Sustainability Statement

Proposed 90MW Battery Energy Storage System (BESS)

Land off High Street, Newburn, Newcastle

Prepared on behalf of

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Introduction

Overview

Fig Power ('the applicant'), are seeking planning permission for the proposed development of a 90-megawatt (MW) Battery Energy Storage System (BESS) with associated infrastructure ('the proposal') on land located off High Street, Newburn ('the site'). Planning permission is sought for an operational period of 40 years.

This sustainability statement has been prepared to be submitted alongside the planning application for the above proposed development. This document details the approach that has been taken to achieve environmental sustainability and the scope of which the proposed development follows the principles of sustainable development.

Proposed Development

Battery storage is essential to help the UK to achieve net zero for power generation by 2035 by creating an electricity system that is clean, affordable and secure. As well as storing power generated by renewable sources, batteries improve the resilience of the electricity system. By storing energy from renewable sources, which can then be used when it's most needed, the electricity system operates more efficiently, reducing the risk of blackouts.

The application is seeking full planning permission for the proposed development of development of a 90-megawatt (MW) Battery Energy Storage System (BESS). The development would be temporary for a period of 40 years and will provide a combined capacity of 90MW.

The main elements of the proposal include:

- The battery storage clusters;
- Transformers and electrical current conversion systems both internal and external (Distribution Network Operator);
- Access track to the site from the main highway;
- Control room;
- Switch room;
- Secure perimeter fencing;
- Temporary construction compound and laydown area, and
- Water main connection

National and Local Planning Policy Context

Global warming and climate change and the issues they present are national and international matters, increased energy efficiency and reduced CO2 emissions have been deemed as areas to address these issues both in international and national policy.

The below sections detail both national and local policies focused on and relevant to sustainable development.

National Planning Policy Framework, NPPF (December 2023)

The NPPF sets out the Government's overarching policy framework for planning and is a material consideration in the determination of applications. Chapter 2 of the NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development. To achieve sustainable development, the NPPF states that economic, social and environmental gains should be sought jointly and simultaneously through the planning system. Pursuing sustainable development involves seeking positive improvements in the quality of the built, natural and historic environment, as well as in people's quality of life.

There are three principal objectives to facilitate sustainable development, highlighted below:

- *an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*

- *a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and*

- *an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.*

Paragraph 11 of the NPPF sets out the 'presumption in favour of sustainable development', which for decision-taking means *"approving development proposals that accord with an up-to-date development plan without delay; or where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless: any adverse impacts of doing so would significantly and demonstrably outweigh the benefits…"*

Chapter 14 of the NPPF notes the role that planning plays when addressing and meeting the challenge that climate change, flooding and costal change present. This chapter states *"The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure."*

This chapter of the NPPF also states that in order to increase the use and supply of renewable and low carbon energy, plans should:

- *provide a positive strategy for energy from these sources, that maximises the potential for suitable development, and their future re-powering and life extension, while ensuring that adverse impacts are addressed appropriately (including cumulative landscape and visual impacts);*
- *consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and*
- *identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.*

When determining planning applications relating to renewable and low carbon development, paragraph 163 states that local authorities should:

- not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions;

- approve the application if its impacts are (or can be made) acceptable54. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.

Local Policy – Newcastle City Council

Net Zero Action Plan

In April 2019, Newcastle City Council (NCC) declared a Climate Emergency, with that the declaration made the commitment to create a new Climate Change Strategy which has the aim of achieving Net Zero by 2030. This aim was backed with the production of NCC's Net Zero Newcastle – 2030 Action Plan.

The Action Plan sets out that NCC's primary focus is on Carbon Dioxide and ultimately a wider aim of lowering greenhouse gas emissions. Part of this focus requires energy efficient improvements to de-carbonise the current energy supply.

Using less energy is NCC's top priority, however the use of renewable energy should be chosen wherever possible. This is further supported within the 22 priority actions NCC have identified, notably E20 which states that NCC will *"explore options for increasingly smart energy systems which adopt 'time of use' and 'flexible demand' approaches to energy consumption,"* which is particularly relevant to this proposed BESS scheme.

100% Clean Energy City

In 2016 Newcastle became one of the 80 towns and cities that committed to 100% clean energy by 2050. To achieve this the council committed to work towards a clean energy system by 2050. In doing so NCC will prioritise local development of renewable and low carbon electricity and heat systems.

Local Plan – Core Strategy and Urban Core Plan 2010-2030 (CSUCP)

Within the CSUCP, the strategic objectives will be delivered by the policies, strategy SO11 is the one which relates to CO2 emissions and to this BESS scheme.

