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

\$2,998

Saved per unit / per year



Scheduling run time to store hours

83%

Reduction in projected annual kWh usage



Reduced run time without sacrificing comfort or safety

1-3 yr

Payback period (ROI)

Case Study: **Lithia Fresno**

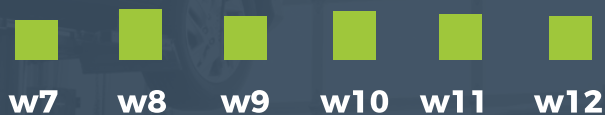


SMC Energy Consumed



Sensors installed to monitor energy consumption of the existing system

Baseline Energy Consumed



SMC motor/schedule applied



Take action today

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