ITPEnergised

Trusted Technical Advisor

Climate Resilience & Risk Assessment

"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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ITPEnergised - In Numbers



> 75% repeat business



Helped over 280 clients with the net zero transition in 2023



> 65 countries, > 30 developing countries



> 10 locations globally



Directly driving 7 of 17 UN SDGs

7. Clean energy 8. Economic growth 9. Industry and Infrastructure10. No inequality 11. Sustainability 13. Climate action17. Partnership



Delivered > 750 projects in 2023

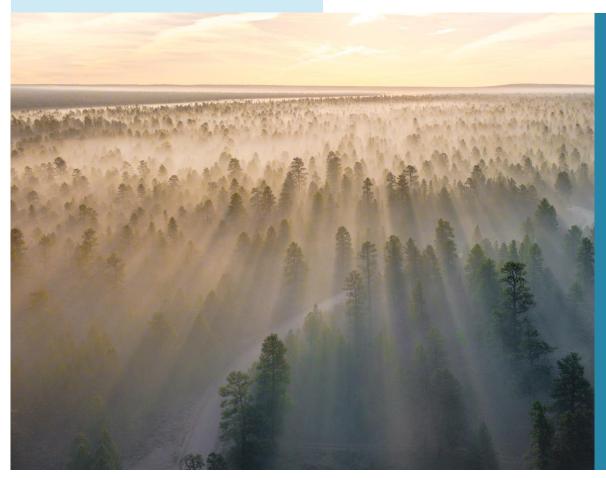


Our motivated staff are key to us and our clients





Passionate About Net Zero



Your Net Zero and ESG delivery partner:

At ITPEnergised 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:

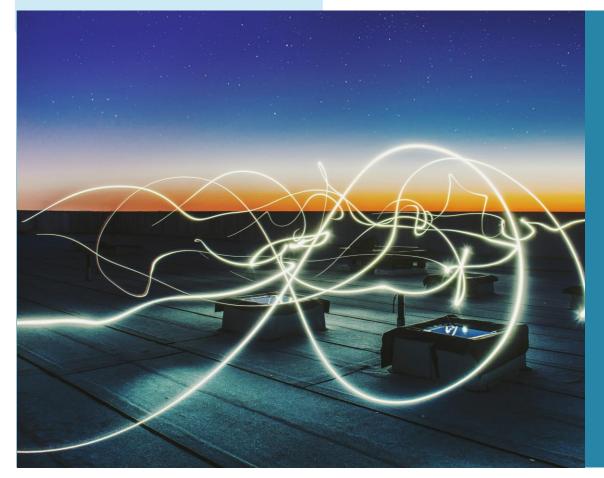
Expertise:

- Corporate, Industrial & Manufacturing > Advisory
- Property & Urban Regeneration
- Onshore Renewables & Storage
- Offshore Wind & Marine Renewables > P3M
- Oil & Gas Transition

- **Environmental Planning**
- Technology



Why We Are Different



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 ITPEnergised services that may be of benefit
- We close gaps in expertise needed with our comprehensive network



Why?

At ITPEnergised we believe in proactive action

Climate change poses significant risks to businesses, communities, economies, and ecosystems worldwide, and we are committed to helping organisations understand and mitigate these risks to build a more resilient future.

Climate risk assessments inform planning applications, strategy and policy development, development of funding proposals, and businesses' ESG disclosure commitments.

At ITPEnergised, climate risk assessments are a key piece of our services in support of a just and equitable transition to net zero. We advise private and public sector organisations and development agencies in this path. By providing climate risk assessment services, we empower our clients to make informed decisions and adapt to the changing climate.



By investing in climate risk assessment services, our clients **not only protect their assets and minimise liabilities but also position themselves as leaders in sustainability and resilience**.

Our assessments help them identify opportunities for innovation, cost savings, and competitive advantage, creating long-term value for their businesses and stakeholders alike.

Additionally, our assessments support the development of funding proposals for multilateral funds, aiding those most impacted by climate change.







How?

Data Analytics and Modelling:

Leveraging advanced data analytics and modelling techniques, we provide quantitative insights into climate risks, using renowned scientific modelled data, scenario analysis, and simulations to forecast potential future impacts with precision.

