

ITPEnergised

Trusted Technical Advisor

Hydrogen Capability

“We believe passionately in the world’s transition to net zero. We are a team of trusted technical advisors who meet and exceed our clients’ aspirations.”





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In numbers



ITPEnergised



> 75% repeat business



Helped over 250 clients achieve carbon targets in 2022



> 65 countries, > 30 developing countries



> 10 locations globally



Directly driving 7 of 17 UN SDGs

*7. Clean energy 8. Economic growth 9. Industry and Infrastructure
10. No inequality 11. Sustainability 13. Climate action
17. Partnership*



Our motivated staff are key to us and our clients



Delivered > 650 projects in 2022



Commercially minded & technology-enabled

Passionate about Net Zero



Our passion



Your Net Zero and ESG delivery partner:

At ITP Energised we're passionate about Net Zero. Our team of industry leading trusted technical advisors meet and exceed our clients' aspirations. Our agile and flexible delivery team works to refine and enable positive changes to environmental, social and governance (ESG) factors and decarbonisation strategies, and to deliver fully practicable solutions.

We work in partnership with our clients to optimise the efficiency of existing assets and facilitate transition to low and zero carbon energy at corporate and site level. In addition, our environmental compliance and impact assessment specialists reduce regulatory/planning burdens and provide exceptional advice and practical solutions.

Sectors:

- Corporate, Industrial & Manufacturing
- Property & Urban Regeneration
- Onshore Renewables & Storage
- Offshore Wind & Marine Renewables
- Oil & Gas Transition

Expertise:

- Advisory
- Environmental Planning
- Technology
- P3M

Why we are different



Differentiation



We think outside the box to help you transform your business:

- Understanding your bird's eye view on wider goals and objectives
- Bringing our passion, commitment and focus to your projects
- Delivering high quality, on time, on budget projects
- Bringing innovation and problem-solving solutions
- Being confidently curious in all that we do
- Becoming an extended part of your inhouse team and advisors
- Understanding the commercial implications of technical discovery
- Challenging the status quo where it adds value – revenue, cost, time
- Thinking long term – pipeline, portfolio, platform - not just one project



How we work with you

Engagement



We think win-win and full project life cycle to help our clients grow:

- We identify relevant trends and innovation:
 - Emerging technologies and future best available techniques
 - Key regulations that drive investment opportunities and risks
 - Market size, growth and behaviour in short and medium term
 - Strategic actions of participants and our network
- We are then better placed to understand your wider goals
- We provide expert and commercially focused guidance and scientific analysis
- We join the dots with other ITP Energised services that may be of benefit
- We close gaps in expertise needed with our comprehensive network



Our expertise in hydrogen

Technical



Technical key expertise

- Needs / yield assessment for prospective consumers and producers
- Grid condition, potential upgrade requirements and connection design
- Project layout, process flow and concept design visualisation
- Initial hazard identification and project risk registers
- Hydrogen transportation options analysis





Our expertise in hydrogen

Environmental & Planning



Environmental key expertise

- Energy and carbon balances and scenario analysis
- Production and energy generation site options screening for red flag constraints and fatal technical flaws
- Lifecycle analysis (streamlined to climate effects)
- Identification and execution of planning and environmental permitting requirements





Our hydrogen projects

United Kingdom

Protium Green Solutions and Budweiser UK (2020 - date)

ITPEnergised is part of the team developing an industrial-scale green hydrogen delivery project for motive and thermal power applications at one of the UK's largest breweries. Initial work scopes included a feasibility, energy and GHG modelling for current and future usage cases, hydrogen demand modelling and hazard identification. As the project progresses, ITPEnergised has moved into a lead role in securing the necessary permissions and consents required for the electrolyser site and linked renewable energy generation developments. We are working in an integrated technical, planning and communications team to engage with local and national planning bodies and environmental regulators.

Confidential Site Selection for green ammonia (2023-)

ITPEnergised is carrying out fatal flaw analysis and mapping of environmental constraints for a longlist of UK sites that will be designed ready for green hydrogen and Power-to-X (green ammonia) production. The work considers risks and impacts from electrolyser, storage and synthesis process stages; we have also managed stakeholder engagement for the client.



Our hydrogen projects

United Kingdom

Development of Consenting Strategies – various clients 2022 - (England, Scotland, Wales)

The ITP Energised team is supporting several confidential hydrogen production facility clients, some with Power-to-X ambitions, as a trusted adviser on consenting strategies. New market entrants can understandably find the maze of regulations difficult to navigate; our approach is collaborative across the client's existing supply chain and identifies not only the permissions required from the various interested statutory bodies, but also how to maximise the chances of success through early identification of risks and opportunities.

