



ITPENERGISED
Earth. Smart. Solutions

Energy and Environmental Consulting

INDUSTRIAL MANUFACTURING SECTOR



www.ITPEnergised.com

INDUSTRIAL MANUFACTURING

Introduction

ITPEnergised (ITPE) was formed when Energised Environments Limited acquired Bristol-based IT Power Consulting Limited and now encompasses Xero Energy Limited. ITPE is a trusted advisor providing client-focused, commercially minded, energy and environmental consulting services to clients in onshore & offshore energy, transport & infrastructure, property and corporate sectors.

We have strong corporate credentials, a first-class in-house team, supported by the best technical sub-consultants we know based on our experience, allowing us to adapt our offering to each geography and the specifics of every project, on a case-by-case basis.

Our team at ITPE has worked across many sectors with a diverse client base including food & drink, industrial, aviation, retail and public sector. Our team has international experience including North America, Europe, Asia and Africa working with major blue chips including Ford, Tesco, GSK, Emerson and Heineken.

Example of our client feedback;

'We found all we came into contact with at ITPEnergised to be both professional and personable which made the process of establishing the baselines and the (ESOS) audit itself straightforward. Communication was clear and allowed us to achieve compliance under a tight deadline.'

Michael Davey, Sustainability Manager,
Munoz Group

Our clients cover a wide range of manufacturing companies and sectors, including:

- DSM Nutritional Products
- Michelin
- Aggreko
- EGGER
- William Grant & Sons
- Glennon Brothers

Our core services to industrial manufacturing clients cover:

- Electrical design, procurement support and technical advice
- Energy management and efficiency services
- Greenhouse gas accounting, reporting and verification
- Energy Saving Opportunity Scheme (ESOS) compliance
- EU Emissions Trading Scheme compliance advice
- Technical and commercial feasibility (renewable technologies and combined heat and power)
- Environmental regulatory advice and auditing including Ofgem audits for RHI
- Environmental Management Systems and programme support (ISO14001 and ISO50001)
- Energy efficiency audits to BS EN 16247
- Energy management system design and implementation for ISO 50001
- Environmental Planning and EIA
- Noise and air quality consultancy
- Environmental permitting support
- Stack sampling
- Carbon strategy and management plan advice

ITPEnergised ADVICE FOR INDUSTRIAL MANUFACTURING SECTOR

If you are looking for a reliable partner to support you with existing operations or planned expansion, please contact:

John Barclay on john.barclay@itpenergised.com and +44 (0) 7881 385 633 or
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Selected project experience

Energy Compliance

ESOS Lead Assessor and auditing - various UK clients

ITPE has provided Lead Assessor services through its experienced team of consultants, and energy audits to a range of companies across all sectors. Members of the team have worked with clients in the oil and gas sector, hospitality, manufacturing, retail and professional services. Clients have included Expro and Proserv, Munoz Group, Millennium Hotels, Carlsberg and many more.

CRC audit - Cummins UK

ITPE undertook the CRC Audit of Cummins UK's footprint data prior to submission of the formal footprint report to the Environment Agency. We provided an assessment of the data, procedures for identifying sources of data and confirmation on the calculations used to generate the footprint.

Auditing and Systems

ISO 50001 & 14001 Integrated Management Systems – DSM Dalry

ITPE provided support to DSM Nutritional Products in Dalry, Scotland. We carried out a gap analysis of the sites operations in preparation for ISO50001. In addition, we also provided bespoke support to their ongoing ISO14001 certification.

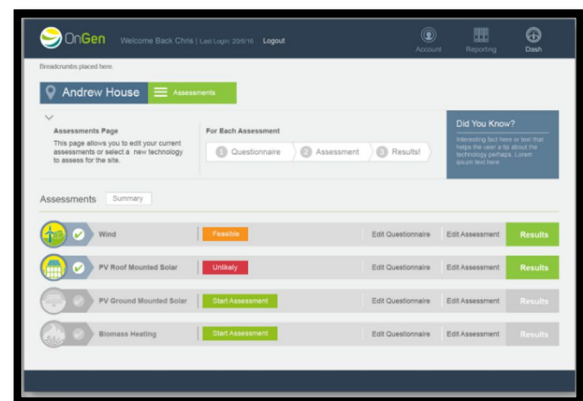


Energy reporting & analysis - Aggreko Manufacturing

ITPE provide energy reporting and analysis on a monthly basis for Aggreko. We use our knowledge of building and factory operations to flag up any unusual patterns with suggestions for possible causes. We produce demand profiles as required ensuring that Aggreko is only required to address areas of concern. Our team has also provided energy auditing to BS EN 16247 and ISO 50001 implementation and gap analysis together with 14001 system support.

Energy technology assessment

Renewable energy assessment tool - OnGen Expert™



ITPE was instrumental in the development of the world's first online renewable energy technology assessment tool, which also optimises generation potential to demand data in order to maximise commercial returns. Our role has been as "technical director" for the software development team on each of the technologies developed on the platform.