Stakeholder engagement:

We facilitate stakeholder engagement processes, fostering dialogue and collaboration among diverse stakeholders, including government agencies, communities, investors, NGOs / CSOs, and private sector businesses. This ensures that our assessments are informed by a broad range of perspectives and that our recommendations are socially and politically appropriate.

Tailored solutions:

We work closely with our clients to understand their unique needs and circumstances, tailoring our climate risk assessments to their specific industry, location, and operational context. This ensures that our recommendations are practical, actionable, and aligned with our clients' strategic objectives.

Scientific expertise:

Our team comprises experienced climate experts, environmental engineers, and specialists in related fields, ensuring that our assessments are grounded in robust scientific principles and methodologies.

Regulatory requirements:

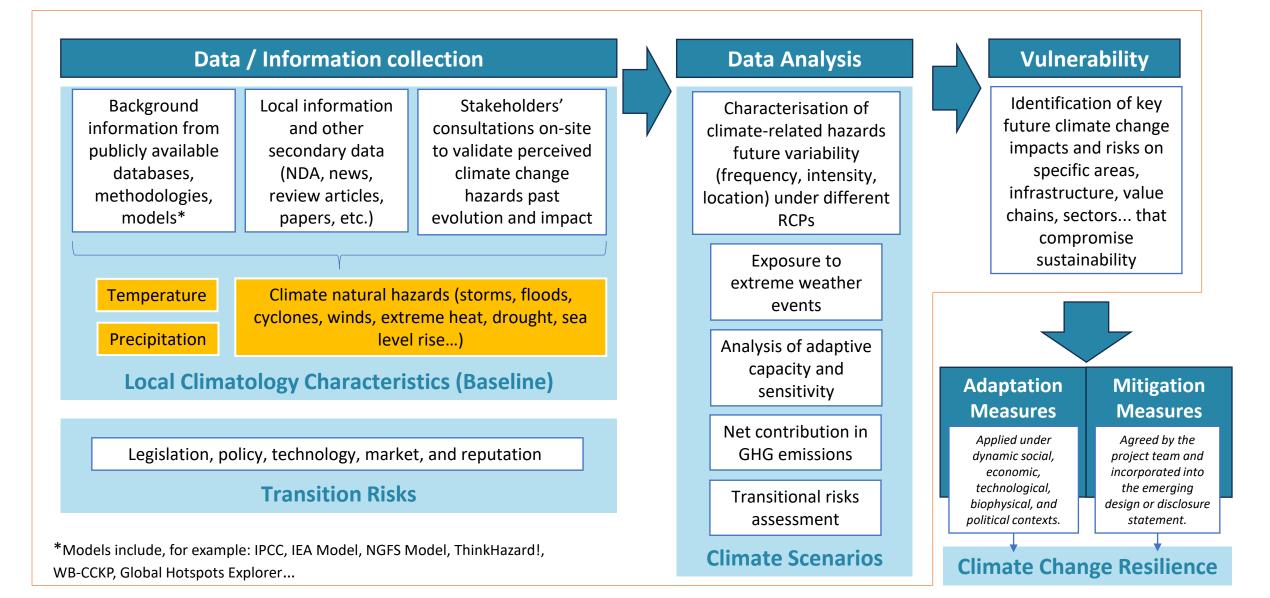
Our expertise in understanding regulatory requirements and reporting frameworks, such as country regulatory requirements, disclosure reporting frameworks (e.g., the Task Force on Climate-related Financial Disclosures (TCFD)), and international guidelines, enables us to assist our clients in navigating complex regulatory landscapes, completing permit applications and fulfilling their disclosure obligations effectively.

Resilience planning:

In addition to climate risk assessment, we offer comprehensive resilience planning services, developing adaptation and mitigation strategies and action plans to help our clients respond to the identified risks, increasing their resilience to climate-related challenges.

