Little Crow
Solar Park

Little Crow Solar Park, Scunthorpe

STATEMENT OF NEED

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On behalf of INRG Solar (Little Crow) Ltd

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1. INTRODUCTION

1.1 This Statement of Need has been Pegasus Group and forms part of a suite of documents supporting an application under Section 37 of the Planning Act 2008 to the Secretary of State for Department for Business, Energy & Industrial Strategy (BEIS) for a Development Consent Order (DCO).

1.2 The development proposal relates to the construction, operation, maintenance and decommissioning of Little Crow Solar Park ("the development") a renewable led energy scheme. The main elements of the development will be the installation of a ground mounted solar park and battery storage with an intended design capacity of over 50MWp (megawatts peak) covering an area of approximately 225 hectares. There will also be electrical connection infrastructure and the point of connection into the local electricity grid is directly to the 132kva electricity overhead pylon which already runs through the development site.

Purpose of Report

1.3 This Statement details the overarching need for the development proposal. It sets out how the development is consistent with Government policy, which identifies a need for low-carbon and renewable energy in order to address climate change, to meet the legal commitment to Net Zero, and to ensure a secure, diverse and affordable energy supply. Government policy requires a mix of renewable energy projects, without preference for technology or scale, to achieve these objectives. The co-location of the battery energy storage system reflects a developing trend that will offer flexibility in operation and maximise energy resources in a balanced and efficient way.

1.4 The accompanying Grid Connection Statement (Document Ref 4.4 LC REP) verifies how the development is uniquely sited to take advantage of the spare network grid capacity. The point of connection is via a single main connection at 132KV to the Norther PowerGrid electricity network that already runs through the order limits.

2. CLIMATE CHANGE AND THE NEED FOR LOW-CARBON AND RENEWABLE ENERGY GENERATION

2.1 The explicit need to introduce a step change in how the country deals with the climate change was recognised by Parliament who, on 1 May 2019, declared an environmental and climate change emergency following the finding of the Inter-governmental Panel on Climate Change that to avoid more than 1.5°C rise in global warming, global emissions would need to fall by around 45 per cent from 2010 levels by 2030, reaching net zero by around 2050. Through the declaration, Government recognises a need to move swiftly to capture economic opportunities and green jobs in the low carbon economy while managing risks for workers and communities currently reliant on carbon intensive sectors. As part of its contributions to international efforts, the UK also has domestic legislation and policies in place to reduce greenhouse gas emissions.

2.2 The Climate Change Act 2008 established long-term statutory targets for the UK to achieve reductions in greenhouse gases by 2050 against a 1990 baseline. The Act originally set a legally binding target of an 80% cut in greenhouse gas emissions by 2050. On 12 June 2019, as a direct response to the climate change emergency declaration, the Government laid the draft Climate Change Act 2008 (2050 Target Amendment) Order 2019 to amend the Climate Change Act 2008 by introducing a target for at least a 100% reduction of greenhouse gas emissions (compared to 1990 levels) in the UK by 2050. This is otherwise known as a 'net zero target' because some emissions can remain if they are offset by removal from the atmosphere and/or by trading in carbon units. The Order was made on 26 June 2019 and came into force on 27 June 2019.

2.3 In June 2020, the Committee on Climate Change published its Reducing UK Emissions[1] report which provides an annual review of UK progress in reducing greenhouse gas emissions. This is the first annual report since the UK set a legally-binding 'net zero by 2050' target, and was due to be released in the lead up to the UN climate conference in Glasgow (before this was postponed until 2021 due to the Covid-19).

2.4 The report provides important new advice to Government on framing a recovery from Covid-19 that both accelerates the transition to Net Zero and strengthens our

[1] https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/

resilience to the impacts of climate change, whilst driving new economic activity. The report states that energy networks must be strengthened in order to support the electrification of transport and heating. The report highlights five investment priorities, one of which addresses the UKs energy networks. Other salient matters raised by the report and are relevant for this application are summarised below:

- Effective and decisive action is needed to secure our recovery from COVID-19 and also to accelerate the transition to Net Zero and strengthen our resilience to the changing climate.

