



In Pueblo, CO, the Progress Rail engineering team took to the track to guide the first-ever train controlled by artificial intelligence, traveling over 200 miles without human intervention, operating flawlessly with independent power.

Features

By adapting to train behavior and our customer operational objectives, Talos offers:

- Higher overall fuel savings of up to 25%
- Emissions reductions up to 25%
- Best in-train force management in the industry, offering increased safety and reducing the risk of break-in-twos.
- Increased network capacity
- Path to Automated Train Operations

Compared other Energy Management (EM) products on the market Talos clearly stands out.

- **Artificial Intelligence (AI) based Controller** for faster development and deployment.
- **OEM locomotive integration** to streamline support and maximize availability.
- **Architected for next generation technologies:**
 - > Automated Train Operation
 - > PowerView™ Integration
 - > Battery Electric Locomotive
 - > Train Pacing

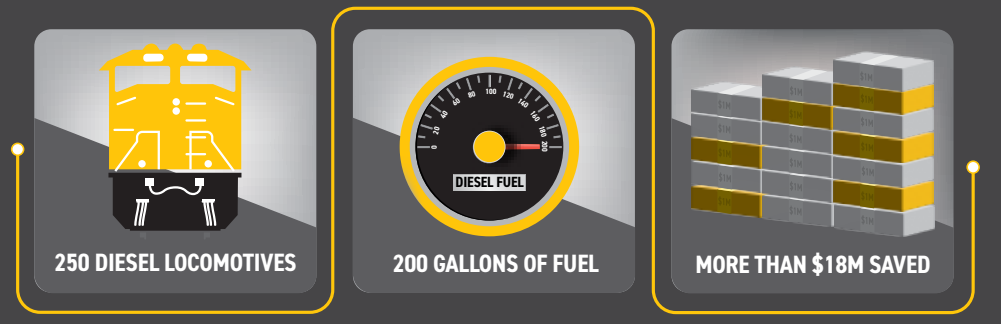
Progress Rail's Talos energy management leverages cutting-edge technology to control the train throttle and dynamic brakes. Talos incorporates track topography, train consist information, route data and historical analysis to build a unique and optimized driving strategy resulting in significant improvements in fuel and/or time efficiencies.

Designed with the future in mind, Talos energy management leverages Artificial Intelligence (AI) and Machine Learning to encode peak locomotive engineer behavior, analyze individual train journeys and optimize train operation. The system is tailored to accommodate variability in consists and the operating environment. Machine Learning offers the ability to continuously improve and



adapt to changing operations. Talos's data-driven nature result is a system that allows for a much faster deployment than other energy management systems.

HOW MUCH CAN YOU SAVE? In this example, a railroad consisting of 250 locomotives using 200,000 gallons of fuel could save over \$18 million using Talos.



Designed for All Locomotive Makes and Models

Talos learns each run considering all factors and interacts with various systems to achieve the best outcome for the journey. The system's ability to learn directly supports battery-electric locomotive initiatives and your evolving fleet mix. Previous rules-based systems would require a rewriting of rules at every step of BEL integration to your fleet to respond to any change in conditions. Leveraging AI, Talos will produce the maximum battery electric efficiency impact while allowing faster integration of battery electric locomotives into your operation.



Battery-Electric Locomotive Integration

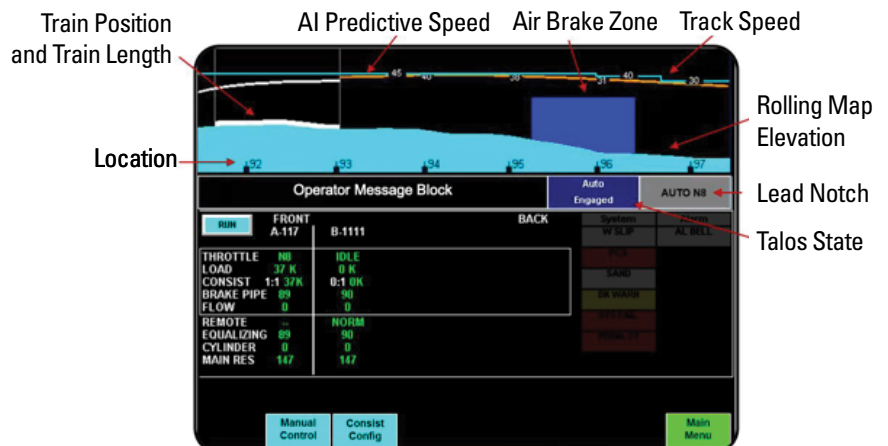
Battery-Electric Locomotives (BELs) are even more efficient with Talos. The table shows the ways Talos and BELs work together to increase performance and maximize fuel and battery energy usage.

Talos BEL Benefits	Increase Battery Range	Increase Battery Life	Predictive Maintenance
Reduction of energy demand	X		
Reduction of variability		X	X
Energy supply prediction	X	X	X
Optimization of braking (AB vs. DB)	X	X	
Consist management	X	X	
Energy supply prediction - enhanced	X	X	X

Talos in the Cab



Left Locomotive Display



Right Locomotive Display