

# Forward-Thinking Five Guys Franchise Sees Big Savings in Energy Efficiency With Upgrades to HVAC Motors

Five Guys built its reputation serving fresh burgers cooked on a grill along with fries cooked in pure peanut oil. With close to 1500 locations and hundreds of franchises, it has earned a loyal following around the world. They are committed to providing great food, a great customer experience, and a great place for employees to work. Their results speak for themselves. Forbes has, at various times, named Five Guys as the fastest growing restaurant chain and America's favorite burger chain. It has also been listed on Forbes Best Employers list.

It's no surprise then that Five Guys franchise owners would be on the forefront of sustainability for quick-service restaurants (QSRs). According to Technomic survey results not only do 79 percent of customers report that they prefer dining at green restaurants, 78 percent of employees report that they would be more excited to work at one.

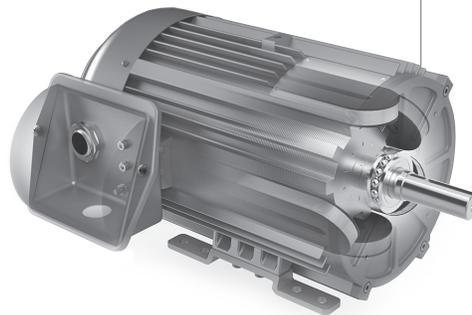
## The Challenge

Energy efficiency is a key component of cost-effective and sustainable operations. QSRs are some of the most energy-intensive buildings in the US. LED lighting and building envelope play a role in efficiency but HVAC has by far the biggest impact - composing upwards of 20-30 percent of total utility expenses and playing a major role in customer comfort.

In a business that operates long hours at a low margin, reducing HVAC energy use can have a big impact on the bottom line and the environment. The challenge is balancing energy efficiency with customer and employee comfort. Energy solutions must not effect the system's ability to minimize food odors and smoke from cooking, manage kitchen temperatures, and maintain good air quality and temperature in the dining area.

## The Solution

To address this complex set of needs, Five Guys Franchise Owner Neal Starling - Gold Valley Development DBA Five Guys, chose to retrofit two existing RTU motors with two Turntide Smart Motor Systems at a site in Montgomery, AL. With its ultra-high efficiency and inherent intelligence, the Smart Motor System enables nimble operation that only uses energy when needed as well as insights into overall energy use.



## Profile

One of America's fastest growing burger restaurants known for their freezer-free restaurants, fresh ingredients, cult following, and great workplace



### BUILDING SQUARE FOOTAGE

2,000 sq. ft.



### HVAC SYSTEM SIZE

2 Rooftop Units (RTUs)



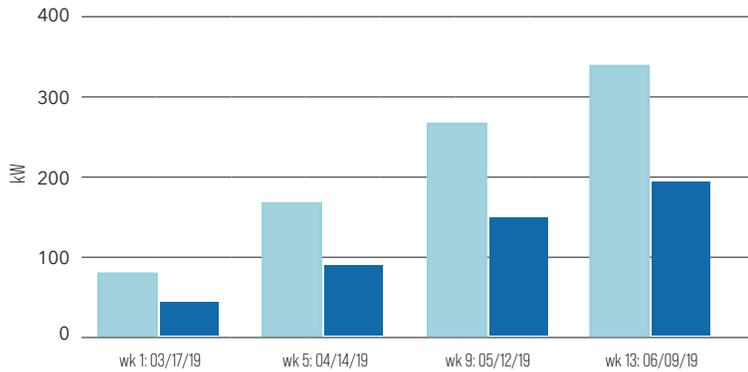
### SMART MOTOR SYSTEM SIZES

(2) 3 HP

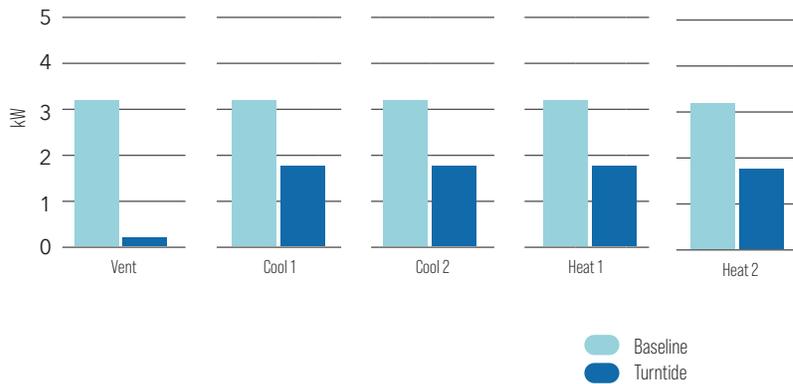
## Results

After four weeks of M&V to establish a baseline, the Turntide Motor Systems were installed. Since the retrofit, Five Guys has decreased energy consumption an average of 70 percent. This decrease has not impacted the comfort and safety of customers or employees but will have an impact on energy bills and the environment.

### SMC POWER DRAW VS. BASELINE (ALL MOTORS)



### SAVINGS BY MODE (ALL MOTORS)



Legend:  
■ Baseline  
■ Turntide

## ROI

Price	\$3,600
Savings	\$2,300
Payback	<b>1.6 Years</b>

**\$2.3K**

Combined annual savings gained by installing optimal efficiency motors

**70%**

Annual kWh savings from combined retrofits of the two RTUs

**1.6**

Years to return on investment



Turntide Technologies (formerly Software Motor Company) has developed the world's most efficient and intelligent electric motor system. The revolutionary Smart Motor System is based on proven switched reluctance technology, now managed with advanced cloud software and connected to precise controls via IoT. Turntide's vision is to eliminate the 25% of global electricity consumption that is wasted by legacy motors, thus accelerating the world's transition from fossil fuels. Turntide is based in Sunnyvale, Calif., with offices in San Francisco; Arlington, Wash.; and Kennesaw, Ga. Turntide has installed Smart Motor Systems with dozens of customers, reducing their motor electricity consumption by an average of 64%, and is powering the systems of leading OEMs. For further information, visit [www.turntide.com](http://www.turntide.com).

**POWER IS VALUABLE. USE IT INTELLIGENTLY.**

© Turntide Technologies. All rights reserved. June 2020