

Process Energy & Carbon Performance

Baseline. Audit. Optimise. Target.

Food, Dairy & Bev.

Life Sciences

Aviation MRO

Automotive OEM

Semiconductor

Energy and carbon costs are embedded in every unit you produce. Climeaction helps industrial manufacturers across five critical sectors understand, manage, and systematically reduce the energy and carbon intensity of their processes, unlocking cost savings, regulatory confidence, and competitive advantage.

Why Process-Level Intelligence Matters

- Site-level energy data alone cannot identify where waste occurs, or which processes drive the highest carbon cost per unit of output.
- Capital investment decisions for decarbonisation need a validated baseline and opportunity map, before projects can be sized and prioritised.
- Utility incentive programmes (Ire: SEAI, US: Mass Save, ComEd, Consumers Energy) require measurable baseline data to quantify for grants and rebates
- Reductions targets that are credible, must be anchored in real production-normalised performance data

Efficiency

Average energy cost reduction identified per FAST audit

Optimisation

Typical payback on process optimisation recommendations

Experience

Industrial sectors served across Ireland and the US

Our Approach: Four Steps to Process Carbon Mastery

01 Baseline

Establish production-normalised energy and carbon intensity (kWh/unit, kgCO₂e/unit) per process, line, and shift. Delivered via sub-metering strategy, utility data integration, and our carbon accounting framework.

02 Audit & Map

FAST Process Audit and Carbon Value Stream Mapping (CVSM) identify hidden energy losses, idle consumption, and process inefficiencies. Every opportunity is quantified in cost, carbon, and payback, giving you a clear, prioritised action list.

03 Optimise

Develop and implement a Process Energy & Carbon Strategy, covering operational measures, engineering upgrades, and technology interventions. Recommendations are staged to match your capital plan and operational constraints.

04 Target & Track

Set science-aligned intensity targets per process and production unit. Establish a benchmarking cadence so performance improvement is visible, reportable, and continuously improving, month on month, year on year.

Sector Expertise

Food, Dairy & Beverage

- Steam, CIP, pasteurisation, and refrigeration baseline
- Thermal energy intensity per tonne of product
- Wastewater energy load quantification
- Refrigerant and compressed air carbon mapping
- Target-setting aligned to Bord Bia Origin Green and SBTi

Life Sciences

- HVAC, cleanroom and controlled environment energy mapping
- Process utility carbon footprint
- ISO 50001 implementation and alignment
- Utility master plan integration and capital prioritisation
- SEAI / EI / IDA Grant support



Aviation MRO

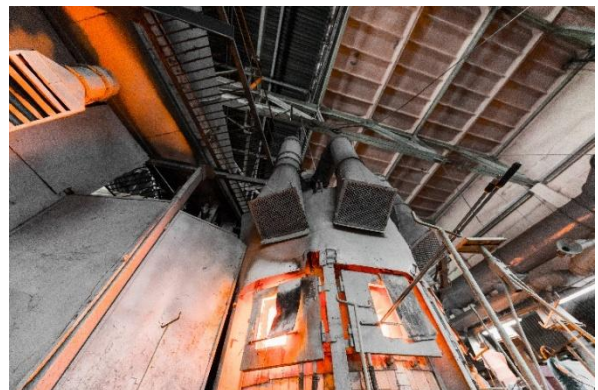
- FAST Process Audit
- Compressed air review and optimisation
- Process heating upgrades and heat recovery plan
- Green Capital Application support
- Multi-year CAaaS delivery

Automotive OEM

- Paint shop, body shop, and powertrain line energy mapping
- Compressed air, hydraulic test, and heating system audits
- Compressed air, chilled water and furnace optimisation
- Decarbonisation roadmap aligned to operational cycles
- Integration with global and site-level sustainability KPIs

Semiconductor

- Process tool and HVAC sub-metering strategy
- UPW, compressed gases and chilled water carbon mapping
- Scope 1 and 2 process mapping aligned to GHG Protocol and SBTi
- Rebate programme qualification and support aligned with EEOS funding opportunities



Funding

A range of Irish and EU funding supports are available to help manufacturers reduce energy use, improve efficiency, and deliver decarbonisation projects. Climeaction supports clients in identifying and maximising applicable funding opportunities.

Available Supports

- **SEAI Grants:** Energy audits, EXEED, renewable heat, and efficiency upgrades
- **EEOS Rebates:** Utility rebates for verified energy savings
- **Enterprise Ireland Supports:** Green Transition and Climate Action funding
- **IDA Ireland Supports:** Sustainability and energy investment supports for FDI companies
- **Accelerated Capital Allowances (ACA):** Tax relief on approved energy-efficient equipment
- **EU & Industry Programmes:** Horizon Europe, EIB financing, and Origin Green initiatives

Your Simple Entry Point

Start with a **Free 2-Hour Process Carbon Discovery Session**. In a single structured conversation with one of our process engineers, we will:

Identify your top 3 energy and carbon cost drivers, Size the opportunity in €/€ and tCO₂e , Outline a 90-day baseline and audit plan

No commitment. No obligation. Just clarity.

Contact



Andrew Crusher – Process Engineering Lead

Andrew is an engineer with extensive experience in Industrial energy systems, sustainability and process engineering across Ireland, the Netherlands and the UK. He has worked with leading manufacturing companies to improve processes, deliver projects, and reduce energy usage, costs and carbon emissions. His projects focus on reducing energy demand, recovering waste energy and applying proven, cost-effective technologies to support decarbonisation. Through high quality Energy Efficient Design (EED), Andrew helps businesses meet carbon reduction targets while minimising capital and operating costs and maximising grant funding opportunities.

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