

JUNCTION 27 ENERGY HUB

DELIVERING CLEAN, LOW-COST
ELECTRICITY FOR MID DEVON



Illustrative view of the Junction 27 Energy Hub
Project from the layby on the east side of the A361

Invitation to public consultation event on **Wednesday 31 May 2023**
from **2pm to 7pm** at **Sampford Peverell Village Hall**

MODERNISING LOCAL ENERGY INFRASTRUCTURE

A LOCAL AND NATIONAL PRIORITY



Battery storage is key priority for 'responding to the climate emergency by maximising the use of clean, low-cost energy from solar and wind farms across the UK'

AN ENERGY HUB FOR MID DEVON



A 400MW battery energy storage project



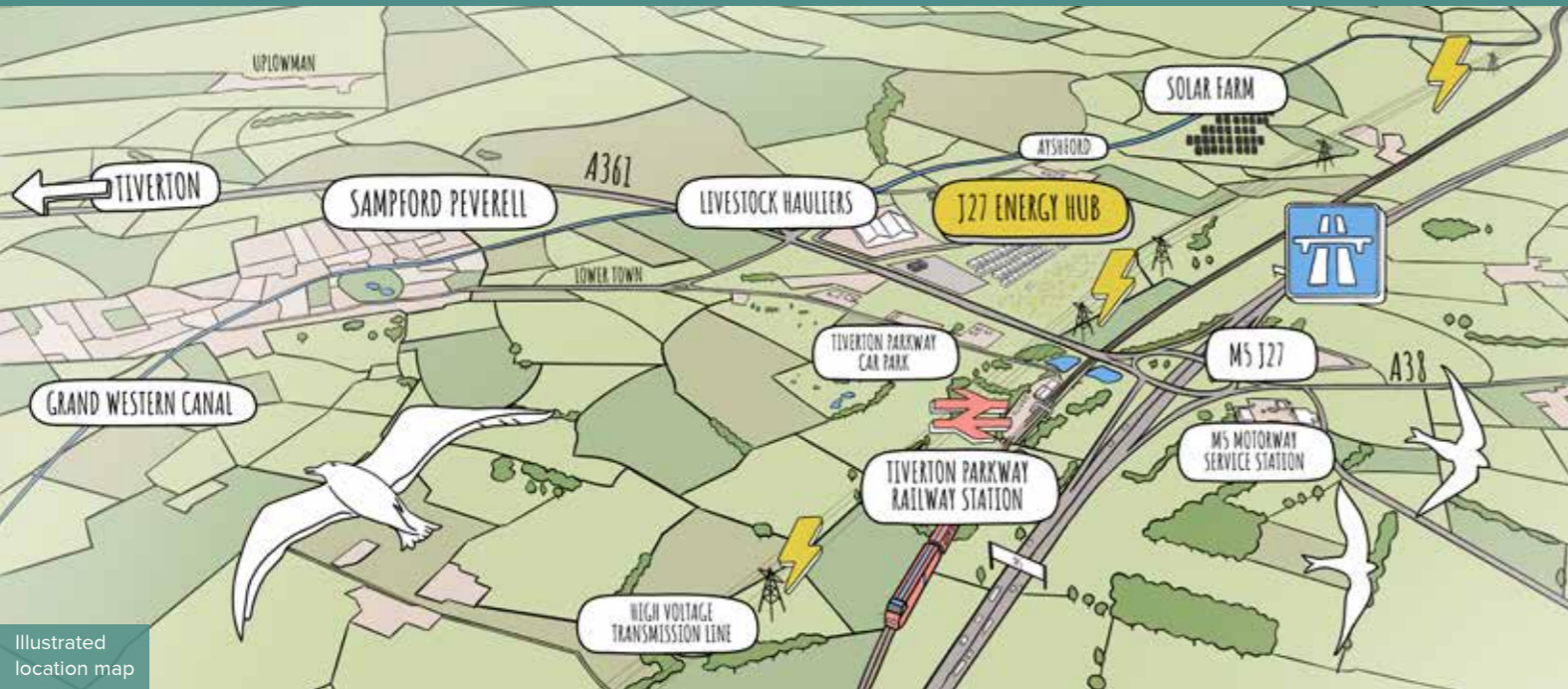
Located on land next to Junction 27 of the M5 EX16 7HL



Connected to National Grid overhead lines network



Capable of storing energy equivalent to a days' power for all 82,000 homes in Mid-Devon when fully charged



Illustrated location map

WHAT'S IN IT FOR THE LOCAL COMMUNITY

LOCAL COMMUNITY

The Junction 27 Energy Hub project will offer £50,000 of funding annually (£2 million in total) for community energy projects such as:

- An electricity bill subsidy payment to households closest to the site.
- The implementation of energy saving measures for low-income households.
- Support for community projects focused on energy efficiency and renewable energy generation.