Climate Risk Assessment - Generic Methodological Approach -







Expertise

> National Level:

- Climate Risk and Vulnerability Assessments (CRVA)
- Policy and strategy development
- Funding applications development for multilateral funds (GEF, GCF, etc)
- Stakeholder engagement

> Corporate level:

- Transition and physical risks assessment as part of corporate ESG disclosures
- Scenario analysis
- o Stakeholder engagement
- GHG accounting and reporting
- TCFD and ESG Reporting

> Project level:

- Environmental Impact Assessments Climate Change Chapters
- Climate Change Adaptation Risk Assessments (CCARAs)
- Stakeholder engagement
- GHG reporting
- GHG reduction plans



National Level Climate Risk Assessments

National Level Climate Risk Assessments



Need:

- Developing Climate Risk and Vulnerability Assessments (CRVA) as part of the development of funding applications to, e.g., the GEF and the GCF.
- Carried out CRVAs on energy, water, transport, housing and food sectors; and across sectoral value chains (for example, essential oils).
- Support the identification of climate change mitigation and adaptation activities to be implemented in developing countries, supporting the implementation of the Paris Agreement targets and their Nationally Determined Contributions.

ITPEnergised Climate Risk Assessment Approach:

- Uses recognised historical and future climate data (IPCC) as a basis to determine local climate projections.
- Prioritises established climate science data and tangible climate change impacts on sectors and/or value chains at national level.
- Deploys strong stakeholder engagement in the assessment as well as defines climate change adaptation and mitigation actions appropriate for the local scenario.
- Follows methodologies recommended by international organisations and scientific bodies.

Developing Nations Project Experience (1/3)

Tuvalu CRVA



Q

Climate Resilient Housing in Tuvalu

- A. <u>Objective</u>: To enhance resilience of Tuvaluan citizens to climate change and natural disasters by improving housing infrastructure with targeted interventions such as housing upgrades, reconstruction, and potential relocation of households from high-risk areas across Tuvalu.
- B. ITPEnergised Commission: To develop a CRVA for Tuvalu as supporting documentation for the client to submit a project concept note to a multilateral fund.



Methodological Considerations

- Information about the vulnerability of the housing sector based on the houses' exposure and predominant type of construction, as well as presence of vulnerable groups, population density, etc. were taken into account along with the methodological approach for CRVAs.
- To strengthen the analysis, findings are triangulated with feedback from local stakeholder consultations, which incorporates a deeper understanding of how they perceive and cope with climate change.



Key Findings of the CRVA

- The shores of the islands that face the inner lagoons may be at higher risk of inundation because they are below sea level.
- The western sides of the islands facing the ocean may be at a higher risk of suffering damages or loss depending on cyclones' intensity.
- Funafuti is the most vulnerable of all Tuvaluan islands in the long-term.

Conclusions and Recommendations

- Different types of interventions are to be considered depending on their exposure and housing conditions.
- Identification of potential synergies is needed with other ongoing housing projects and adaptation plans.
- Conduct on-the-ground data collection and climate projections to identify the potential impacts of the different climate hazards and climate risks with more precision on specific spots.
- CRVA to be updated with the new National Population and Housing Census results.



Developing Nations Project Experience (2/3)

Madagascar CRVA





- A. <u>Objective</u>: To reduce the vulnerability and increase the resilience to climate change of the essential oils (EO) value chains in Madagascar by promoting innovation, transfer and large-scale deployment of adaptation-oriented technologies and services.
- B. <u>ITPEnergised Commission</u>: To develop the necessary documents and a Baseline Report (including a CVRA) to support the application and request approval from a multilateral environmental fund to implement the project.



Methodological Considerations

- The EO value chains most vulnerable regions were identified based on various tools and the analysis of their adaptation capacity along with the methodological approach for conducting CRVAs.
- Climate change adaptation technologies for the EO value chains were identified to strengthen the analysis.



Key Findings of the CRVA

- Small-scale growers, collectors, producers; traditional small-scale distillers; women, indigenous peoples and the youth engaged in EO value chain's activities have very low adaptive capacity and are the most vulnerable to climate change impacts.
- Six regions are more prone to suffering the adverse impacts of climate change. Vulnerable people of the EO value chains are located there.

Conclusions and Recommendations

- Change sustainable agricultural practices, crop diversification, focus on crop selection and incorporating nutrient management systems.
- Incorporate technologies and measures that capture and efficiently use water as well as new irrigation techniques.
- Improve EO producers / collectors' access to agroclimatic data through digitally-enabled information and education tools.
- * Adopt sustainable energy and fuels for the distillation processes as a means to reducing deforestation rates and conserve forest cover.
- Implement early warning systems for cyclones/storm events and adopt suitable water routing, storage and supply systems.