- It is 12 months since Net Zero became law, requiring the UK to reduce net emissions of greenhouse gases to zero by 2050. Initial steps towards a net-zero policy package have been taken, but this was not the year of policy progress that the Committee called for in 2019. **Current policy is insufficient for even the existing targets and a net zero target would not be credible unless policy is ramped up significantly.**

- Power sector plans are advancing in line with the large scale required for the net-zero target. The power sector has been a major success story in the past decade. Emissions have decreased around 62% over the period 2008 - 2018 reflecting real decarbonisation of energy produced in the UK. The carbon intensity of the grid fell from around 500 gCO?/kWh in 2010 to 246 gCO?/kWh in 2018.55 Electricity generated from renewables was 25 TWh in 2008 (7% of mix), and rose to 100 TWh in 2018 (34% of mix). This has resulted in a transition from fossil fuel-based power to renewables. For example, in Q3 2019, renewables provided more electricity than fossil fuels for the first time in the UK's history. This has wider importance when considering that electrification will increase demand for electricity over the coming decades.

- The goal to substantially expand supplies of low-carbon power must be accompanied by steps in the Energy White Paper to encourage a resilient and flexible energy system. The Energy White Paper was scheduled for publication in Spring 2020, but the Covid-19 outbreak has delayed this.

- **Delivery of renewable energy generation must continue to progress with great urgency in order to meet the UKs next carbon budget.**

Consistently strong deployment of low-carbon generation is crucial to the Net Zero target.

National Grid - Future Energy Scenario

2.5 The National Grid has also carried out extensive work on what needs to be done to reach UK's 2050 net zero target. It's Future Energy Scenarios[2], published in July 2020, identifies how reaching net zero carbon emissions by 2050 is achievable. However, it requires immediate action across all key technologies and policy areas and full engagement across society and consumers. The document explores four different pathways towards decarbonising the UK energy system and these are linked to variables from the level of decentralisation to the level of societal change. Importantly, National Grid identifies that a 'steady progression' approach will not enable the UK to meet its 2050 target. In reaching net zero emissions by 2050, National Grid believes that: -

- At least 40 GW of new capacity is connected to electricity system in the next 10 years alone.
- At least 3 GW of wind and 1.4 GW of solar need to be built every year from now until 2050.

2.6 It is therefore acknowledged that in order to achieve net zero major investment and electrification of much of our heating, industry and transport. Cleaner power generation and major changes in the way that energy is used will also be needed.

BREXIT

2.7 BREXIT is also a material consideration for energy and climate change. Government has explored the relationship between BREXIT, energy and climate change through its Briefing Paper published on 9 November 2018[3]. The salient points are: -

- There is currently uncertainty about the Brexit impact on a number of issues including: the UK's departure from Euratom, the future of the EU internal energy market (IEM) and the status of the single electricity market (SEM) on the island of Ireland.

[2] https://online.flippingbook.com/view/621114/22/
[3] House of Commons Briefing Paper: Brexit Energy and Climate Change

- The impact of Brexit on UK energy and climate change policy is subject to the outcome of the Brexit negotiations. The possible consequences vary based on whether the outcome is a full Brexit deal, a sector-specific deal, or in the case of no Brexit deal.

- Brexit has the potential to impact the UK's civil nuclear industry, including nuclear supply of electricity

- The UK is currently a full member of the EU internal energy market (IEM). The IEM allows harmonised, tariff-free trading of gas and electricity across Europe (through interconnectors), leading to lower prices and greater security of supply. Britain has four electricity interconnectors with Europe and the island of Ireland providing 4GW of electricity interconnector capacity: 2GW to France (IFA); 1GW to the Netherlands (BritNed); 500MW to Northern Ireland (Moyle); and 500MW to the Republic of Ireland (East West).

- The IEM facilitates harmonised, tariff-free trade across these interconnectors. The flow of electricity between interconnected markets is driven by cost differentials. When the price of electricity is lower in one market, energy will flow from that market to the higher priced market. The effect of this is to make the prices in each converge - they increase in the exporting market and decrease in the importing market.

