



# ELECTRICITY, POWER, AND EMISSIONS:

USING MOTOR POWER  
DATA TO CREATE A  
CLIMATE-INFORMED  
MAINTENANCE PLAN

# TAKE ACTION TODAY

## TO MAKE YOUR PUMPS MORE EFFICIENT

Pump motor power levels and energy consumption provide valuable input about the status of and changes to the pumping subsystem over time. Knowing the energy footprint of each pump/motor combination enables informed decisions about efficiency and utilization. When viewed over time, this data can provide additional data on system degradation and maintenance needs. A properly maintained and right-sized pumping subsystem means efficient energy use, and a reduced environmental impact.

**LEARN MORE ABOUT THE BENEFITS OF POWER SENSING.**

[www.loadcontrols.com/pump](http://www.loadcontrols.com/pump)

## ENERGY EFFICIENCY - ENVIRONMENTAL IMPACT

Electricity plays a significant role in climate change as one of the major sources of greenhouse gas emissions. The generation of electricity, particularly from fossil fuel-based power plants, releases substantial amounts of carbon dioxide and other pollutants into the atmosphere.

**More efficient electricity use** is crucial in reducing our carbon footprint.

In industrial spaces, **electric motors are vital energy consumers.** Based on data compiled by the International Energy Agency, industrial motors account for 47% of the global electricity consumption. Enhancing the efficiency of electric motors becomes crucial to minimize energy wastage and optimize power consumption in industrial settings. By adopting **advanced motor control systems like Load Controls, industries can reduce their electricity consumption**, thereby reducing both operational costs and environmental impact.

# CALCULATING EMISSIONS

If you're curious about how much carbon you're emitting from your pumps and motors, it's easier to track than you'd think!