Developing Nations Project Experience (3/3)

Democratic Republic of the Congo CRVA



The Project

- Objective: To reduce vulnerability and enhance resilience to climate change through promoting innovation, transfer and large-scale deployment of adaptation-oriented technologies and services by SMEs and create jobs.
- B. ITPEnergised Commission: To prepare the necessary documentation and an energy Baseline report (including a CRVA) to request approval from a multilateral environmental fund for the project to start implementation.



Methodological Considerations

Assessment of the areas that are more prone to climate impacts and risks as well as identification of the vulnerable groups based on different tools available for the DRC. * To strengthen the analysis, findings are triangulated with feedback from local stakeholder consultations, which incorporates a deeper understanding of how they perceive and cope with climate change.

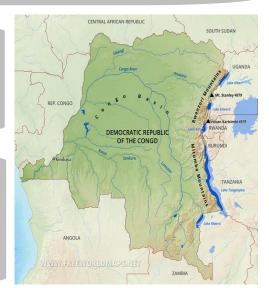


Key Findings of the CRVA

- * Seven provinces identified as the most prone to suffering from climate change impacts and therefore vulnerable to the effects of climate change.
- Six groups were identified as the most vulnerable within these provinces.

Conclusions and Recommendations

- Choose selective breeding in aquaculture and effective aquaculture feed management systems.
- Incorporate technologies and measures that capture and efficiently use water as well as new irrigation techniques.
- Consider climate insurance products for livestock, crops and fish.
- Integrate Multi-Trophic Aquaculture systems.
- Conduct flood management and flood awareness campaigns.







Corporate Climate Risk Assessments

Corporate Level Climate Risk Assessments



Need:

Climate risk assessments are essential for ESG reporting at a corporate level for several reasons:

• Identify Climate Risks and Opportunities

Help corporates identify these risks and opportunities, and understand their potential impacts on operations, supply chains, assets, and finances.

• Understand Financial Implications

Evaluate the potential financial impacts of climate-related risks on revenue, costs, asset values, insurance premiums, and access to capital to make informed decisions and protect shareholder value.

Assess Regulatory Compliance

Support companies to meet current regulatory requirements (TCFD) and in anticipation of future regulatory requirements (CSRD, SEC rules).

• Understand Stakeholder Expectation

Demonstrate a commitment to sustainability, transparency, and responsible corporate citizenship to all stakeholders who are placing greater emphasis on climate resilience.

• Build Long-Term Resilience

Understanding climate resilience fosters long-term business resilience and competitiveness in an ever-changing environment.

ITPEnergised Corporate Level Climate Risk Approach:

- Identify climate risk and ESG regulatory requirements, investor expectations and corporate ambition to create a bespoke approach to assessing and reporting climate resilience.
- Conduct climate risk and opportunity assessment workshop with key personnel to identify and evaluate risks and opportunities aligned with fit-for-purpose and internationally recognised frameworks.
- Apply qualitative or quantitative scenario analysis using internationally recognised scenarios (IEA, IPCC, NGFS) to assess climate resilience across different time frames.
- Align climate risk assessments and results with reporting requirements, business risk management and wider business objectives.

Corporate Climate Change Projects

Solar Fund TCFD Support



The Project

- A. <u>Objective</u>: To evaluate climate resilience through the Recommendations of the TCFD.
- B. <u>ITPEnergised Commission</u>: Provide support for a Solar Fund's TCFD implementation and reporting, including a climate risk assessment and scenario analysis.



Methodological Considerations

ITPEnergised's approach involved evolving the Solar Fund's TCFD implementation and reporting with an emphasis on key areas.
 Specifically, it involved climate-related risk and opportunity assessment, climate scenario analysis amd reporting.



Key Findings

- The Solar Fund was found to be resilient under various climate scenarios and had appropriate risk management procedures and governance structures in place to mitigate potential climate risks or take advantage of any potential climate opportunities.
- The updated TCFD report was updated to align with current trends and best practices, further aligning with regulatory requirements for future compliance.



- * The Client enlisted the services of ITPEnergised given the work we have done over the years with the Solar Fund and its parent company.
- Renewable energy firms are still required to perform climate risk analysis and general ESG improvements, despite its positive contribution towards climate change mitigation.
- * Investors have been increasingly becoming more aware of ESG and climate issues with greater demand for transparency of ESG information.