In addition to an estimated £1m per year in business rates for reinvestment in local initiatives

ENHANCING NATURE AND WILDLIFE ON SITE

It is estimated that Britain has lost around 50% of its biodiversity since the 1970s due to intensive farming, new housing and commercial development.

More than half of the project site has been set aside for initiatives that will enhance nature and wildlife. These enhancements could include:

- The creation of wetland habitats and/or water meadows adjacent to the River Lyner.
- Planting of new hedgerows and reinforcement of existing ones.
- The creation of bird and animal habitats across the site.
- Grazing meadow in the fields between the batteries and the river.

These initiatives will support significant increases in biodiversity on the site.

DELIVERING FOR MID-DEVON AND DEVON

The Devon Carbon is Devon's strategic plan for reducing carbon emissions across the county to net zero and is endorsed by Mid-Devon Council. It outlines the role of storage as follows:

"Deploying flexibility services and storage technologies will reduce the amount of new renewable energy capacity required. This will make best use of the resource, reduce investment costs and avoid the need for fossil-fuel powered peaking plants to generate power when demand outstrips the instantaneous supply from renewables."

ENABLING THE TRANSITION TO A CLEAN, LOW COST AND SECURE RENEWABLE ENERGY SYSTEM

Built for an era of coal and gas fired power stations, the existing UK electricity network needs upgrading to support the deployment of renewable, low carbon energy. The inflexibility of the network is adding costs to bills and fails to deliver the emissions reductions needed to prevent climate change.

FINANCIAL TIMES

“UK warned of risk to key net zero goal without power grid plan.”

In a sign of grid infrastructure struggling to keep pace with changes to the power system, the watchdog found that generators were being paid up to £62 million per day to cut output when supply outstripped demand and could not be stored.

THE GUARDIAN

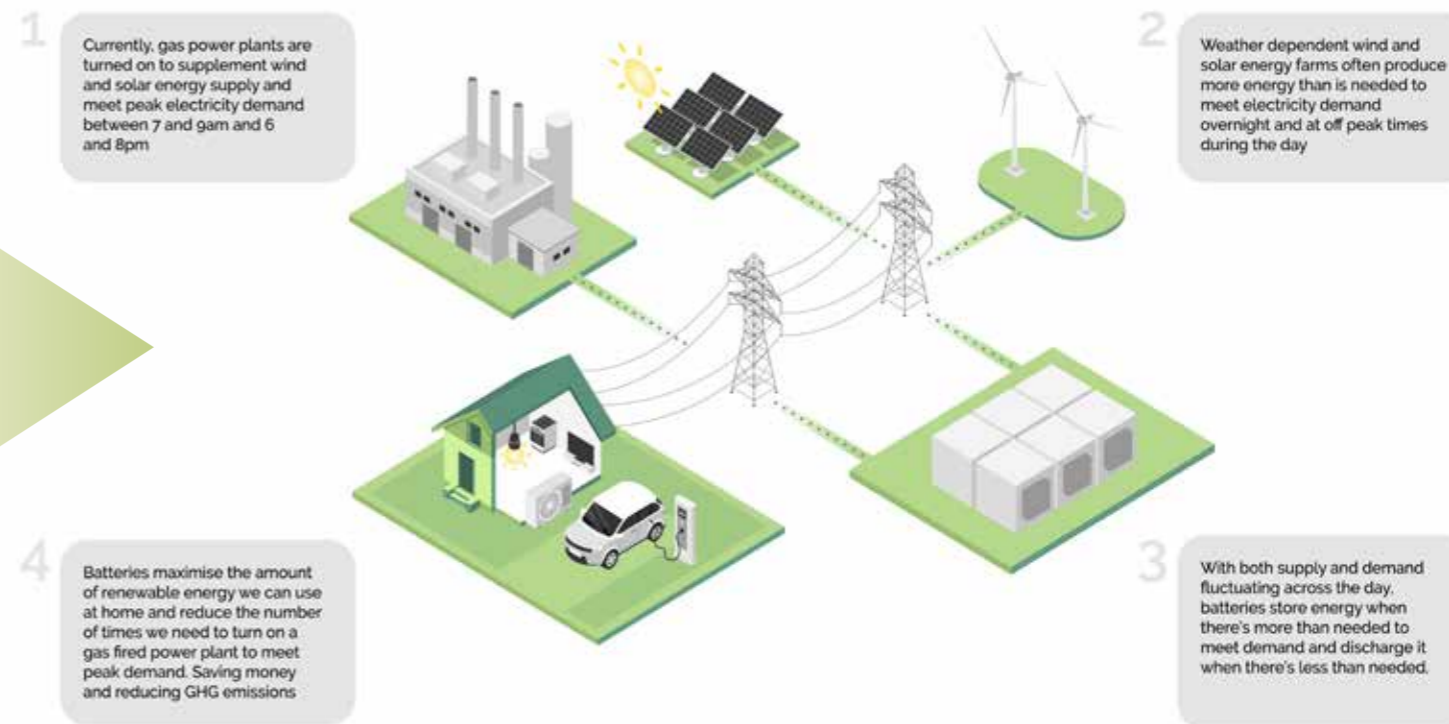
“National Grid pays high price for gas-generated power during UK cold snap.”