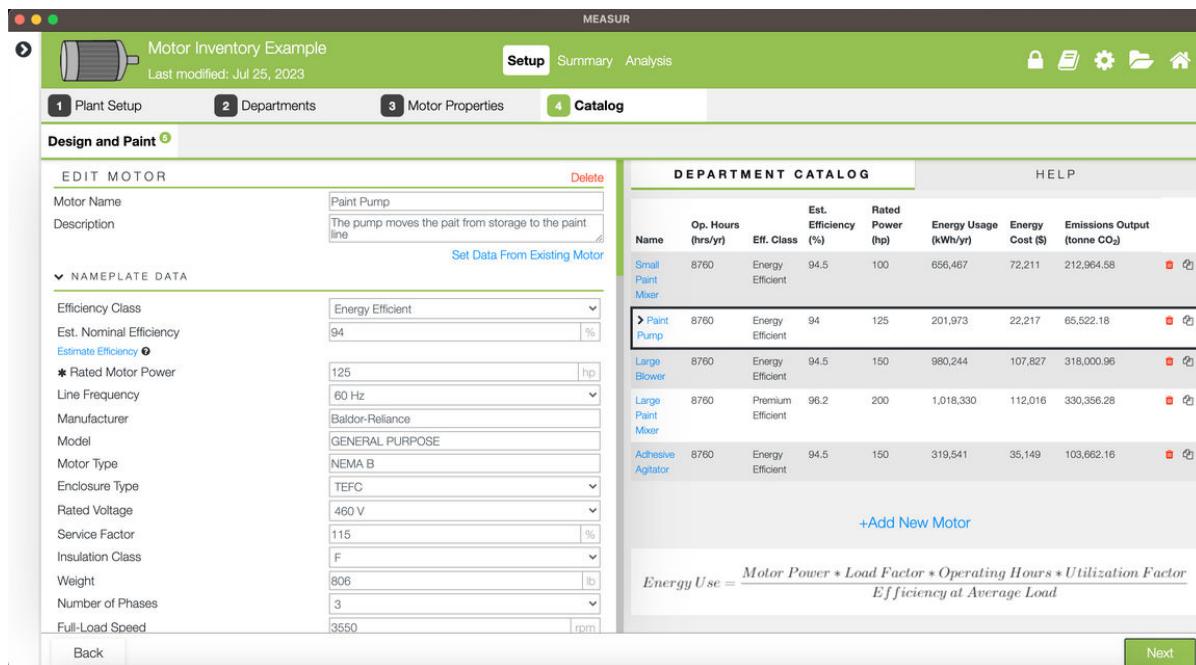


Figure 1: Department of Energy's MEASUR tool for energy efficiency calculations

1. Download the Department Of Energy's [MEASUR](#) application (seen above) at [ornl-amo.github.io](http://ornl-amo.github.io)
2. Provide basic information like your region and electricity costs
3. Add motor details like average load, motor power, and operational hours
4. Receive efficiency, cost, and emissions insights automatically!

## ALL EMISSIONS MATTER

Whether it's motor usage, or propane for heating, all emission sources add up. Calculating emissions from electricity use is an important first step, but it should be partnered with a thorough investigation of an organization's environmental impact.

If you're ready to take the next step, use the [EPA's Simplified GHG Emissions Calculator](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator) to gauge your organization holistically. [epa.gov/energy/greenhouse-gas-equivalencies-calculator](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator)

## REDUCING YOUR EMISSIONS

There are plenty of methods to reduce emissions and electricity bills. After an organization's emissions have been calculated it's time to make a game plan for how to meaningfully reduce its impact.

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### Set Targets:

Set goals that align with [science-based](#), global commitments to reduce emissions

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### Motor Efficiency:

[Trust Load Controls](#) to improve motor efficiency:

- Right-size your oversized motors, replacing them with smaller motors that operate optimally in the range of the expected load
  - Replace or repair inefficient motors with measured HP that is higher than expected for the work being performed
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### Lighting:

Buy LED bulbs, which use 90% less energy and last 15x longer than traditional bulbs

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### Efficient Appliances:

Reduce costs without compromising quality through [ENERGY STAR](#)

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### Other Measures:

[Upgrade buildings, conduct audits, or leverage renewable energy to save](#)

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## OFFSETTING WHAT YOU CAN'T REDUCE

Reducing emissions in business operations takes time. Early wins can be achieved through projects that introduce operational cost savings. These savings can be invested in larger projects, or emissions offsets. Offsetting refers to when organizations support independently certified and verified projects that reduce carbon emissions in other locations. We trust [Patch](#) to offset all the emissions from our processes. This can supplement your climate strategy while larger reduction plans are crafted.

# CONCLUSION

Electricity and carbon emissions are strongly linked. Through the DOE's MEASUR tool the emissions from your motors can be calculated. Pair this information with insight on motor efficiency gathered from Load Controls Motor Power Sensors, and a climate-informed maintenance and replacement strategy can be formed.

Reducing your electricity consumption, and bills, can be an important part of creating a positive impact on the climate.

Trust Load Controls to protect your motors, reduce your operational costs, and improve your energy efficiency.

**VISIT LOADCONTROLS.COM FOR MORE APPLICATION USE CASES AND PRODUCT INFORMATION, OR TO REQUEST A 30-DAY TRIAL**

## ABOUT LOADCONTROLS

Load Controls was incorporated in 1984 with the vision of providing motor power sensors to the process manufacturing world. Decades later, we remain committed to that vision, with an ever-expanding product portfolio, a growing base of more than eleven thousand satisfied customers, and more than 170,000 controls installed to date. Load Controls has a track record of supplying and servicing motor monitoring solutions to the world's leading organizations.

Currently, our sensors and controls are used by:

- 9 out of 10 of the world's largest chemical processing firms
- 9 out of 10 of the world's largest pharmaceutical companies
- 7 out of 10 of the world's largest paper and pulp processing manufacturers

We sell our products directly around the globe, and through pump equipment distributors and electric component supply partners. We are based in Sturbridge, Massachusetts, in our own "mini-mill" brick building, a modern replica of the many red brick buildings that dot our regional landscape.

We manufacture all our controls and sensors here in Massachusetts. In 2022, we earned the ISO9001:2015 Certification, a testament to our continued quality management in the design, manufacture, and service of our 100% US-made industrial sensors and controls.

## CONTACT US

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