FAIR OAKS RENEWABLE ENERGY PARK

Socio Economic Statement

PREPARED ON BEHALF OF

Fair Oaks Renewable Energy Park Limited

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SOCIO ECONOMICS STATEMENT

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INTRODUCTION

SE1 This Statement considers the socio-economic effects of the proposed Fair Oaks Renewable Energy Park in the context of the recognised global imperative for renewable energy. The assessments within this chapter do not form part of the EIA but the information is material to the consideration of the Planning Application.

SE2 As discussed within **Chapter 2 - Development Rationale** of the Environmental Statement (ES) the effects of climate change are now being experienced at all levels – global, national, regional and local and the Proposal will contribute to global efforts to address climate change. Similarly the socio-economic effects of the proposal will also have effects at the national and local level.

SE3 The effects considered are primarily:

- rural diversification and land use;
- electricity generation;
- emissions;
- employment and local businesses;
- tourism;
- public attitudes; and
- community benefits.

SE4 At the heart of the NPPF (MHCLG, 2021) and indeed the planning system is the Government's aim to achieve sustainable development. The Government describe three dimensions to sustainable development:

- economic (including the provision of infrastructure);
- social (supporting strong vibrant and healthy communities); and
- environmental (including to mitigate and adapt to climate change and moving to a low carbon economy).

SE5 Within the NPPF is '*a presumption in favour of sustainable development*'. The Planning Statement which accompanies the planning application discusses renewable energy projects in the context of sustainable development, not least due to the socio-economic benefits associated with such schemes.

SE6 In consideration of planning policy and socio-economic effects for energy projects, the Overarching National Policy Statement for Energy (EN-1) (DECC, 2011), which is a material consideration for projects determined through the Town and Country Planning Act, states:

'The Government's wider objectives for energy infrastructure include contributing to sustainable development and ensuring that our energy infrastructure is safe. Sustainable development is relevant not just in terms of addressing climate

change, but because the way energy infrastructure is deployed affects the well-being of society and the economy' and;

'In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account: its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits.'

RURAL DIVERSIFICATION

SE7 Rural diversification has become an important source of support and income for a large proportion of the UK's farms, allowing farmers to continue to manage the countryside.

SE8 DEFRA figures (Farm Accounts for England) for 2019/20 (DEFRA, 2021) show that:

- 68% of farm businesses in England had some diversified activity;
- 49% of farm businesses in England have some diversified activity other than letting buildings; and
- diversified activities are slowly increasing, with the 2019/20 figures being 3% higher than the previous.

SE9 **Table SE.1** provides a summary of income from diversified enterprises as provided by the DEFRA Farm Accounts for England report.

SE10 Of interest, 33% of farms (18 600 farms) receive income from renewable energy diversification. This equates to an annual income of £94m, representing 7% of the farm income.

SE11 Solar generation provides an income to some 12 600 farms in England. This will vary from large scale schemes to roof-mounted arrays. Nevertheless, solar energy currently brings £38m of revenue per annum to farms in England, more than tourist accommodation, or sport and recreation.

SE12 Consistent with these results, a 2019 report by the National Farmers Union (NFU) Mutual found that approximately 29% of already diversified farms chose renewable energy. The case study provided a common reason for choosing to diversify, as illustrated in the following quote:

'The main reason for diversifying is because relying on income based purely on agriculture made us too vulnerable so I wanted to spread the risk and bring some financial stability.'

SE13 The importance of supporting a prosperous rural economy is highlighted in Paragraph 84 of the National Planning Policy Framework (MHCLG, 2021):

'Planning policies and decisions should enable:

[...] b) the development and diversification of agricultural and other land-based rural businesses [...].'

SE14 In providing a source of diversification this proposal will provide a means to develop the future farming practices, and overall diversify operations ensuring the long term viability of the farm and associated benefits for the local rural economy.

