

PUMPS POWER ENERGY & COST SAVINGS

Pumps can account for 40% of industrial energy usage¹.

Designing pump systems to reduce energy consumption is one step toward greater sustainability.

MANUFACTURERS SEE THE BUSINESS CASE FOR SUSTAINABILITY

According to a **2019 NAM Sustainability Survey Report**:

>**80%** of manufacturers said they have a sustainability policy in place or are developing one.



93.8% of companies surveyed track energy usage.

Top Drivers of Manufacturer Sustainability Policies





ENERGY RATING

Brand XYZ	ESCC Pump Type
Model #: 84	- Motor
Nominal Speed: 3600	- Continuous Controls

VARIABLE LOAD
PEI_v: 0.40

ENERGY RATING
60



Power savings over the baseline can be estimated by multiplying ER by motor input power (kW) and dividing by 100. Multiplying power savings by operating hours and cost of energy will yield estimated cost.

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- 1. BASIC INFORMATION**
 Pump brand, model number, nominal speed, equipment type, motor and controls (if applicable).
- 2. PUMP ENERGY INDEX**
 Calculation comparing the pump's efficiency to the minimum standard. Lower values are better.
- 3. ENERGY SAVINGS**
 Number indicating the percent of power savings over the baseline set by Department of Energy. The higher the energy rating, the more efficient the pump.
- 4. ESTIMATED SAVINGS**
 Illustrates the method for using the ER rating to determine actual savings.

THE LABEL THAT UNLOCKS SAVINGS

The Hydraulic Institute (HI) Energy Rating Program allows users to view and verify data on pumps that indicates the power savings obtained from upgrades and changes.

INDUSTRIAL BUSINESSES CAN SAVE BIG OVER TIME

If an industrial plant using 40 pumps operating at an average of 15-hp switched or modified pumps to achieve an energy rating of 50, that business would save:

1.3 million kWh per year, which roughly equals...

\$117,000
in annual savings

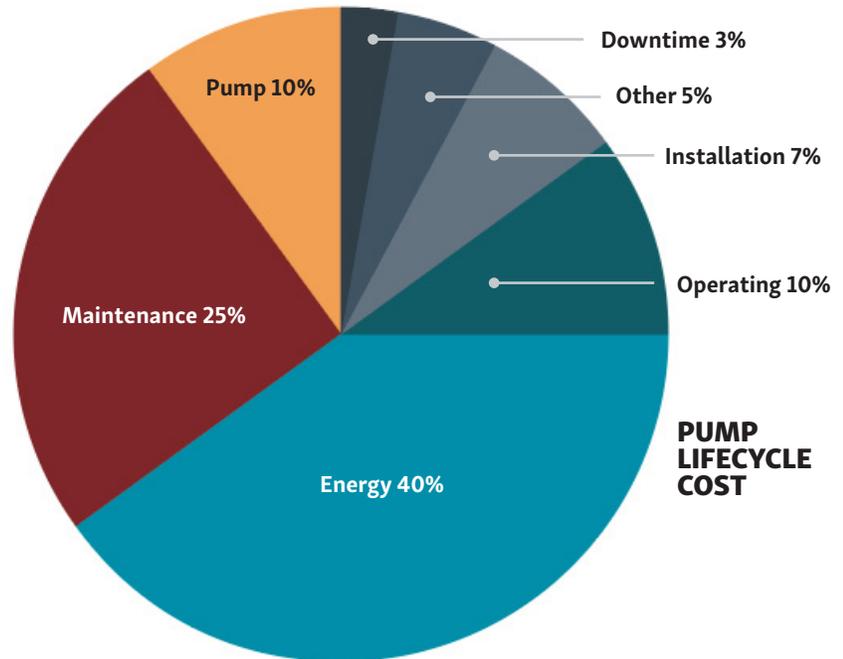
>\$1.3 Million
in cost savings over an estimated 11-year lifetime of the pumps

114% Internal rate of return
<11 mos. Simple payback



OTHER METRICS FOR SUCCESS

Don't forget that pump cost, installation and energy savings are only part of the equation. Energy-efficient pumps that vary their speed to meet demand can also save costs by boosting reliability and reducing expenses tied to maintenance, operation and downtime.



IMAGINE THE IMPACT

Selecting pumps within an HI Energy Rating of 50 for all new pumps installed in 2020 could unlock energy savings of:

- **14.2 TWh** annually
- **162.9 TWh** of electricity over an 11-year pump lifetime

According to the [EPA's greenhouse gas equivalency calculator](#), that greenhouse savings would represent:



A year's worth of electricity for more than **13 million homes**



Carbon sequestered by more than **1.9 billion tree seedlings** grown for 10 years



The CO2 emissions from more than **12.9 billion gallons of gas** consumed

FIND THE RIGHT SOLUTION

Learn more about HI's Energy Rating Program and search the database of rated pumps to find your solution. Visit <http://pumps.org/EnergyEfficiency/>.

The Energy Rating Label Program is part of HI's ecosystem of energy efficiency training, certification and standards initiatives to raise awareness of energy saving options, including Pump Systems Matter Training, PSAP Certification, Lab Approval and HI Test Standard.