

Fuel solutions from GE

GE solution	What it does	What it saves	What other benefits it offers
Auto Engine Start Stop ¹	Cuts idling time, reducing wasted fuel	1-3% road 6-10% switcher	Lower NOx emissions and particulates Less yard noise
Half-Speed Blower ²	Reduces blower speed from full to half in idle	Up to 1%	Increases blower life
Consist Manager ¹	Optimizes fuel and power for all units in a consist	1-3% for each locomotive	Greater crew comfort—lower noise and vibration Ease of use—transparency to operator
Notch 8 Fuel Economy ²	Automatically or manually adjusts Notch 8 power	1-2%	Reduced noise and vibration
AccuFuel ¹	Measures fuel levels for better fuel management	Efficiencies from more strategic fueling decisions	Deters fuel theft Reduces billing errors
Engine Optimizer/ Smart Burn ²	Balances engine performance	1-2%	Delivers flexible solutions to enable fuel savings and emissions compliance

1. For GE and EMD locomotives
2. For GE locomotives

Start saving today

Call your GE representative to learn more about:

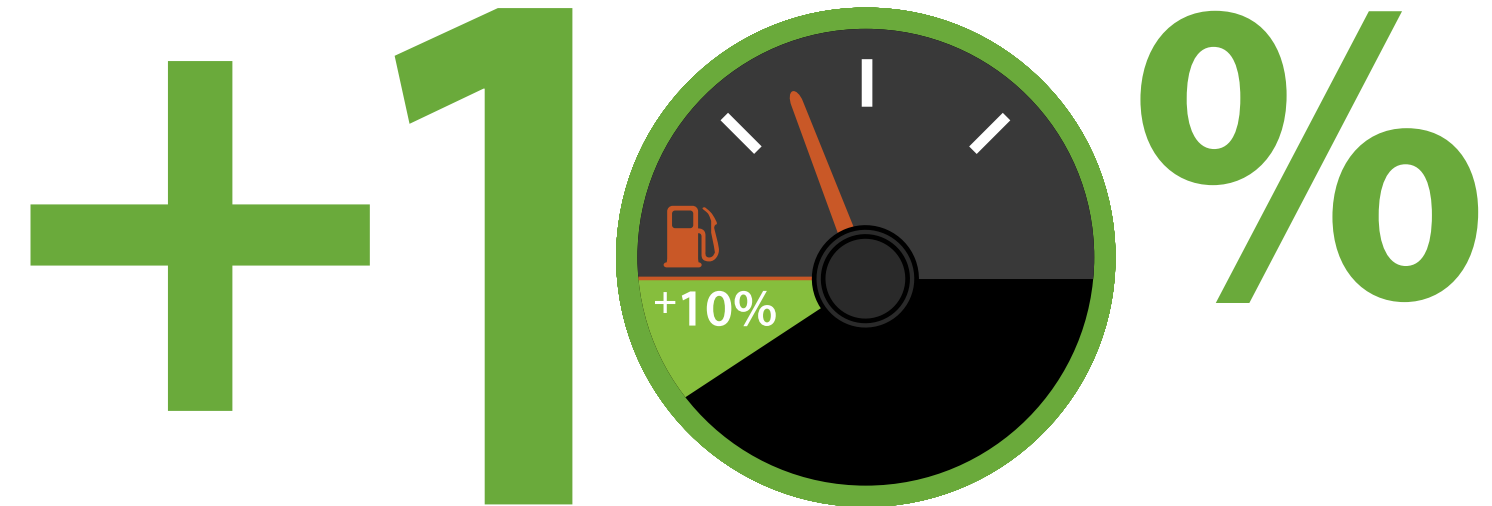
- Tailored fuel savings solutions
- OEM integration of products
- Reliable, safe, proven systems

Visit us online at getransportation.com

GE Infrastructure
Rail

Fuel savings solutions

For up to 10% greater efficiency



* EMD is a trade designator of Electro-Motive Diesel, Inc. GE is not an authorized EMD distributor, nor is otherwise associated or affiliated with EMD. However, GE does represent that its replacement parts, components, subsystems and services are compatible with and usable on EMD locomotives and engines.



Going further with fuel efficiency solutions

The typical locomotive uses more than 330,000 gallons of fuel a year. What if you could cut that by 10%? At a pump price of \$1.15/gallon, as an example, you'd save your railroad nearly \$38,000 per locomotive year. Multiply those savings by the number of units in your fleet—50, 100, 300 or more. And ring up the savings. GE has the fuel management solutions to make it happen.



Products proven in service

Today, more than 8,000 fuel savings solutions are installed on GE and EMD* locomotives in switcher and road service around the world. Our products reflect expertise in control algorithms, distributed power, emissions technologies and more. Designed and tested to the rigors of Six Sigma methodology, GE fuel solutions are demonstrating measurable savings in multiple customer applications.

OEM integrated: reliable & safe

With our fuel solutions, you can have both efficiency *and* reliability. As a locomotive OEM, we're uniquely equipped to integrate fuel reduction products with the complex engine propulsion and control systems of both GE and EMD locomotives. You'll get proven fuel savings solutions *without* compromising adhesion, tractive effort, auxiliary loads, transient response, emissions levels or safety.

