

Ford Motor Company–50001 Ready

WHY 50001 READY?

The U.S. Department of Energy's 50001 Ready program is a self-paced, no-cost way for organizations to build a culture of structured energy improvement that leads to deeper and sustained energy and GHG savings. Recognition is available for facilities and organizations that self-attest to the implementation of an ISO 50001-based energy management system without external audits or certifications.

Overview

Ford Motor Company is a global automotive manufacturer based in Dearborn, Michigan, with manufacturing plants and offices in over a dozen countries around the world. Plant energy efficiency is a priority for Ford and is a key component of its sustainability commitment to the planet. The company continues to develop and implement methods to reduce energy consumption when modernizing existing plants and when designing new ones.

In 2013, Ford launched its Energy Management Operating System (EMOS) and integrated it into the Ford Production System (FPS). It provides a standardized global process for managing energy efficiency & supply activities by setting priorities based on best practice replication, Plant Energy Team engagement, and facility modernization priorities.

To implement energy efficiency projects, Ford continues to use its Performance Contracting (Finance Lease) process. Focus areas include lighting, compressed air, heating, ventilation, and air conditioning (HVAC), building management systems, and process optimization. Energy opportunities can also be implemented by the Plant Energy Teams using internal plant expense or capital cost save budgets. An additional funding source is the Facility Health Assessment (FHA) process, a tool used by Ford which allows energy efficiency projects to be funded as plant health infrastructure upgrades.

Prior U.S. Department of Energy (DOE) partnerships have proved beneficial to Ford. As a Better Plants and Better Climate Challenge partner, Ford is committed to a 50% greenhouse gas reduction by 2030 and 10% overall reduction in energy intensity. In 2020, the company received a DOE Better Project Award in recognition of a 50% reduction in energy and water use at the



Members of the plant energy team for the enterprise data centers, adding 50001 Ready to accomplishments: Ken Wojtkowiak, Alvan Fontenot, Paul Parton, Brian Warren, Chris Mikail, Mike Dieringer, Dave McCutcheon, Michelle Croal. (Absent Tony Sledge, Lasanthi Banduseela).

Photo credit: Ford Motor Company.

Dearborn Research and Engineering Campus Central Energy Plant. In 2021, Ford met its previous goal of a 25% improvement in energy intensity through the Better Plants Challenge.

Solutions

Participation in the 50001 Ready program gave Ford the opportunity to update and better integrate the management systems approach into its EMOS while reemphasizing energy efficiency's importance to the company's sustainability plan.

32 of Ford's U.S.-based sites, manufacturing and non-manufacturing alike, engaged in the program and have achieved 50001 Ready recognition since 2022. Taking advantage of the cohort training, coaching and technical support the program offered led to energy management techniques and decarbonization strategies being more deeply integrated into the company's processes and continuous improvement mindset and lower costs.

Six of Ford’s Germany-based manufacturing sites were already ISO 50001 certified, but the remainder of the company’s global sites used 50001 Ready training sessions and review of the 50001 Ready Navigator tasks to identify significant energy users and opportunities for improvement.

Key Takeaways: Implementing a 50001 Ready Energy Management System

- ▶ **A standardized approach:** To minimize burden on plant-level personnel, many 50001 Ready Navigator tasks were handled at the enterprise level, with input from individual plants as needed. This streamlined implementation across all 31 U.S. sites while still tailoring implementation to each site’s needs. Enterprise-level personnel worked closely with the cohort coach to integrate all aspects of energy management, as described by 50001 Ready, into Ford’s EMOS.
- ▶ **A bird’s eye view:** Ford used the 50001 Ready Navigator’s Multi-Site Portfolio View to monitor implementation progress across all sites. This allowed staff to review task status at both corporate and local levels with focused follow-ups occurring where needed and supporting actionable steps such as weekend shutdowns and general maintenance.
- ▶ **Strengthening strategic partnerships:** Ford has partnered with DTE Energy, a local utility company, for almost 30 years. DTE Energy embeds regional energy managers into Ford’s energy efficiency department to support projects and initiatives. This relationship was strengthened by the DTE Energy regional energy managers’ participation in Ford’s 50001 Ready cohort alongside their Ford colleagues. The training, led by an external consultant, consisted of a series of webinars and coaching that featured the 50001 Ready Navigator and accompanying materials, along with assessment and review assistance.
- ▶ **Assessing opportunities:** The 50001 Ready Navigator was most helpful in identifying the energy projects that would yield the best results. Using the tool to manage the systematic collection and analysis of energy performance indicators and targets for energy benchmarking, including

normalizing for production (and weather, as was done historically), meant that only the most impactful projects were pursued.

“Our participation in 50001 Ready allowed us to refresh and simplify our EMOS programs and reinforce energy management as an important tool to reach cost savings and emissions reductions goals.”

– Michelle Croal, Energy Manager, Ford Motor Company

Other Benefits

Implementing 50001 Ready saw benefits beyond the financial and environmental. Having gone through the program together, communication was enhanced between plant facility management teams and Ford energy and engineering teams. Facilities are also benefiting from improved building comfort due to the new EMOS energy policy and implementation guides providing updated protocols for HVAC settings.

50001 Ready-Recognized Sites at Ford (31):

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|----------------------------|-------------------------------|
| Allen Park, MI (EMDO) | Dearborn, MI (Rotunda Center) |
| Allen Park, MI (Test Lab) | Dearborn, MI (Stamping) |
| Allen Park, MI (VPEC+DTF) | Dearborn, MI (Truck) |
| Avon Lake, OH | Dearborn, MI (WHQ+FMCC) |
| Brook Park, OH | Flat Rock, MI |
| Buffalo, NY | Flat Rock, MI (EDC2) |
| Chicago Heights, IL | Lima, OH |
| Chicago, IL | Livonia, MI |
| Cincinnati, OH | Louisville, KY (Assembly) |
| Claycomo, MO | Louisville, KY (Truck) |
| Dearborn Heights, MI | Sterling Heights, MI |
| Dearborn, MI (Central Lab) | Sterling, MI |
| Dearborn, MI (DM) | Wayne, MI |
| Dearborn, MI (EDC1) | Woodhaven, MI (Forging) |
| Dearborn, MI (Engine) | Woodhaven, MI (Stamping) |
| Dearborn, MI (R&E) | Ypsilanti, MI |

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