Corporate Climate Change Projects

TCFD Compliance and ESG Support



The Project

- A. <u>Objective</u>: TCFD compliance and other ESG disclosures and reporting for a leading mid-tier oil and gas production company, operating in the UK Continental Shelf (UKCS).
- B. <u>ITPEnergised Commission</u>: Support with TCFD implementation for compliance and ESG disclosures in 2023, including the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB).



Methodological Considerations

- * ITPEnergised to support the Client in meeting all regulatory TCFD requirements and working with external auditors for compliance.
- Undertook stakeholder engagement to understand primary risk drivers and governance structure, workshop climate risk and opportunities assessment and scenario analysis for the company, before collecting all remaining data required to meet the reporting requirements.
- Short timeframe to deliver the disclosures and it was the Client's first year of TCFD implementation and reporting.

Key Findings

- Successfully supported the Client in meeting TCFD reporting requirements and helped develop GRI and SASB disclosures.
 The Client was found to be resilient under the various climate scenarios with differing commodity and carbon prices.
- * Appropriate governance structures and risk management processes were in place to manage climate risks.

Insights

- It is important for companies to align their ESG strategies and reporting with globally recognised frameworks for transparency and credibility.
- Direct engagement and collaboration with internal stakeholders are crucial for effective data gathering and reporting.
- Opportunities exist for companies to consider quantitative climate scenario analysis alongside qualitative reporting for climate-related risks and opportunities, enhancing the depth of understanding for stakeholders.



Corporate Climate Change Projects

TCFD Compliance and ESG Support



The Project

<u>Objective</u>: Developing ESG report and associated disclosures for a privately owned, next generation oil and gas company with a robust, value driven portfolio of UKCS assets.
 ITPEnergised Commission: Support for 2023 ESG disclosures including the GRI, SASB, CDP, and the TCFD.



Methodological Considerations

- Updated the TCFD report with support on reviewing and updating the Client's climate risk and opportunities assessment and scenario analysis.
- Provided ad-hoc support in advising on drafting the ESG report, including technical review of GRI and SASB disclosures, strategic support on CDP disclosure requirements.



Key Findings

- Successfully supported the Client in drafting its TCFD report and helped develop GRI, SASB and CDP disclosures.
- The Client was found to be resilient under the various climate scenarios with differing commodity and carbon prices.
- Appropriate governance structures and risk management processes were in place to manage climate risks.



- The support provided by ITPEnergised was tailored to the Client's specific needs, with a focus on aligning ESG reporting with global frameworks while maximising efficiency.
- Regular communication and collaboration between the Client and ITPEnergised were emphasized to ensure the successful delivery of the project.



TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

By Task Force on Climate-related Financial Disclosures https://assets.bbhub.io/company/sites/60/2022/03/GPP_TCFD_Status_Report_2021_Bo ok_v17.pdf, Public Domain, https://commons.wikimedia.org/w/index.php?curid=117969978



Project Level Climate Risk Assessments

Climate Emergency Declarations in the UK



As of December 2023:

598 climate emergencies declared at sub-national local levels in the UK;

Represents approximately **95.6%** of the UK population;

Highlights the seriousness of the issue and spurs discussions on the role of local authorities in addressing climate change.

ITPEnergised's GHG Assessment Approach:

Evaluation using direct and indirect emissions using a streamlined approach based on the World Resource Institute/World Business Council for Sustainable Development (WRI/WBCSD) GHG Protocol;

ITPEnergised's Climate Resilience Evaluation Approach:

Meticulous and targeted evaluation of resilience using Met Office Climate Projection data.

Prioritises established climate science data and tangible climate change impacts on projects.

Methodology approved by numerous planning authorities.

Our expertise utilised for:

- Standalone climate assessments supporting development applications.
- Integration of climate resilience considerations into environmental impact assessments.
- GHG Reduction Plans
- GHG Management Systems



Project Level Climate Change Projects (1/3)

UK Solar Farm



The Project

Planning support in the form of a climate change chapter for EIA.

- A. <u>Objective</u>: To carry out a greenhouse gas (GHG) assessment, and an examination of climate resilience in relation to a Proposed Solar Farm Development near Runcorn, England.
- B. <u>ITPEnergised Commission</u>: To prepare the Climate Change chapter of the EIA in support of the Proposed Development.