In total, the cost of balancing the system on Tuesday this week was estimated at between £5m and £10m... The cold, still weather reduced wind power and pushed up demand this week, while strikes at EDF’s nuclear plants in France also put a strain on the grid.

SKY NEWS

“Britons paying hundreds of millions to turn off wind turbines as network can’t handle the power they make.”

Batteries solve one of the biggest challenges facing renewable energy. Matching weather dependent solar and wind electricity with household and business electricity demand.





DETAILED PROPOSAL OVERVIEW

Proposed Landscape Features and Management:

Screening belt of shrub and tree vegetation

Manage and maintain existing hedgerow (with hedge trees) to a greater height of 3-4 m

Plant additional hedge trees and manage/maintain existing hedgerow to a greater height of 3-4 m

Plant new hedgerow with hedge trees and manage/maintain hedgerow to a height of 3-4 m

Plant new hedgerow with small hedge tree species (where allowable relative to pylon easement), and manage/maintain hedgerow to a height of 3-4 m

Proposed Biodiversity Features:

Linear or Oxbow ponds

Scattered shrub and tree planting

Tussocky grassland along river corridor

Retained pasture

Other neutral grassland

20m (approx.) offset from river corridor

THE RIGHT LOCATION

- Strategically positioned on the National Grid transmission network to be able to support electricity supply across Devon and maximise the local use of renewable energy.
- Built in an area that already hosts major road, rail and electricity network infrastructure.
- Proximity to motorway network will reduce construction traffic passing through local towns and villages.

LOW VISIBILITY

The site already benefits from significant tree and hedgerow screening along the A361 boundary. There is existing hedgerow along the lane to Ayshford to the North of the site. Both boundaries will be supplemented with further planting to close any gaps and screen the site from both roads.

VITAL STATISTICS

- 60% of the project site allocated for nature enhancement.
- 40% of the site for batteries, equipment and substation.
- 3 metre maximum height of batteries.
- 13 metre maximum height of substation equipment.
- Capable of storing energy equivalent to a days' power for all 82,000 homes in Mid-Devon when fully charged.
- 40 year operational lifetime.
- 12-15 month construction timeline.

Proposed Indicative Site Layout

FAQS

ARE BATTERY ENERGY STORAGE SITES NOISY?

Battery energy storage sites are not usually audible above ambient noise-levels, particularly when sited close to busy roads as is the case here. A full noise assessment will be submitted with our planning application.

IS BATTERY ENERGY STORAGE SAFE?