Environmental permitting and environmental risk management

In 2023, the team has worked on multiple Environmental Permit / PPC Permit applications for HPF developers including several for Protium. We have managed liaison with the regulators and engineering design teams to produce detailed but proportionate application dossiers containing the necessary risk assessments and audits against UK and EU guidance on Best Available Techniques for pollution control. We have also supported Johnson Matthey at their installation in England manufacturing hydrogen fuel cell components in the same manner.



Our hydrogen projects

United Kingdom

Bruichladdich Distillery (2021-date)

ITPEnergised consortium has won the UK government green distilleries funding competition with an innovative hydrogen energy centre proposal for the Bruichladdich distillery. ITPEnergised, in a consortium with Protium Green Solutions, has received more than £70,000 in funding to complete a feasibility study on incorporating innovative hydrogen combustion technology into the Bruichladdich Distillery. Part of the BEIS Net Zero Innovation Portfolio (NZIP), the project complements our ongoing work with Bruichladdich assessing the application of alternative fuels at the distillery.



Our expertise: corporate advisory

Corporate advisory



ESG & Sustainable Development and Finance

- ESG strategy and performance
- Impact investing
- Stakeholder engagement
- Carbon strategy
- Compliance and diligence
- TCFD alignment
- Benchmarking (CDP, SDGs)
- GHG reporting and verification
- Programme management
- Capacity building and training



Energy and Low Carbon Transition

- Energy management system design and auditing
- Energy and carbon permitting
- Decarbonisation and net zero strategy planning
- Technical and commercial feasibility assessments
- On-site energy generation feasibility
- Energy Performance Certificates
- Behavioural change programmes



EHS, Permitting & Compliance

- Applications, variations and surrenders
- Emissions monitoring and assessment
- Air Quality modelling (ADMS, Aermoc, Puff)
- Environmental Management Systems
- Regulator and stakeholder liaison
- Compliance support
- Improvement conditions



Asset Management & Technical Due Diligence

- Technical asset management
- Financial asset management
- Technical due diligence
- Technical advisory and Client's Engineer
- Solar design



Air Quality & Acoustics

- Odour and Noise monitoring
- Modelling and interpretation
- Liaison with stakeholders
- Odour and Noise control and abatement
- Best Available Techniques assessment and justification
- Cost benefit analysis
- Private nuisance support

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Our expertise : environmental planning

Environmental Planning



Environmental & Social Impact Assessment

- Constraints assessments
- Feasibility, screening, scoping
- ESIA project management
- Regulatory consultation
- Technical disciplines
- Stakeholder engagement
- Public inquiry
- Expert witness



Ecology & Ornithology

- Habitat and botanical survey
- Preliminary Ecological Assessment
- Specialist species surveys
- Biodiversity enhancement
- Habitat management plans



Construction Environmental Management

- Licensing support
- CEMP
- Environmental monitoring
- Habitat management
- Environmental clerk of works
- Ecological clerk of works



Geology, Peat & Hydrology

- Geology & Ground Condition Impact Assessments
- Peat management
- Wind Farm Carbon Balance Assessments
- Surface water management
- Groundwater Dependent Ecosystems

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Our expertise: grid and technology

Grid & Technology



Engineering

- Technology review
- Engineering review of systems design
- Substation site selection and routing designs
- Cable design including dynamic loading and asset reliability
- Substation layout design
- Grid connection concept
- Micro grid concept costing
- Private wire design



Power Systems

- Load flow studies and reactive power capability, compensation equipment specification and optimisation
- Short circuit (fault level) equipment rating
- Transient network strength studies and stability (SCR, weak grid)
- Electrical losses assessment and design optimisation
- Grid Code compliance tests, studies and model validation
- Cable rating, including offshore dynamic cable rating
- Network constraint modelling



Development Project Management & Grid Services

- Project design development and management
- Site finding and resource assessment
- Grid application preparation, support and due diligence
- Network connection costing
- Procurement support
- Programme management



Regulation Services

- Licensing, exemptions, regulatory requirements, metering systems, obligations and arrangements.
- Grid connection costs
- System charges (TNUoS, GDUoS)
- Balancing charges (BSUoS)
- Transmission loss multipliers, benefits and credits, underwriting and security requirements.
- Charging arrangements for transmission and distribution connected projects.
- Provision of consultation briefings and responses to help our clients be heard and protect their projects.

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ITP Energised Group offices in:

Bristol, London, Edinburgh, Glasgow, Lisbon, Madrid, Delhi, Beijing, Canberra and Auckland

Onshore Renewables & Storage | Offshore Wind & Marine Renewables
Corporate, Industrial & Manufacturing | Property & Urban Regeneration
Oil & Gas Transition

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