

# Energy Technology List (ETL) – Retrofit Energy Efficiency Report

This report provides five example retrofit technologies listed on the UK Energy Technology List (ETL). Each example explains how existing equipment can be upgraded to improve energy efficiency, reduce operational costs, and lower carbon emissions. Cost estimates are provided in both GBP (£) and EUR (€).

## 1. Condensing Economiser – Boiler Flue Heat Recovery

**Description:** A condensing economiser is installed in the boiler flue to recover waste heat from exhaust gases and use it to preheat boiler feedwater.

**Installed Cost:** £28,000 / €32,000

**Energy Savings:** 7–9% reduction in fuel consumption (~70,000–90,000 kWh/year)

**Annual Cost Savings:** £2,100–£2,700 / €2,400–€3,100

**CO<sub>2</sub> Reduction:** 14–18 tonnes per year

**Payback Period:** Approximately 3–4 years

## 2. Retrofit Burner Control System

**Description:** Electronic burner controls replace mechanical systems to optimise air/fuel ratios and combustion efficiency.

**Installed Cost:** £2,000–£10,000 / €2,300–€11,500

**Energy Savings:** 5–7% fuel reduction (~50,000–70,000 kWh/year)

**Annual Cost Savings:** £1,500–£2,100 / €1,700–€2,400

**CO<sub>2</sub> Reduction:** 10–14 tonnes per year

**Payback Period:** Around 2 years

### 3. HVAC Demand-Driven Ventilation Controls

**Description:** Smart HVAC controls adjust ventilation rates based on occupancy and air quality sensors.

**Installed Cost:** £5,000–£15,000 / €5,750–€17,250

**Energy Savings:** Up to 69% fan energy reduction (~34,500 kWh/year)

**Annual Cost Savings:** ~£4,100 / €4,700

**CO<sub>2</sub> Reduction:** 6–10 tonnes per year

**Payback Period:** Approximately 2 years

#### 4. Refrigeration Cabinet Door & Curtain Retrofits

**Description:** Doors or strip curtains reduce warm air infiltration into refrigerated display cabinets.

**Installed Cost:** £200–£1,000 / €230–€1,150 per cabinet

**Energy Savings:** 20–40% reduction (600–1,200 kWh/year per cabinet)

**Annual Cost Savings:** £150–£300 / €175–€345

**CO<sub>2</sub> Reduction:** 0.1–0.25 tonnes per year

**Payback Period:** Less than 1 year

## 5. LED Lighting Retrofit Kits

**Description:** LED retrofit kits replace fluorescent or older lamps using existing fittings.

**Installed Cost:** £20–£60 per fitting (+ labour) / €23–€69

**Energy Savings:** 40–50% reduction (~100,000 kWh/year in large installations)

**Annual Cost Savings:** ~£8,000 / €9,200

**CO<sub>2</sub> Reduction:** ~20 tonnes per year

**Payback Period:** 1–2 years