

Fluid System Optimization

SAVE MONEY AND IMPROVE YOUR BOTTOM LINE

Improve your facility's operations with our Fluid System Optimization program from Xcel Energy. Our study incentives and project rebates can help you reduce your energy costs, improve productivity, enhance system knowledge, and increase profitability for a variety of systems.

ELIGIBLE SYSTEMS		
Pump systems	Blower systems	Hydraulic systems
Fan systems	Vacuum systems	Compressed air – demand

Study Considerations

Studies will address current conditions and operating parameters, measure flow, pressure and power, and estimate future process production needs. Scope is not limited to any one factor, but can include a variety of factors depending on impacted systems. Some possible considerations for the various systems may be:

FAN AND BLOWER SYSTEMS

- Equipment selection
 - size and type, degraded fans, incorrectly sized fans, optimal fan types, alternate fan drive options, and obstructed inlets.
- Drive selection (belts, sheaves, alignment, etc.)
- Control method (dampers, variable pitch blades, variable speed drive, etc)
- System configuration (to address insufficient air delivery, unnecessary pressure drop, etc.)
- Identify duct system leaks and improvements, repairs can save significant operating costs not just on your fan system but from your HVAC systems affected by leakage into conditioned air spaces.
- Leakage or waste reduction
- Identify the optimal method of controlling fan or blower systems with variable loads due to ambient conditions, occupancy, and production demands, saving you energy on both fan/blower and HVAC systems.

PUMP AND HYDRAULIC SYSTEMS

- Identify the optimal choice of pump used in your system based on fluid properties including acidity/alkalinity, operating temperature, vapor pressure and viscosity.
- Analyze your design pump capacity to accurately size your piping system, determine friction head losses, construct system curves, and select a pump and drive motor.



Study funding up to 75% of study cost PLUS additional BONUS up to 100%* of study cost when you implement projects identified in your study.

*bonus potential will be outlined with your study measures upon study approval.

- Consider important environmental considerations that affect your system including ambient temperature and humidity, elevation above sea level, and whether the pump should be installed indoors or outdoors.
- BEP — Best Efficiency Point
- Pump selection (size and type)
- Control method (recirculation/bypass lines, variable speed drive, etc)
- Pump configurations (parallel operation for multiple-pump systems)
- Pipe and other system component configuration
- Waste reduction

COMPRESSED AIR DEMAND STUDY AND VACUUM SYSTEMS

- Analyze your optimal compressed air/vacuum needs by examining what your uses are, why they are used, when air is used and your future use outlook.
- Determine what pressure/vacuum is needed on your system and why.
- Compressor/vacuum pump selection (size and control type)
- Clean up equipment selection (filters, dryers, and storage)
- Control method
- Multiple-compressor/vacuum pump configuration and control
- Pipe and other system component configuration (reduce pressure drop between equipment room and end-use)
- Waste reduction (high to low pressure conversion, pneumatic to electric conversion, open blowing, etc.)

Our rebates help reduce your costs

STUDY REBATES

Study rebates are up to 75% of the study cost depending on the expected energy savings, not to exceed \$25,000. Plus bonus rebates up to 100% of the out-of-pocket study cost when you implement energy saving projects from the study. Bonus of \$.03/kWh and \$3/Dth (excludes supply side studies).

EQUIPMENT REBATES

Use our prescriptive and custom rebates to help offset the costs of purchasing more efficient equipment of making process improvements.

Rebates New – VSD Air Compressor 10 to 49 hp	\$100/hp
Early Retirement – VSD Air Compressors 10 to 49 hp	\$100/hp + \$3,000
No Loss Air Drains	\$200/ea
Mist Eliminators	\$3/rated CFM
Cycling Dryers	\$2/rated CFM
Dew Point Demand Controls	\$1,500/ea
Motors & Drives	See Motor & Drive Efficiency Rebates for more details



Contact your Xcel Energy account manager, or call our Business Solutions Center at **1-800-481-4700** for all the details.

This program's rules, requirements and offer are subject to change at any time. The rebate program will provide up to 60 days notice of cancellation. Changes or notifications will be posted on xcelenergy.com/rebates, Fluid System Optimization page.

The customer is responsible for checking with the Xcel Energy Business Solutions Center at **1-800-481-4700** or by e-mail at **energyefficiency@xcelenergy.com** or visit **xcelenergy.com/Rebates** to determine whether the program is still in effect and to verify program parameters.