- As wholesale gas and electricity prices in the UK are generally higher than elsewhere in Europe, interconnection has caused a reduction in wholesale prices, and hence consumer prices in the UK.

2.8 Leaving the IEM has the potential to impact the trade of energy through interconnectors. The Briefing Paper identifies how one potential impact of leaving the IEM is an increase in the cost of energy imports and this in turn would be passed on to UK's householders and businesses. In terms of energy security, it notes how the interest of the UK should be to increase the flexibility and resilience of grid, especially with increasing intermittent renewables. The development proposal would contribute towards the objectives set out in the briefing note.

Clean Growth Strategy

2.9 The Clean Growth Strategy[4], published in October 2017, provides the Government's latest position on solar parks and sets out a comprehensive set of policies and proposals that aim to accelerate the pace of "clean growth", i.e. deliver increased economic growth and decreased emissions.

2.10 To achieve the clean growth, the Government identifies how the UK will need to nurture low carbon technologies, processes and systems that are as cheap as possible, this includes subsidy free ground mounted solar parks as achieved by this development. The Government places significant emphasis on securing increased investment across the energy systems whilst minimising, as much as possible, the public costs for securing such investments and makes multiple references to how they are seeking the delivery of solar without subsidy. Moreover, page 99 specifically states how "Government want to see more people investing in solar without government support".

2009 Renewable Energy Directive (RED)

2.11 The 2009 Renewable Energy Directive (RED) had a target for the UK to obtain 15 per cent of its energy from renewable sources by 2020. Whilst the UK ceased to be an EU member state in January 2020, the consideration of its performance is useful towards understanding the challenges of reaching a net zero carbon by 2050. During 2019, only 12.3 per cent of final energy consumption was from renewable sources.

National Policy Statements

2.12 National Policy Statements[5] (NPS EN-1[6] and NPS EN-5[7]) set out a case for the need and urgency for new energy infrastructure to be consented and built with the aim of supporting the Government's policies on sustainable development, notably by mitigating and adapting to climate change, and contributing to a secure, diverse and affordable energy supply.

[4] https://www.gov.uk/government/publications/clean-growth-strategy
[5] https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/national-policy-statements/
[6]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf
[7]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47858/1942-national-policy-statement-electricity-networks.pdf

2.13 Part 2 of NPS EN-1 explains that the Government is committed to meeting the legally binding target to cut greenhouse emissions by at least 80% by 2050, compared to 1990 levels, as noted before this target is now 100% for England. The NPS recognises that delivering this change will be a major challenge for energy providers. The focus of Government activity in this transformation is to facilitate investment by the private sector in new low-carbon energy infrastructure to contribute to climate change mitigation and to ensure security of supply.

2.14 The Government's wider objectives for energy infrastructure include contributing to sustainable development in order to address climate change and to ensure the well-being of society and the economy.

2.15 The need for all types of energy infrastructure covered by the NPS for energy security and to reduce greenhouse gas emissions dramatically is addressed within Part 3 of the NPS EN-1.

2.16 Paragraph 3.3.29 sets out that the Government does not anticipate that decentralised and community energy systems are likely to lead to significant replacement of larger-scale infrastructure. Moreover, interconnection of large-scale, centralised energy generating facilities through a high voltage transmission system enables the pooling of both generation and demand which in turn provides economic and other benefits.

The UK's Solar PV Strategy

2.17 The UK Solar PV Strategy is in two parts:

2.18 Part 1: Roadmap to a Brighter Future (DECC, 2013) confirms that 'Solar PV is one of the eight key renewable energy technologies that can help to create a clean, balanced UK energy mix'. It sets out four guiding principles:

- 'Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of the overall energy goals - ensuring that solar PV has a role alongside other energy generation technologies in delivering carbon reductions, energy security and affordability for consumers;
- Support for solar PV should deliver genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final

consumption by 2020 and in supporting decarbonisation of our economy …….;

- Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them; and

- Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives - ensuring that we address the challenges of deploying high volumes of solar PV.'

2.19 Part 2: Delivering a Brighter Future (DECC, 2014) includes a section on large-scale, ground-mounted solar PV schemes. Whilst recognising the opportunities for greater generation, it is acknowledged that largescale solar developments can have a negative impact on the rural environment and on local communities.

