

How can you make sustainability profitable by using smart driver technology?

How more sustainable operations helps create better profits

With rising energy costs, supply chain pressures and increased social interest in sustainable production, it's more important than ever that the equipment you use high class perform while reducing your carbon footprint. By reducing the carbon footprint, businesses also save energy costs, which helps create better profits.

That's where our technology comes in. When selecting an UV lamp driver, of course, the initial cost is a crucial consideration. End users must factor in the total cost of ownership – not simply the upfront cost of a lamp driver. The energy and maintenance costs need to be considered – longevity is key here. Using smart UV lamp driver technology helps to create a more sustainable operation, reducing carbon footprint and saving costs at the same time.

How to calculate the total cost of ownership of UV Lamp drivers of your application?

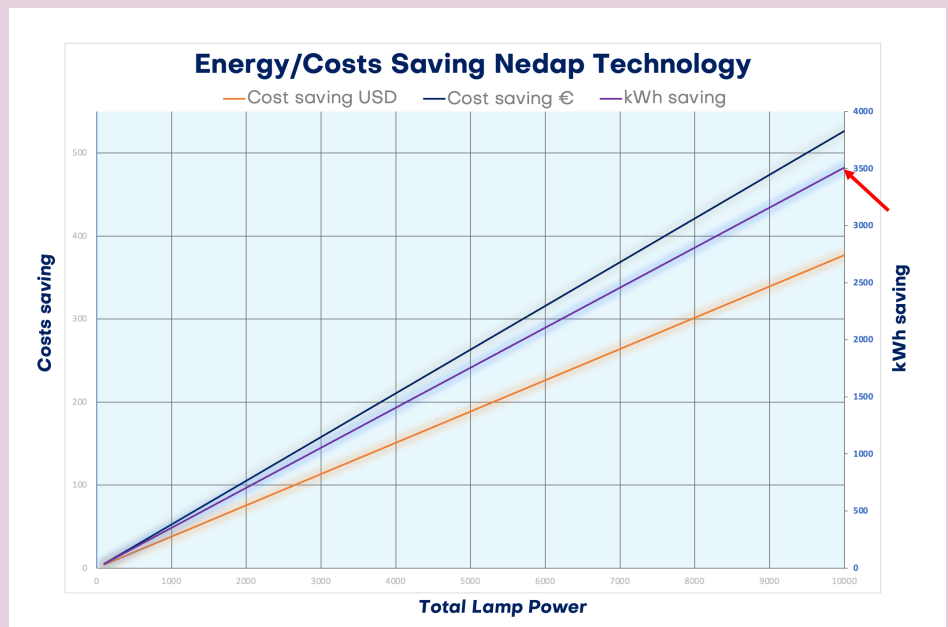
Parameters that determine the total costs over a longer period of time are:

- 1. Initial costs** of the lamp driver and additional costs (for example line filters etc.)
- 2. Efficiency** of the lamp driver
- 3. Price of industrial energy**

- 4. Estimated operating hours** of your application driver
- 5. Total lamp power** that is used
- 6. Product lifetime**

System efficiency and energy cost savings

Based on benchmark research, UV systems with Nedap UV lamp drivers are up to 5% more energy efficient than other drivers in the market, due to higher Lamp driver efficiency, lower Total Harmonic distortion (THD) and higher Power Factor (PF). With the current energy prices, this results in substantial operational cost savings. Depending on the price of industrial energy, the operating hours per year, and the lamp power used (kW) you can calculate the energy savings for end-users of your application.



Example

- Industrial energy price: \$ 0,1075 per kwh and € 0,150 per kwh (August 2022)
- 6000 operating hours
- 5% efficiency increase
- 60 kW total lamp power

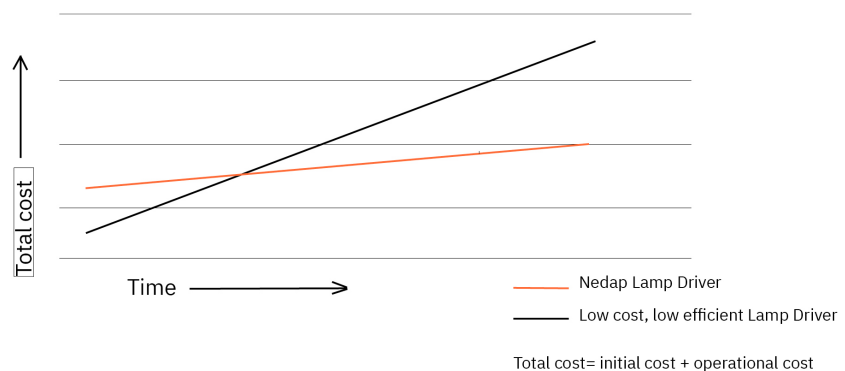
When the total lamp power in your application is 10 kW, a 5% efficiency increase results in **3500 kWh** savings per year. If your UV application uses a total of 60 kW of lamp power, this results in **21,000 kWh** (6x 3500) savings, and **€3,160 (6x €526) or \$2,262 (6x \$377) per year**

A reduction of 21,000 kWh also equals a reduction of **4200 kg CO₂**

(source: European Environment Agency)

Calculation of payback period

The initial price of your UV solution maybe higher using a premium UV driver, but your customer will experience substantial energy costs savings. The payback period is the time between the initial investment date and break-even point, the moment you save money compared to a competitive product. This depends of course, very much on the UV application.



Explanation of the additional costs

When defining the costs of UV solutions, consider how you can save costs by reducing the number of additional components you need.

Nedap offers drivers with:

- Internal fuses
- Low inrush current
- Integrated components to fulfil EMC (EMI) and THD requirements
- Heat detection sensors and integrated fan tray power supply (4kW rack)
- Power factor correction
- Ground fault detection (also in lamp idle mode for 800W and 2x1000W drivers)

This means for your system that:

- No additional EMI filters necessary
- No external temperature detection necessary
- No over voltage protection necessary
- No ground fault detection necessary



Sustainability

First, your UV systems offer you more UV, due to better efficiency. Secondly, the Nedap high-quality UV lamp driver increases the lifespan of UV lamps significantly – an important reason for all major lamp manufacturers to recommend Nedaps lamp driver technology. Both features lead to a more sustainable operation.

**We
power
UV**
*Smart UV driver
technology for more
sustainable operation*



Nr. 1 technology • Most efficient driver technology, requires less installation space. >900.000 electronic UV lamp drivers installed and in use worldwide.



Reliable • Nedap UV drivers are designed to last. The average lifetime production is more than 10 years.



Flexibility • Digital lamp selection and optimization and UV lamp dimming down to 30% and beyond.



Insights • Relevant data for cleaner operation. Embedded software for system data reporting.