Table SE.1 - *Income from Diversified Enterprises, England 2019/20 (DEFRA, 2021)*

	No. of farms	% of farms	Total Farm Business Income for these farms (£m)	Income of diversified enterprise (£m)	Average enterprise income (£/farm)
Farm Business Income (including diversification)	56 500		2 597		
Farms that engage in:					
Diversified enterprises (all kinds)	38 400	68%	2 048	734	19 100
Letting buildings for non-farming use	25 500	45%	1 650	521	20 400
Processing/retailing of farm produce	5 600	10%	182	50	8 900
Sport and recreation	7 500	13%	444	22	3 000
Tourist accommodation and catering	3 300	6%	180	16	4 800
Solar energy	12 600	22%	897	38	3 100
Other sources of renewable energy	6 000	11%	475	56	9 400
Other diversified activities	6 700	12%	336	30	4 500

SE15 Income to farms is just one important aspect of farm diversification. Pressure is also coming from the retail sector as suppliers source from low carbon farms to assist with the carbon labelling of their products. Examples of this include Sainsbury's, who have pledged to become carbon neutral by 2040 and as part of this state that they will also work with their suppliers to '*set their own ambitious Net Zero commitments*' (Sainsbury's, 2021).

SE16 Similarly, Tesco has pledged to be a zero-carbon business by 2050 and zero-carbon in the UK by 2035. Focusing initially on their own operations, this company is also working with their suppliers to do the same. This involves the encouragement of a low carbon strategy down the entire supply chain to the agricultural sector (Tesco, 2021). This is a challenging undertaking. Tesco currently report that 54% of their UK Field-to-Tesco carbon footprint comes from the agricultural sector.

SE17 To diversify into renewable energy is therefore of material benefit to a farm, through the association of its produce with low carbon energy production.

Optimising Land Use

SE18 DEFRA Farming Statistics for '*Final crop areas, yields, livestock populations and agricultural workforce at 1 June 2020*' (DEFRA, 2020) finds that the total utilised agricultural area has remained relatively stable, between 17 and 18 million hectares since 2001. In this period the number and scale of ground mounted solar arrays has increased but it can be seen that this does not significantly affect the useable area for agriculture.

SE19 Of greater interest is the Building Research Establishment publication '*Agricultural Good Practice Guidance for Solar Farms*.' (BRE, 2014a). This finds that:

'The developer, landowner and/or agricultural tenant/licensee may choose to graze livestock at higher stocking densities throughout the year over much of the solar farm, especially where the previous land use suggested higher yields or pasture quality. Between 4 and 8 sheep/hectare may be achievable (or 2-3 sheep/ha on newly-established pasture), similar to stocking rates on conventional grassland, i.e. between about March and November in the southwest.'

SE20 The BRE also advocate free-range poultry or bee-keeping as productive options, and stress that solar farms may actually enhance the agricultural value of land. In the BRE NSC Biodiversity Guidance for Solar Developments (BRE, 2014b) the benefits of solar farms on land quality are discussed:

'Soil health is essential for the sustainability of farming in the longer-term and solar farms could play an important role by resting soils through the life of the solar farm. Resting would especially benefit soils that have been exhausted of their nutrients and compacted by farm machinery. Thus, solar farms can provide a means for soil to improve while maintaining production from solar harvesting, and possibly grazing.'

SE21 In addition the BRE also state:

'establishing permanent grasslands with few or no agricultural inputs on post-arable land should lead to a significant reduction in carbon release from the land.'

SE22 There is also evidence that soil moisture is better retained on fields with solar panels (Adeh, Selker and Higgins, 2018).

SE23 In terms of biodiversity, the ecological assessment and landscape and visual impact assessment discuss the extensive enhancements to all habitats on site (arable, hedgerow and trees). The ecological assessment considers that this will ensure that a Biodiversity Net Gain (of 74%) is achieved by the proposed development.

SE24 As a result of resting the land from intensive agriculture for the life of the proposed Fair Oaks Renewable Energy Park, measurable benefits for biodiversity and soil health would be achieved.

