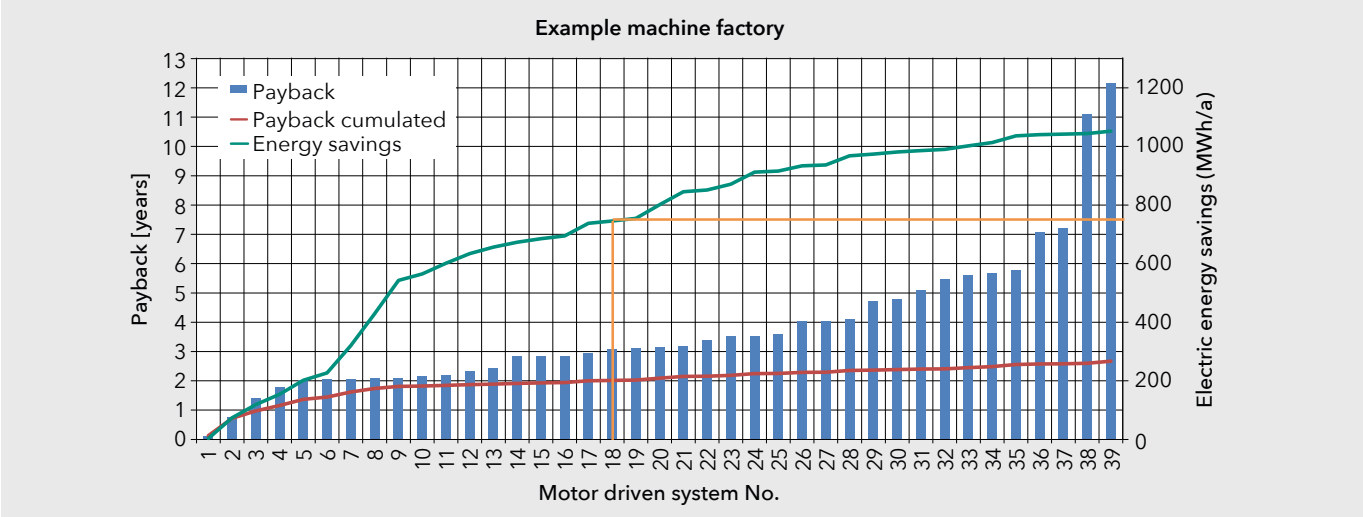
Measures for motor driven systems

The systematic analysis of electric energy savings in motor driven systems in factories has given some new insights: Many motor driven systems can be improved with very low payback times: The figure below shows that many big machines with around two years payback generate substantial electricity and cost savings.

The figure below shows the results of the cost benefit analysis of each of the 39 motor driven systems in a machine factory in Switzerland in blue bars (Payback). The machines are sorted from the shortest payback time at the left side (below one year) to the right side with the longest payback time (two machines over 10 years). The red line in the figure shows the cumulated payback time that comes into play when packages are made with the machines providing the best payback times. The red line shows, that the average payback of the packages (cumulated for all 39 machines) only amounts to 2.7 years even when some machines are included with considerable higher payback times. This clearly indicates that an approach implementing entire packages of 20 to 30 motor driven systems can benefit the total energy savings of the factory at the lowest possible cost.

The green curve in the figure above shows the electric energy savings. It cumulates the savings from the machines with the lowest payback up to those with the highest payback. The curve show that substantial electricity savings are already made with the first group of machines with low paybacks up to two years. This also means that 80 % of the total electric energy and operating cost savings of this factory can be made with about half of the motor driven systems. This result is good news for a fast implementation program that also needs to consider the limited engineering capacity available in the factory. And it also opens the way to a continuous multi-year program where always the machines with the best payback times are implemented in packages.



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