

Energy efficiency in the chemical industry

With rises in energy prices, it is becoming increasingly important for companies to look for areas where they can reduce energy consumption.

By selecting the right lubricant and the right lubrication partner who provides the necessary experience and know-how, companies can achieve two goals in a single step: saving costs and reducing their environmental footprint.

Lubricants are often overlooked when it comes to increasing energy efficiency, however, in applications involving gearboxes and compressors, they can play an important role. Here, the right choice of lubricants can save between three and five percent of energy, thereby reducing the carbon footprint.

Changing lubricants can bring payback in a short time

Most of the steps a company can take to increase energy efficiency will come at a notable cost. Upgrading to newer machines, changing equipment, or installing alternative energy sources like solar panels can be expensive, and it can take years to make up for

the costs. With lubricants, on the other hand, payback is immediate, and a change can be made much more quickly. Lubricants offer new ways of attaining sustainability goals, lowering costs, and achieving a better energy balance, but it is vital to look at the whole system and take a before/after comparison.

Why should you trust our solutions?

We can prove what we claim! For more and more companies, the certification of energy and resource management plants are increasingly important. To do so, they need a reliable lubricant partner with the experience to deliver energy savings with the right choice of lubricants. At Klüber Lubrication, we can prove energy savings and carry out projects that comply with internationally recognised standards such as the International Performance Measurement and Verification Protocol (IPMVP) or DIN ISO 50015. Another advantage is provided by our detailed energy savings report that can be part of your energy audit documentation.

For further details visit
<https://www.klueber.com/uk/en/>



Two examples where we have proven energy efficiency through lubrication

1 Business Case: Energy Efficiency increased at cooling towers in Korea

Application: 11 cooling cells
Mineral Oil with ISO VG 320 used in all gearboxes
Installed power of 37kW per gearbox

Goal: Reduction of total energy consumption and costs

Result: 6% reduced energy consumption
Total reduction of 272 MWh and 161 tons of CO₂ emissions/year
€17,600 total cost savings/year
Payback time of 4 months

2 Business Case: Significant savings in a specialty gas plant in Thailand

Application: 2 x Turbo Compressors – Cameron ASD 6000
Rated power: 1120 kW & speed of 2978 rpm
Lubricant volume = 300L (each)

Goal: Increase efficiency and reduce energy consumption

Result: Extended drain intervals from 2 years to every 3 years
Total reduction by 46 MWh and 17 tons of CO₂ emissions/year
€19,500 savings per year on each compressor
Return of investment in only two months