The policies that will deliver this strategy focus on sustainable growth, flood and water management, green infrastructure and the natural environment and climate change. With regards to climate change policy CS16 comprises of six criteria which cover a range of subjects that developments are required to address. Policy CS16 states:

1. *Use a good standard of building fabric, passive design, and landscaping measures to minimise energy demand,*
2. *Be flexible from the outset to allow adaption to alternative uses,*
3. *Deliver a good level of sustainability required by relevant government schemes/guidance,*
4. *Minimise its contributions and provide resilience to the ongoing and predicted impacts of climate change,*
5. *Reduce its whole-life CO2 equivalent emissions impact, and*
6. *Optimise the use of local renewable or low carbon energy in accordance with the following hierarchy:*
    i. *Connection to an existing, or make provision for future connection, to a committed wider decentralised energy scheme within a specified timeframe,*
    ii. *Development of a decentralised energy scheme for the whole or significant portion of a development from the outset, including joint schemes with significant adjacent external energy loads,*
    iii. *Incorporation of other renewable energy solutions,*
    iv. *Incorporation of other low carbon energy solutions in accordance with current government guidelines.*

Policy CS16 Assessment

Assessment Approach

Newcastle City Council have guided applicants to produce sustainability statements in accordance with Policy CS16. Specifically noting that applicants should meet the requirements within Policy CS16 as are noted in the previous Chapter.

Newcastle City Council advice states that the objective of the sustainability statement is to ensure that *"the proposed climate change mitigation and adaptation measures comply with Newcastle City Council's approach to address climate change. It also ensures climate change and sustainability considerations remain an integral part of the development's design, construction and lifetime operation."*

Assessment

The following section shows the assessment of the proposed development against the criteria that is set out in policy CS16 (Figure 2).

Criterion 1

This requires the use of a good standard of building fabric, passive design and landscape measures to minimise energy demand. The applicant will need to demonstrate how a range of passive design measures and landscaping measures have been incorporated into the design to minimise energy demand.

Due to the site being manned infrequently there will be minimal energy demand on site. The visits to the site will be for maintenance, as a result there will be no requirement for heating.

The nature of the development limits the materials that can be used safely. Opportunities to reduce carbon used in the development will be taken. Generally, for the whole site energy efficient lighting that is motion sensitive will be used.

Criterion 2

This requires a flexible design to allow for adaptation to alternative uses. This will require applicants to consider incorporating measures, such as Lifetime Homes, Smart Homes and Modern Design and the ability of development to be converted to alternative forms of development.

The site has a proposed lifetime of 40 years, after which it will be decommissioned, and the land will be returned back to its current condition. After this point alternative uses can be undertaken on the site.

Criterion 3

This requires a good level of sustainability through the applicant demonstrating best practice project and site management, site water use, site transport, water reuse and recycling, the sustainable use of materials and construction techniques.

Construction of the buildings and equipment onsite will be minimal as the majority of it will be pre-fabricated off-site and transported to the site ready for use. The site is unmanned, with very occasional visits, as a result water usage and waste will be limited.

Criterion 4

This seeks to minimise a development's contribution to, and provide resilience from, the ongoing and predicted impacts of climate change. This will be measured by a commitment by the applicant to incorporate measures to mitigate and adapt to climate change, specifically relating

to transport, waste and, building water use, the impacts from overheating and flooding and the incorporation of landscaping and ecology in its design.

In relation to transport the site will be unmanned the majority of the time, and access will only be required for routine operation and maintenance purposes, daily access to the site is not required.

Regarding waste, as the site will be unmanned the majority of the time waste will be minimal. When operational staff do visit the site, they will be responsible for removing their own waste from the site and disposing of it appropriately.

In relation to water use as the site will be unmanned the majority of the time, water usage will be minimal. Water-saving features and techniques will be used to ensure this.

For drainage and flooding please refer to the accompanying drainage strategy and flood risk assessment provided.

In relation to ecology of the site has been assessed in detail as part of the planning process and is shown in the ecological management plan.

Criterion 5

This requires a reduction in whole-life CO2 emissions impact. This can be achieved through demonstrating that the performance gap between design and as-built is minimised and information is given to the occupants to encourage the use of the building in an energy efficient way.

The control room, switch room and welfare facilities will be the only buildings which consume energy on site. The other equipment on site will all be related to the BESS. The opportunities for energy saving will be communicated to all on-site staff.

Criterion 6

This requires developments to optimise the use of local renewable or low carbon energy in accordance with a hierarchy, prioritising decentralised energy schemes (referred to throughout this document as District Heat Networks), followed by other renewable energy solutions and finally other lower carbon energy solutions. Where no District Heat Networks exist, Major applications must evaluate the feasibility of providing a District Heat Network and, where feasible implement such schemes.

