

# ESO Case Study

Name:

Date:

Class:



## Starter:

Reintroduce Energy Superhub Oxford and ask pupils to outline the project to gauge recall and understanding. Reiterate 3 areas of focus: Transport, power and heat

## Main activity:

ESO case study sheets (KS3 or KS4 as applicable). Using the case study with resource links and video clip links alongside the Case Study Analysis sheets to interrogate the one of the 3 key areas of ESO from the perspective of a town councillor planning a similar scheme.

## AFL:

Use the analysis sheets and group activity/discussion to assess depth of understanding. Worksheet and activities can be done in conjunction with this as a homework task as can fieldwork/research sheets.

## Success criteria:

Learners will have a more detailed understanding of challenges of delivering a scheme like Energy Superhub Oxford. They will be able to explain the context and motivation for the plan and should be able to outline any challenges and how they may be overcome.

## Differentiation:

Ensure all children are involved in group in discussion, if necessary, it may help to allocate specific roles. Use differentiated questioning and prompts. Encourage use of video clips and source links.

*To get involved, please go to <https://energysuperhuboxford.org/get-involved/>*

## Program of study:

**Challenges in the human environment.** The challenge of resource management: Energy.

## Key learning objectives, students should:

- Understand the motivation behind and need for schemes like Energy Superhub Oxford
- Be able to analyse the success of the project so far, identify any possible challenges and suggest solutions

## Cross curricular links:

Science – climate change, energy and electricity, renewable energy, batteries and energy storage

Maths – economic sustainability, statistics

English – persuasive writing, discussion and debate

Design and Technology – engineering, systems, sustainable design and energy use

History – industrial revolution, historical context

Art and Design – recording & informing through imagery

SEAL/PHSE – healthcare, education, social issues, climate change, political movements and campaign

## Key vocabulary:

Sustainability, climate change, climate emergency, natural systems, global warming CO<sub>2</sub>, ecosystems, legislation, Net Zero, emissions, citizens' assembly, fossil fuels, renewable energy, decarbonisation, efficiency, ICE, EV, GSHP, infrastructure, hybrid, megawatts, Lithium-ion, vanadium redox flow system, intermittent generation, peak demand, algorithm

## Resources:

ESO Case Study (KS3 or KS4)

Embedded video clips

Analysis sheets

Worksheet and activities

**Further links to sources that may aid learning can be found in Case Study**