



Today, in spite of an ever-growing adoption of Energy Management Systems (EnMS) in the industrial sector there is a low awareness of motors and motor driven systems efficiency savings potential. There is a poor, if existent, identification of "significant energy use" motors and motor driven systems as

being an integral part of an energy and asset management program and the need for connecting the two. Adding to this there is the misperception that having an EnMS in place is synonymous with utilizing the full potential efficiency of motors and motor driven systems.

These factors all contribute to more focus being needed on connecting motors and motor driven systems at the asset and system structure level. The implementation of an energy management program needs to systematically develop stakeholder awareness and intelligence on the operational benefits and savings potential with respect to motors and motor driven systems energy efficiency as it relates to operations, maintenance, procurement, and planning and design.

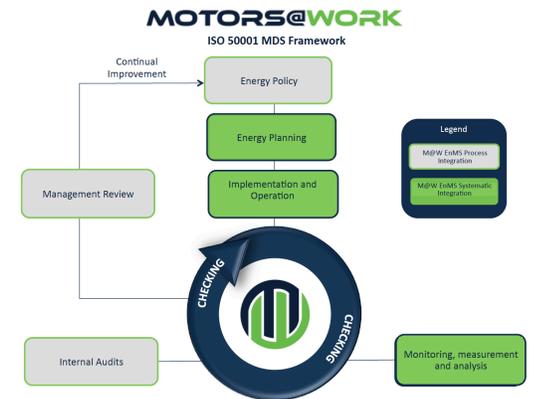
Facts & Figures

- Motor-driven equipment accounts for over 60% of the electricity consumed worldwide in the Industrial and motor Intensive commercial operations, 6.75 trillion kWh, or approximately 1 out of every 4 kWh.
- Over 300 million motors are in use today in industrial and large commercial applications and is projected to grow to over 600 million by 2040.
- D.O.E. estimates that from 15% to 80% of motor-driven equipment electricity consumed is wasted.

Benefits of Motors@Work™

- Increase motor driven system efficiency by 20% to 30%, saving electricity, extending the life of your equipment, and complying with regulatory and environmental mandates.
- Systematically Identify motor driven system non-conformity performance and initiate corrective actions based on certified operational analytics, applicable standards, commercial market availability, and pre-defined legacy applications configurations and integrations.
- Provide motor driven system intelligence, using the latest technology, where it is needed, when it is needed, to whom needs it.
- Verify and validate your motor driven system efficiency countermeasures and program performance internally and against your worldwide peers.

From a holistic energy system perspective implementation of the ISO 50001 framework offers the opportunity of realizing the potential efficiency of motors and motor driven systems by systematically promoting; 1) the adoption of more efficient motor driven system components, 2) design change modification of motor driven systems alignment with end use, 3) efficiency optimization of motor driven systems, and 4) better in-field operations management of motor driven systems through the convergence of energy, asset management and controls.



Introduction

Motors@Work™ was specifically designed and developed based on satisfying the ISO 50001 requirements whereby strengthening management focus on energy, injecting organizational discipline across functional silos, creating opportunity for cultural shift, encouraging commitment across an enterprise or company beyond the "low hanging fruit", introducing and sustaining a systematic approach to efficiency and continual improvement, identifying required resources to meet energy reduction goals and enable linking them directly to profit margin, and providing management controls based on measurement, verification, and communication.

Motors@Work™, built in collaboration with and certified by the folks that brought you Motor Master+ and Motor Master+ International, will provide greatly expanded analytical and collaborative "worldwide motor community"

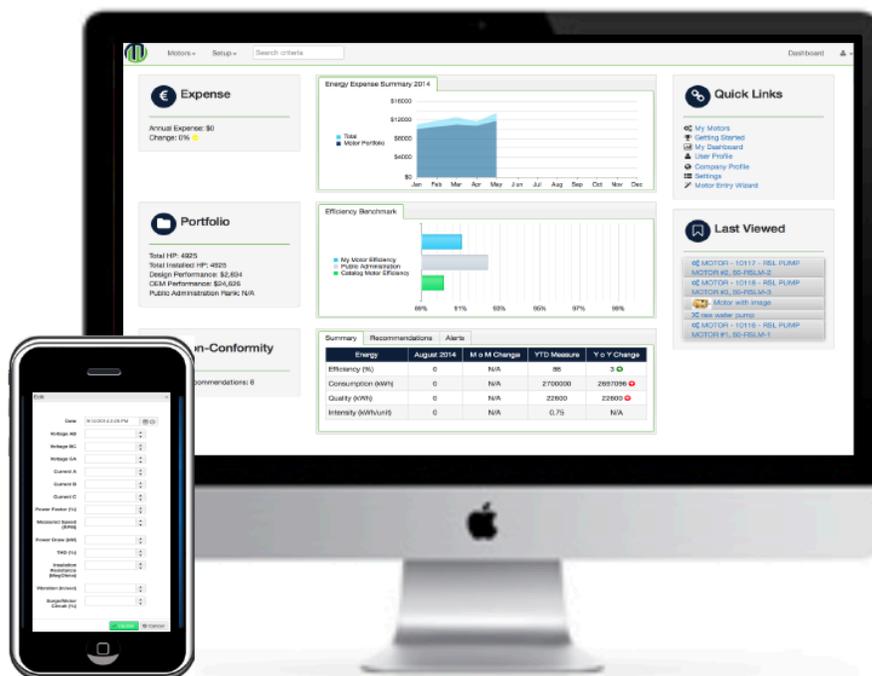
Motors@Work™ Brief

Motor Driven System Energy Optimization

capabilities using the latest technology, certified analytics, systematic business process integration, and near real-time data currency to provide motor and driven system intelligence that nobody else has, that everybody needs, and delivered when and where needed to optimize your motors and driven systems efficiency and significantly reduce costs. Whether you have a dozen motors or thousands, Motors@Work™ will provide the flexibility and scalability to meet your needs no matter where the motors are in the world.

