efeu

Efficient Energy Use

Selection tool for pumping systems

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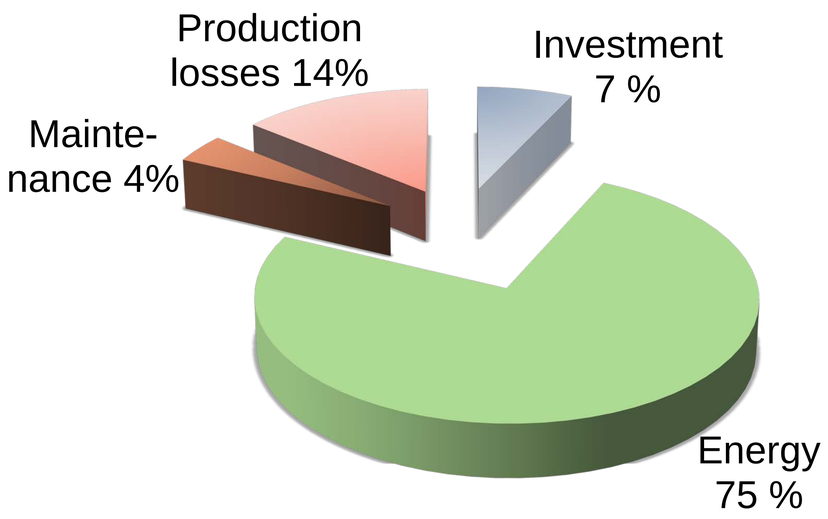
One outcome of EFEU program by LUT is the Pumping System Optimization Tool, which takes account all major components in the system and selects the most energy efficient system for given process.

Pumping, fan and compressor systems cause major part of the electricity consumption in motor-driven systems. Also their life-cycle costs are dominated by energy consumption, as shown below for a pulp pumping system:



Pumping systems have often notable energy savings potential, which is related to their:

- Efficiency in the component level
- Dimensioning and design in the device level
- Operational energy efficiency in the systems level

Determination of the available energy savings potential has so far required the use of component-based selection tools and combination of their results.

- Instead of components, rather the best possible system should be selected based on the total system energy consumption or LCC. Then also the existing energy savings potential is well utilized.

To resolve these issues, PSOT selects the best possible system in terms of energy consumption for known process conditions:

PSOT also allow easy comparison of existing and new pumping system for energy auditing purposes: