

Investigating Supply Chains in Renewable Energy Projects in Wales

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Background

- There are issues surrounding ethical supply chains in renewable energy projects.
- For example, balsa wood is an essential material to produce wind turbines. Sourcing balsa wood has led to illegal logging (Environmental Investigation Agency, 2024).
- This paper is researching how wind and solar energy projects in Wales mitigate these risks.



Figure 1: Phases for the LCA of renewable energies (Raygoza-Limón et al., 2025).

Aims & Objectives

- The aim of this paper is to explore how and to what extent Welsh wind and solar energy projects assess and manage supply chain risks.
- The main research objectives are:
 - Undertake a thorough literature review to identify the background to this work.
 - Research how businesses are screening for supply chain issues when sourcing materials for wind and solar energy projects.
 - Fill the current gap in literature surrounding supply chain issues in Welsh wind and solar energy projects.



Figure 2: Aims and Objectives Visualiser (Portsmouth Website Design, 2026).

Literature Review Summary

- Literature suggests that supply chains risks are common in sourcing materials for renewable energy.
- For example, 45% of the global supply of polysilicon, which is a component critical for producing solar panels, comes from the Xinjiang Uyghur Region, where it's manufactured with state funded forced labour (Cockayne et al., 2022).
- There is currently a gap in the literature discussing how Welsh renewable energy projects screen for these risks.



Figure 3: Literature Review Visualiser (Mallory-Kani, 2023).

Methodology

- The research method is qualitative research.
- Interviews will be conducted with industry professionals, NGO experts and qualified professionals.
- The goal is to conduct 4/5 interviews.
- The reason for using interviews is that they allow participants to discuss their thoughts on specific topics (Winwood, 2019).
- The aim is to finish interviews by the end of February to allow enough time to analyse the results.



RESEARCH METHODOLOGY

Everything You need to Know

Figure 4: Research Methodology Visualiser (Deeptanshu & Dogra, 2022).

Forward Plan

- Finish all interviews by the end of February.
- Write analysis and discussion during March.
- Complete entire dissertation by end of April to hand in early in May.



Figure 5: Plan Visualiser (Mallory-Kani, 2023).

References

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- Cockayne, J., Huerta, R.E. and Burcu, O. (2022) *Rights Lab 'The Energy of Freedom'? Solar energy, modern slavery and the Just Transition*. Available at: <https://www.nottingham.ac.uk/research/beacons-of-excellence/rights-lab/resources/reports-and-briefings/2022/march/the-energy-of-freedom-full-report.pdf> (Accessed: 20 January 2026).
- Winwood, J. (2019) 'Using interviews', in M. Lambert (ed.) *Practical Research Methods in Education*. Routledge, p. 12. Available at: <https://www.taylorfrancis.com/reader/download/f8367774-0757-48d0-8200-fd11fb0ca632/chapter/pdf?context=ubx> (Accessed: 20 January 2026).



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