Auto Engine Start Stop (AESS) *Eliminates wasted fuel during unnecessary idle*

When a locomotive has been idling longer than necessary, AESS safely shuts down the diesel engine. The result? Fuel savings of up to 10% for EMD switcher locomotives and up to 3% for GE and EMD road locomotives. For a typical 3,000 hp locomotive, cutting idle time with AESS can save as much as \$8,000 per year in fuel costs. AESS monitors ambient temperature, battery voltage and brake system air pressure to stop and start a locomotive at the right times.

Half-Speed Blower *Reduces blower speed in locomotive idle*

Our half-speed blower solution drops blower operation from full to half speed (not Off/Full). The blower saves fuel by modulating auxiliary loads and optimizing the cooling strategy for related equipment.

Consist Manager *Produces middle-notch economies with no loss of power*

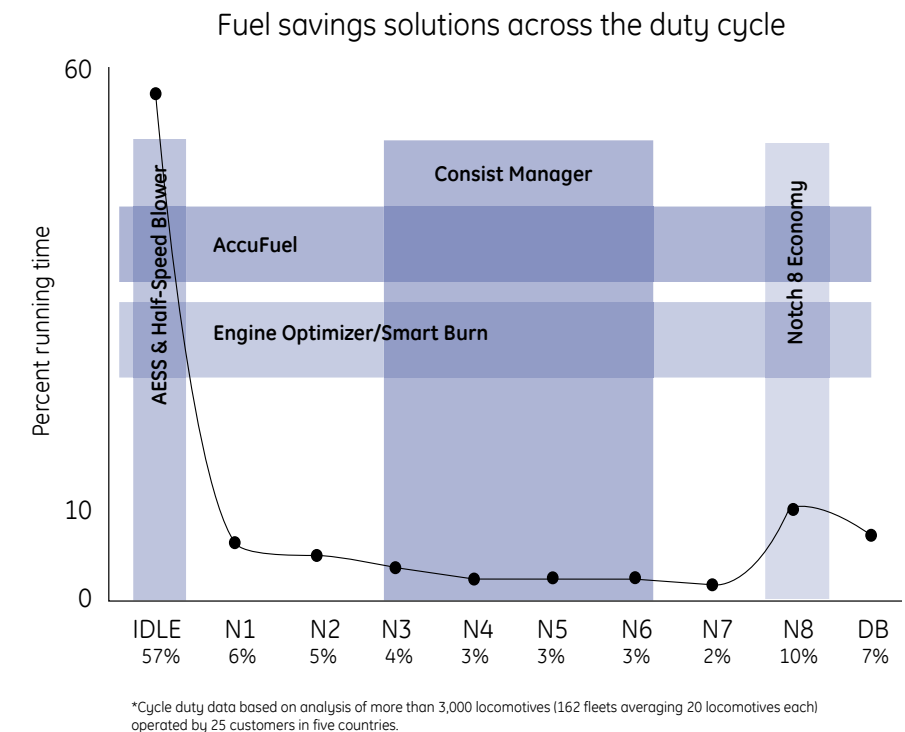
It's the first software solution of its kind, proven in revenue service to deliver fuel savings of up to 3%. Consist Manager avoids N3-N6 fuel inefficiencies by selecting the best notches for the lead and trail units. You experience fuel economies across the consist—with no loss in horsepower. The system is required on the lead locomotive only, but fuel savings multiply on the trail units. Consist Manager works on mixed consists of GE and EMD locomotives, and there's no need for unit isolation.

A spectrum of solutions

The GE portfolio of fuel products uncovers savings opportunities throughout the locomotive duty cycle. Auto Engine Start Stop (AESS) and a half-speed blower for idling; Consist Manager™ for N3-N6; a Notch 8 economy solution, and AccuFuel™ monitoring as well as Engine Optimization for economies across the cycle. Individually, these solutions offer efficiencies. Collectively, they drive savings up to 10%.

Tailored to your duty cycle

With data on thousands of locomotives around the world, we have unique insight into typical operating cycles, and we have the engineering expertise and software tools to analyze your unique duty cycle. We can develop a customized fuel savings package to save the most for your cycle. Using your railroad operating data, we'll identify the fuel savings and cash flow you can expect from a tailored fuel solution from GE.



Notch 8 Economy *Saves fuel at Notch 8 while maintaining adhesion*

When full horsepower isn't needed at Notch 8, our economy solution transparently redefines the power being delivered, adjusting to a lower rating to save fuel. The system scales back the gen field to the alternator and drops engine RPM, as needed. Notch 8 economy is available with manual keyed switch or automatic override based on track speed.

AccuFuel Monitor *Makes strategic fueling decisions possible*

AccuFuel uses ultrasound to measure locomotive fuel levels, with an accuracy of +/-1% static and +/-3% rolling. Easily mounted to the existing vent on a locomotive fuel tank, the system is 10 times more reliable than "bubblers." With more accurate fuel monitoring, you can optimize fueling stops and capitalize on the most economical fuel prices available, while reducing out-of-fuel events and preventing theft.

Engine Optimizer/Smart Burn *Delivers efficiency and emissions advantages*

Our Engine Optimizer solution balances engine performance to provide optimal fuel economy while achieving emissions compliance. Smart Burn is a locomotive-enabled Engine Optimizer.