The National Planning Policy Framework

2.20 The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

2.21 Overall, the NPPF sets out the over-arching presumption in favour of sustainable development. Material for this application is how Government has placed a greater emphasis on the delivery of infrastructure, including energy and how this is integral towards fulfilling the economic arm of achieving sustainable development including energy and how this is integral towards fulfilling the economic arm of achieving sustainable development [8].

2.22 **Section 14** of the NPPF relates to meeting the challenge of climate change, flooding and coastal change. **Paragraph 150** of the NPPF sets out the planning policy perspective with regards to increasing the use and supply of renewable and

[8] As part of the second iteration of the Framework (2nd edition), Government introduced new wording that requires to decision taker to take into consideration the recommendations of the National Infrastructure Committee. The definition of economic objective was also been extended to include the identification and coordination of the provision of infrastructure.

low carbon energy. Through the paragraph, Government requires the decision maker to:-

a) *provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);*

b) *consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and*

c) *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.*

2.23 **Paragraph 154** sets out that in determining renewable energy applications local planning authorities should approve the application if its impacts are (or can be made) acceptable and that applicant should not be required to demonstrate **the overall need for renewable projects.**

Energy Storage, Parliamentary Office of Science and Technology

2.24 The House of Parliament Science and Technology Post Note Number 492[9], published in April 2015, specifically relates to energy storage and provides the following overview:-

- New energy storage technologies can help to maintain reliable energy supplies and could enable significant use of low-carbon electricity, heat and transport technologies;
- Cost is the main barrier for most storage. Innovation, demonstration and roll-out subsidies could address this constraint;
- For some near-cost-competitive electricity storage technologies, storage operators suggest that legislation and regulation produce significant barriers.

[9] https://post.parliament.uk/research-briefings/post-pn-492/

Eight Great Technologies

2.25 Supporting technologies where UK's science strengths and business capabilities combine is a core part of the Government's Industrial Strategy. Government considers that energy storage is one of the eight great technologies[10] in which the UK can become a global leader.

Digest of United Kingdom Energy Statistics (July 2020 Edition)

2.26 This Digest[11], also referred to as DUKES, is an essential source of energy information providing figures on the UK's overall energy performance, production and consumption. The digest is published annually and the latest edition was published in July 2020. Salient points of the report are: -

- In 2019, 12.3 per cent of total energy consumption came from renewable sources (Table 6.7); up from 11.2 per cent in 2018 (revised). On a RED basis, renewable electricity represented 35 per cent of total electricity generation; renewable heat 7.9 per cent of overall heat; and renewables in transport, 8.8 per cent.

- Fossil fuels remain the dominant source of energy supply, but now account for 78.3 per cent, although this is a record low level.

- Imports and exports in 2019 were both down; overall net imports decreased and accounted for 35.2 per cent of UK consumption of energy products.

[10] https://www.gov.uk/government/publications/eight-great-technologies-infographics
[11] https://www.gov.uk/government/statistics/digest-of-uk-energy-statistics-dukes-2020

3. CONCLUSIONS

3.1 There has been long-standing recognition of the need to decarbonise energy generation as one of the means of combatting the adverse effects of climate change. The Climate Change Act 2008, as amended, sets a new Net Zero emissions target by 2050. In July 2019, the Committee on Climate Change published its 2019 Progress Report to Parliament on reducing UK emissions. This indicated that the new target was achievable with known technologies, alongside improvements in people's lives. It also explained that decarbonisation of the power sector and more rapid electrification must be accompanied with greater build rates of low-carbon generation capacity, supplemented by measures to enhance the flexibility of the electricity system to accommodate a high proportion of variable generation. Taking the totality of Government policy and guidance there remains a strong need for a mix of renewable energy projects and that mix should include a continuing role for large-scale solar PV.

3.2 Overall, the development is consistent with Government policy, which identifies a need for low-carbon and renewable energy NSIPs in order to address climate change, to meet the legal commitment to Net Zero and to ensure a secure, diverse and affordable energy supply.