REDUCING FUME CUPBOARD ENERGY USAGE IN R&D CHEMISTRY LABORATORIES

**CLIENT | LOCATION**
Global pharmaceutical manufacturer, UK

**SECTOR**
Research and development laboratories

**PROJECT BRIEF**
Our client was experiencing high energy demand driven by high volumes of treated fresh air to a large number of fume cupboards operating 24/7. We were tasked with targeting fume cupboard capture face velocity (CFV) reduction and introducing night setback in order to reduce energy demand without compromising on laboratory personnel safety.

**SOLUTION**
We carried out the following:
- Produced a detailed smoke trial approach document for client approval.
- Proved the feasibility of reducing CFV by carrying out a smoke visualisation trial.
- Produced a bespoke smoke trial video matrix to simplify video analysis of trial.
- Recommended replacement of existing laboratory supply air diffusers.
- Demonstrated capability to safely reduce existing CFV’s to level agreed with EHS / users.
- Developed diversity and night setback strategy for client review.
- Complete risk assessments, change and regulatory documentation.

**RESULTS**
£12,000
Energy cost savings (per year)

75.4 tonnes of CO₂
Emissions reduction (per year)

293,000 kWh
Energy savings delivered (per year)

“The EECO2 team demonstrated a thorough understanding of laboratory air systems. The data obtained was instrumental in formulating our energy reduction strategy…also their flexibility (weekend working) was appreciated.”

Site Facilities Manager