Methodological Considerations

- A GHG Assessment to evaluate direct and indirect emissions using a streamlined approach based on the World Resource Institute/World Business Council for Sustainable Development GHG Protocol.
- A Climate Resilience Assessment providing an overview of the currently understood status of climate change (from Met Office projection data) and how the Proposed Development would be affected by projected changes in temperature, precipitation and wind shear under a pessimistic climate change scenario.

Key Findings

- GHG emissions during construction represent a fractional increase above baseline (insignificant).
- Direct and indirect operational GHG emissions represent a reduction compared to baseline conditions (insignificant).
- Pessimistic climate change projections will have an insignificant impact upon the Proposed Development.

Insights

ITPEnergised in this example were able to rely on their anonymised industry data from over 120 solar power assets operating in the UK. Using an in-house developed approximate emissions factor, we can calculate operational GHG emissions of a typical operational solar asset in the UK and report in an appropriate context (e.g. as a percentage of a Local Authority's catchment area operational GHG emissions).



Project Level Climate Change Projects (2/3)

UK Aluminium Smelter



The Project

GHG Assessment, GHG Reduction Plan and GHG Management System Improvements

- A. <u>Objective</u>: Provide support to ensure compliance of an aluminium smelter, located in Fort William, Scotland, with the Aluminium Stewardship Initiative (ASI) Performance Standard V3 Principal 5 'Greenhouse Gas Emissions'. The client was Alvance British Aluminium.
- B. <u>ITPEnergised Commission</u>: Two workstreams 1. Calculation of GHG footprint and emissions intensity and 2. GHG reduction plan and GHG management system improvement.

Methodological Considerations

- Workstream 1: Calculate an accurate and reliable GHG emissions footprint associated with the operation of the smelter covering a 12-month period with methodology aligned with the GHG protocol as per the requirements of the ASI standard.
- Workstream 2: Develop a GHG Reduction Plan for the smelter which is consistent with a 1.5 °C global warming scenario and uses an ASI-endorsed methodology.

Key Findings

- **Workstream 1**: Alvance's 2022 GHG Emissions share per scope reliably calculated.
- Workstream 2: ITPEnergised recommended amendments to Alvance's existing emissions management systems, specifically LOC-PRO-HSEQ Greenhouse Gas Emissions Procedure, to ensure it can achieve performance aligned with the GHG Reduction Plan.



- ITPEnergised in this example were able to pinpoint the largest source of contribution to emissions and from here suggest next steps relating to data improvement for future GHG reporting and GHG Emissions Reduction Plan with an associated pathway.
- ITPEnergised were able to recommend targeted amendments to Alvance's existing emissions management systems to ensure compliance with the ASI Standard.





Project Level Climate Change Projects (3/3)

UK International Advanced Manufacturing Park



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The Project

Climate Change Impact Assessment (CCIA)

- A. <u>Objective</u>: A Chapter forming part of the IAMP: Early Infrastructure and Northern Employment Area which sets out the findings of an Environmental Impact Assessment.
- B. <u>ITPEnergised Commission</u>: ITPEnergised prepared a Climate Change Impact Assessment (CCIA) through evaluating the potential impact of the construction and operation of the Proposed Development.



Methodological Considerations

- Evaluate the potential impact of the construction and operation of the Proposed Development on climate change due to emissions of GHGs (based on reasonable estimates and professional judgement).
- Evaluate the vulnerability of the Proposed Development to climate change (wind speed, precipitation, and temperature based on Met Office projections to 2080).



Key Findings

- The assessment concluded that the effects of climate change were Minor Adverse and of Low significance for the construction phase and of Negligible magnitude and significance for the operational phase (i.e. not significant).
- Potential climate change effects cause by GHG emissions were assessed as Minor Adverse and of Low significance for both the construction phase and operational phase (i.e. not significant).



- * No mitigation for further climate resilience beyond the tolerances included within the design were required.
- Mitigation to reduce construction phase GHG emissions were suggested to include the substitution of virgin bulk materials with those with a higher recycled content.
- Mitigation to reduce operational phase GHG emsissions were suggested to include the supply of building thermal energy from Air Source Heat Pumps.



As of January 2024, ITPEnergised is now part of SLR Consulting.

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

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