The battery containers are designed to ensure safe operation across the project lifetime. Individual battery cells are continuously monitored by a sophisticated safety system and controlled remotely if required to ensure safe operation.

Battery energy storage systems are designed to comply with strict safety standards set by international regulatory bodies, such as the International Electrotechnical Commission (IEC).

These standards cover all aspects of the battery storage systems, from installation to operation and maintenance, to ensure that they meet the highest safety standards.

WILL THIS PROJECT CHANGE THE USE OF THE LAND?

No, the project is temporary with batteries, other equipment and hard infrastructure removed at the end of the project and the land returned to agricultural use.

WILL THIS BE A MAJOR CONSTRUCTION PROJECT?

Most of the components are prefabricated offsite rather than assembled in situ. On site construction will be restricted to the laying of shallow concrete pads for battery containers to sit on and the craning of prefabricated units into position ready for cabling and connection works. As such, project construction would take 12-15 months.

WILL THE PROJECT ADD TO TRAFFIC IN THE AREA?

Typically, there would be on average one or two HGVs a day bringing prefabricated units to the site during construction.

WILL THERE BE LIGHTING ON SITE?

The site will not be illuminated at night.

HOW SUSTAINABLE IS BATTERY TECHNOLOGY?

The Lithium-Ion batteries that will be used in the project are not reliant on scarce raw materials. There are established recycling processes for recovering the most common elements used in battery construction - cobalt, nickel, lithium and manganese - for re-use.



Photo by Simon Cooper

WHO WE ARE

Clearstone Energy is a leading British renewable energy developer.

We are working with National Grid to develop solar generation and battery energy storage projects that are building a new UK energy system based on clean, low cost and renewable energy.

Since founding in 2016, Clearstone Energy has developed nine energy projects in the UK. Two are operational and seven are in construction.

We believe that our projects can do more than energy generation and storage. They support the adoption of renewable energy and energy efficiency technologies in the communities that host them. They provide opportunities to build habitats for wildlife and contribute to the preservation of local ecosystems. They can deliver wider community benefits.

We value your input and feedback in shaping this project proposal. Thank you.



Digby Willoughby

Senior Development Manager
Junction 27 Energy Hub



MEET US IN PERSON

We would very much like to talk to you about the Junction 27 Energy Hub project at our public consultation event on **Wednesday 31 May 2023** from **2pm to 7pm** at **Sampford Peverell Village Hall**.

KEEP IN CONTACT

Please visit **www.j27energyhub.com** where we will provide updates on this consultation and the project. For further information, please do not hesitate to email the project team at **feedback@j27energyhub.com** or call **0800 707 4063**.

TELL US WHAT YOU THINK

No-one knows a local area better than its residents and we would be grateful for your feedback to help us refine our proposals for Junction 27 Energy Hub. We are particularly interested in your views on:

- Our ecological enhancement plans for the area between the batteries and the River Lyner.
- The position of the access point to the site.
- Is there additional screening that we could provide on the site?
- Our community benefit offer.
- Whether there is a community project that this project could support financially.

Scan this QR code to take our online survey



FEEDBACK FORM

To return your completed feedback form please tear it from the brochure and pop it in the post by **Wednesday 28 June 2023**. Alternatively, you can return your form via email to **feedback@j27energyhub.com..**

Title: Name:
 Address: Postcode:
 Email: Telephone:

1. Has this leaflet been helpful in understanding our proposal? ☐ Yes ☐ No ☐ Not sure
2. With regards to the proposals you have read about within this leaflet, are you:
☐ In favour ☐ In objection ☐ Of no opinion
3. Please use this space to provide any comments on the proposal. We would welcome your feedback on all aspects of the emerging design shown in the brochure.

Please provide your contact details if you wish to get a response. Any information provided will only be used for the purpose of the planning application to the Local Planning Authority and will not be disclosed with any third parties. **Your contact details will not be listed on the planning application documentation.**

Freepost CLEARSTONE ENERGY

FOLD HERE

Instructions

To return your feedback form, please fold and put it in the post to us.

If you'd like more space to share your thoughts, send us an email, or just write your comments down and pop them in an envelope with 'FREEPOST CLEARSTONE ENERGY' written on the front. You don't need any further address or stamp.

Any queries or problems? Get in touch via feedback@j27energyhub.com.