CSUCP CS16 - Criterion 6

Criterion 6 of policy CS16 requires developments to optimise the use of local renewable or low carbon energy in accordance with the hierarchy it sets out, this involves prioritising decentralised energy schemes, followed by other renewable energy schemes and then other lower carbon energy solutions.

Renewable energy and its related infrastructure have the ability to significantly help to achieve the UK's targets of low carbon technologies replacing existing coal and gas power plants. BESS schemes will play a role in helping to integrate intermittent renewables into the electricity grid, with National grid stating:

"Managing these peaks and troughs becomes more challenging when the target is to achieve net zero carbon production. Fossil-fuel fired plants have traditionally been used to manage these peaks and troughs, but battery energy storage facilities can replace a portion of these so-called peaking power generators over time."

The UK's aims for the development of reliable energy generation in order to achieve a low-carbon future is set out within numerous government policy documents, which have been highlighted below.

National Planning Policy Framework - December 2023

Within the NPPF, section 14 'Meeting the challenge of climate change, flooding and costal change' sets out, in Paragraph 157 that "the planning system should support the transition to a low carbon future in a changing climate". This is in line with the aims of the proposed development, the approach is consistent with the NPPF's overall aims of achieving sustainable development.

Paragraph 163 of the NPPF states that "when determining planning applications for renewable and low carbon development planning authorities… should recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions."

Planning Practice Guidance – Battery Energy Storage Systems – August 2023

In August 2023, the Planning Practice Guidance was updated to include reference to Battery Energy Storage Systems. The guidance states in paragraph 032 (Reference ID 5-032-20230814) that:

"Electricity storage can enable us to use energy more flexibly and de-carbonise our energy system cost-effectively – for example, by helping to balance the system at lower cost, maximising the usable output from intermittent low carbon generation (e.g. solar and wind), and deferring or avoiding the need for costly network upgrades and new generation capacity."

Overarching National Policy Statement for Energy - March 2023

This National Policy Statement (NPS) sets out national policy for the energy infrastructure and may be a material consideration in making decisions on planning applications under the 1990 Town and Country Planning Act.

Section 2.3 of the NPS addresses the UKs aim for reaching net zero. Stating that the objectives for energy systems are to ensure the supply of energy always remains secure, reliable, affordable, and consistent with meeting targets to cut greenhouse gas emissions to be net zero by 2050. EN-1 paragraph 2.3.5 further highlights the need to change the sources of energy from fossil fuels to more low carbon sources, further confirming this by emphasising *"the importance of addressing our underlying vulnerability to international energy prices by reducing our dependence on imported oil and gas, by improving energy efficiency" (EN-1, paragraph 2.5.6).*

With regards to Energy storage EN-1 states *"Storage and interconnection can provide flexibility, meaning that less of the output of plant is wasted as it can either be stored or exported when there is*

excess production" (EN-1, paragraph 3.3.6). EN-1 also emphasises that energy storage is a key asset to ensuring peak demand is met whilst also reducing the need for network infrastructure.

The NPS EN-1 also states that storage systems such as the proposed development can help in *"maximising the usable output from intermittent low carbon generation (e.g. solar and wind), reducing the total amount of generation capacity needed on the system"*

Flexibility in Great Britain – May 2021

Published in May 2021, this document analysed the future net zero energy systems in Great Britain which are expected to have implications for policymakers and the wider energy sector. One of these findings specifically was embedding greater flexibility across the entire energy system will reduce the cost of achieving net zero for all consumers while assuring energy security.

The document also found that investing in flexibility is a no-regret decision as it has the potential to deliver material net savings of up to £16.7bn per annum across all scenarios analysed in 2050. Further findings also stated that a more flexible system will accelerate the benefits of decarbonisation supported by decentralisation and digitalisation.

Conclusion

This sustainability statement's aim was to set out the key sustainability features of the proposed development in accordance with Newcastle City Councils Guidance.

The push towards installation of renewable energy infrastructure to replace fossil fuel power is evident across the country. The proposed development will provide up to 90 MW of electricity to the grid at times of high demand, whilst helping with the integration of renewables into the grid and ultimately meeting the NCC and UK's net zero targets.

The site will be unmanned the majority of the time, with operation staff only attending for operation and maintenance purposes. As a result, the energy demand for the site will be very low. Energy saving measures will be incorporated into the design of the buildings.

The proposed development has a planned lifespan of 40 years and will then other purposes. A drainage strategy and flood risk assessment have been produced to ensure that the site is adequately mitigated against potential flood risk.

BESS schemes are deemed to be an integral part of the UK's transition to a low carbon economy and future. The site and development are considered to meet the principles of sustainable development, the criterion set out in Policy CS16 and will play an integral role in achieving and meeting the UK and NCC's net zero targets.