

# Energy

## Energy efficient UV disinfection

Disinfection water technology

### Part 2 –Performance, Case studies

Ministry of Health's regulations in Israel require public facilities including hotels, hospitals and old-age homes to maintain hot water system temperature at a minimum of 55°C prevent the proliferation of Legionella. However, maintaining a high temperature translates into a drastic increase in energy costs and it also exacerbates deposit formation on the heat exchanger.

An international hotel chain with operations in Israel piloted and installed in 2015 a full-scale UV system to improve its water disinfection sustainability while adhering to a "green" energy consumption policy. The UV technology was installed in the hot water system, directly before the heat exchanger. Comprehensive microbial monitoring was undertaken from various points to determine the efficacy of the technology to disinfect the hot water system and provide non-chemical control of pathogenic organisms such as Legionella.

The UV technology provided superior disinfection control at the reduced temperature, resulting in the Ministry of Health authorizing the hotel to permanently reduce the temperature of the hot water system to 50°C. As a result, the hotel saved 25 000 € per annum in energy related expenses.

### Part 3 –Companies manufacturing/implementing the technology

Atlantium Technologies with Hydro-Optic™  
(HOD) UV Technology

<https://atlantium.com/>

BIO- UV  
UV-Guard

<https://www.bio-uv.com/>

<https://uvguard.com/>

Aquaprox

<http://www.aquaprox-tertiaire.com/probio-uv-c/>

UV germi

<https://www.uvgermi.fr/en/legionella/>