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Low and Zero Carbon Energy Supply Options Appraisal – EGGER Barony

ITPEnergised worked with the site management team to identify and evaluate low and zero carbon energy options for the site. The feasibility assessment considered the potential for several technologies including:

- Gas fired CHP - turbine/engine
- Wind turbine generation – on site or adjacent land
- Solar PV
- Solar thermal
- Fuel cells - central or decentralised
- Energy from Wood – gasifier or anaerobic digestion
- Energy storage
- Biomass boiler or direct biomass firing
- Biomass CHP; gasifier or turbine
- Heat pumps
- Geothermal
- Discounted at proposal stage - wave, hydro, tidal, P2G and absorption cooling



The findings of the evaluations were presented in a review report which

considered each technology in the context of criteria including:

- Benefits
- Barriers
- Incentives available
- Technology maturity/risk
- Supply chain maturity and after sales support
- High level costs and typical ROI

Carbon Management and GHG inventory

Climate Change Risk Assessment - Diageo

The project assessed the impact that climate change will have on Diageo's major European spirits warehousing facility in Scotland. The aim of the study was to identify the likely climate change scenarios for key time frames: 2020, 2050 and 2080. ITPE team members developed a bespoke risk assessment methodology to look at the impact on infrastructure, people and products.



The approach utilised published climate models to develop an agreed scenario based on probability of various impacts occurring; i.e. increased rainfall and intensity, high temperatures, greater severe weather occurrences including high levels of short lived snow fall. The study provided a series of priorities and

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recommendations on adaptation and set out areas of further research that needed to be completed to make detailed investment appraisals.

GHG verification - National Grid

Members of the ITPEnergised team undertook verification of National Grid's GHG emissions for the UK and US businesses. Working to WRI/GHG Protocol standards, they provided Limited Assurance to National Grid for external reporting purposes as to the suitability and validity of the companies' GHG Inventory. The assurance statement was provided to the board and approved.

Carbon Management Plans

Various public and private sector clients

Members of the ITPEnergised team have supported a number of organisations over the last five years in managing and reporting on their carbon footprint.

The work involved an initial review of the maturity of Carbon Management Plans, including an assessment of carbon saving project implementation rates and achievement of aims/targets and the development of Action Plans. These typically included identification and quantification of emission sources, scrutiny of existing carbon saving projects, support to develop new projects and strengthening of internal processes to support key communication between participants and stakeholders.

Environmental Permitting

Precious metals refinery, Part A1 permit applications, surrender and variation

Complete asset lifecycle support through securing a first permit, surrender and re-application following a premises move, and permit variation under Environmental Permitting Regulation 60 on publication of

the updated Non-Ferrous Metals BREF Note.

Members of the ITPEnergised team provided turnkey support through managing engagement with the Environment Agency and delivering all the necessary supporting assessment works, including air quality modelling, management systems development and Site Condition Reporting.

Pharmaceuticals manufacturing, Part A1 variations

The ITPEnergised team supported pharmaceutical manufacturing clients over the course of several years with technical inputs to a major permit variation following a change to production processes and emissions profiles. Related studies included selection and justification as BAT of new air pollution control technology, and the design of a new site wide air quality monitoring protocol.



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Medium Combustion Plant Directive Permit Applications

Various clients

We worked with several clients through the inception of the Medium Combustion Plant permitting regulations, particularly around clarifying participation, challenges for applications in areas constrained for air quality, and invested in a streamlined application tool to enhance our value proposition.

Jedburgh Distillery EIA

Jedforest BV (Marussia Beverages BV)

ITPEnergised led and delivered the EIA for a proposed distillery development at Jedburgh in the Scottish Borders, working with Blyth & Blyth and architects Simpson & Brown.

The development is to comprise two distilleries, visitor centres, bottling hall, maturation warehousing, offices and associated infrastructure.

A key issue involved biodiversity protection and enhancement, as the site is located on the banks of the Jed Water with other activity identified during ecology surveys. Other important environmental considerations included air quality and odour, water resources, noise, landscape and visual impacts, flood risk, archaeology, and socio-economic impacts. ITPEnergised undertook some technical surveys and assessments, co-ordinated others undertaken by external specialists, and authored the Environmental Statement to accompany the planning application to Scottish Borders Council.



The application has been consented and ITPEnergised continues to support the client with discharge of planning conditions and construction phase environmental monitoring.

Orwell Crossing Business Park

Orwell Truck Stop Ltd.

ITPEnergised coordinated and delivered an Environment Report in support of a planning application for the masterplan development of a 30-hectare site in Suffolk, for Strategic Employment Land (principally class B8 storage and distribution). The local authority deemed that an EIA was not required, however a comprehensive Environmental Report was prepared. Working with Farningham Planning, ITPEnergised led the environmental survey and assessment work, including landscape and visual assessment, cultural heritage assessment, air quality, noise, ecology and contaminated land. The project has been consented.

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