Motors@Work™ is a market proven, certified, scalable, collaborative SaaS cloud-based solution. Motors@Work™ continually assesses, 24 x 7, motor-driven equipment energy performance, identify non-conformance and replacement candidates (based on over 20,000 commercially available premium efficiency motors), notify the appropriate stakeholder at the right time, at the right place, with the right information, and validate changes once they are made. But that's not all, Motors@Work™ will drive energy efficiency back into the OEM supply chain through never before offered market visibility and product analytics.

Motors@Work™ will handle everything from calculating a simple return on investment on a single motor purchase to a comprehensive enterprise system management program optimizing the operations & maintenance and design, change, management of your motor driven systems. Motors@Work™ allows you to create, import, or integrate with your company's inventory system-of-record of commissioned and spare motors and system components. Certified analytics and standards will determine motor system load, efficiency at the load point, energy consumption and cost, either by field measurements or near real-time integrations to legacy



systems. Motors with constant and variable loads are both accommodated. Inefficient or oversized motor non-conformities will be identified, repair and replacement countermeasures defined, and potential savings determined. Power quality (voltage imbalance and harmonics) is monitored and anomalies will also be identified to meet rated efficiency and performance levels. Validation of efficiency savings will be provided promoting a continually improving motor system efficiency program and stakeholder commitment.

Getting Started... 1-2-3

Motors@Work™ is easy to learn and use and flexible to handle a small single site operation to large complex multinational organizations that want to systematically incorporate energy into their life-cycle motor management program. Motors@Work™ defined APIs and configurations, professional services, and Partner Network ensure you are up and running as quickly and efficiently as possible at whatever level of business process integration makes sense - and because Motors@Work™ is additive to what you already have in place, with minimal if any impact on your existing operations.

Motors@Work™ is designed to solve the most simple to the most complex and demanding motor driven system efficiency management challenges. However that does not mandate an expensive, time consuming deployment. In fact, just the opposite. Motors@Work™ can be up and running in days or weeks instead of months or longer depending on the complexity and level of integration required to meet your operational objectives. Motors@Work™ 1-2-3 methodology delivers efficient and cost-effective implementations in line with your needs and budget. 1-2-3 takes you through the necessary steps to ensure a rapid implementation and efficient on-going operations. Whether on your own or with our assistance, you will be guided through each step of planning, setting-up, and using the Motors@Work™ features while leaving the

Motor Driven System Energy Optimization

operations and maintenance of the software up to us. No matter what stage of motor driven system efficiency management you are at, the 1-2-3 methodology explains what activities are required for each phase and why they are important.

Pricing... \$.25 / HP / mo.

Motors@Work™ is a SaaS energy and asset management convergence software offering. Motors@Work™ pricing features facilitate the self-funding Customer energy maturity enablement based on a \$10 recurring annual savings for every \$1 in access fee (based on 10% avg.

efficiency gain). Motors@Work™ access is \$.25 per HP (horsepower) per month. The value based (not user base) Software Access Fee, minimum 2 year term, has been designed to reduce the up-front fee. The Software Access Fee is based on the total HP of the motors being managed. The annual Operations & Support Agreement is included in the monthly SaaS Access Fee. A Perpetual Access Fee including a recurring annual maintenance fee of 22% is available.

Any Motors@Work™ Professional Services required by the Customer are billed on a time & material basis.

Conclusion

With Motors@Work™ you will know exactly how your motor-driven equipment energy is being used providing the information and intelligence that will save you energy, reduce maintenance costs, optimize your operations, and improve your motor driven system asset performance. All of which goes right to the bottom line.

Motors@Work™ Motor Driven System Optimization Features:

Motors@Work™, a systematic approach to sustainable motor-driven system management Best Practices:

- Motor driven system and components energy efficiency and loss determination
- Customer context benchmarking of actual motor portfolio performance vs. SIC, Design, and OEM Market
- T-O-U Utility rate schedules for season, time of day, demand charge and power factor
- 47,205 pre-defined Electric Utility Rate Schedules from 4,643 EIA-recognized Utilities
- Custom Utility Rate schedules
- Motor-driven system and process definition
- Fixed and variable speed motor systems
- What-if scenarios
- Analytics, Reporting, and Non-conformity Notifications
- Selecting the appropriate motor energy efficiency class
- Understanding the existing asset energy performance and benchmark against current high efficiency standards
- Prioritizing resources with highest run times and potential impact (define enterprise motor portfolio and map)
- Identifying in-field power quality and non-conformity performance
- Identifying motor efficiency upgrade opportunities
- Applying applicable PdM and CdM maintenance strategies
- Determining repair vs. replace vs. application design economics
- Managing available spares for efficiency and not emergency repair and uptime
- Pumping system efficiency management
- Pumping system operating optimization (Water & Waste Water)
- Leverages and preserves the Operator's technology investment