ELECTRICITY

Electricity Consumption and Demand

SE25 Since around 2005, total electricity consumption has been falling, across sectors, year on year (DBEIS, 2021a). In 2020 approximately 280TWh of electricity was consumed in Great

Britain, with approximately 38% attributed to domestic use. In the domestic sector it is thought that this reduction is down to increased household and appliance efficiencies, as well as higher bills.

SE26 There are currently approximately 24.7 million dwellings in England (MHCLG, 2021b). Since 2010, the number of new dwellings built each year has steadily increased from approximately 106 720 in 2010 (the lowest since 1946) to approximately 148 630 in 2020 (MHCLG, 2021b).

SE27 According to the Office for National Statistics (ONS, 2021a) the UK population in mid 2009 was over 62.2 million. The latest population estimate from the ONS states that there are over 67 million people in the UK. The UK population has been steadily increasing since late 1980 and this trend is expected to continue. The expected increasing population and housing stock can only have an upward influence on the national domestic electricity demand.

SE28 **Chapter 2 - Development Rationale** of the ES discusses the UK's legally binding target, under the Climate Change Act 2008 (as amended), to achieve net zero carbon emissions by 2050. It explains how the Sixth Carbon Budget ties in with the Energy White Paper (December 2020), the Government Response to the Future Homes Standard (January 2021) and the 10 Point Green Plan. With all new cars and vans to be fully electric from 2030 and heating in new homes to be non-fossil fuel from 2025, electricity demand is set to increase from approximately 300TWh today to 360TWh in 2030, 460TWh in 2035 and 610TWh in 2050. In addition to this, to produce hydrogen for transport, an additional 120TWh is required in 2050.

UK Electricity Generation

SE29 UK Energy statistics show that primary energy production in 2020 was 1.5% higher than a year earlier (DBEIS, 2020a). This increase follows a dip in energy production in 2019, the first since 2014, and resumes an overall trend of growth.

SE30 2020 saw a 29.3% decrease in electricity generation from coal, bringing it to a record low level and accounting for only 0.5% of the total primary energy production. Nuclear electricity also fell by 9.2%. A record high of 44.6% of electricity was supplied by renewables in the second quarter of 2020. This was mainly driven by increased renewable energy production capacity. Gas accounted for 34.4% electricity generation (DBEIS, 2020a).

SE31 Looking at renewables specifically, the latest DBEIS Energy Trends Report data shows that solar energy forms a relatively small proportion (less than 10%) of overall renewable generation (DBEIS, 2021b).

SE32 As discussed in **Chapter 2 - Development Rationale** of the ES, the UK has a legally binding target to achieve net zero emissions by 2050. To achieve this, additional renewable energy generation will be required.

SE33 When solar farms are generating electricity, the amount of electricity other power stations need to generate in order to meet demand is reduced. This means that as long as fossil fuels are present in the UK's energy mix, each kWh of electricity produced by solar farms will effectively displace a kWh of electricity that would otherwise have been produced by burning fossil fuels.

Predicted Electricity Generation

SE34 Fair Oaks Renewable Energy Park will connect directly in to a nearby 132kV overhead power line. This is the voltage of the Distribution Network voltage for supply across the region. Whilst the site is generating it will supply electricity directly into the local network and its serviced consumers off setting power import from the National Grid.

SE35 As stated in **Chapter 7 - Construction, Operation and Decommissioning** it is predicted that the solar farm at this site would have a potential annual yield of approximately 43 700MWh.

SE36 In terms of household electricity usage this would be sufficient to offset the equivalent annual energy needs of 11 200 (to 3 S.F) average Nottinghamshire homes (as noted in **Chapter 1**).

Energy Prices

SE37 A report for the Solar Trade Association in 2014 investigated the economic benefits of solar PV installation (CEBR, 2014). Within this it included the relative cost of solar energy compared to more conventional sources. The analysis found that using conservative estimates from the Department of Energy and Climate Change (now DBEIS), large-scale solar becomes cheaper than gas before 2025 and cheaper than wholesale electricity before 2030. This is demonstrated in terms of the Levelised Cost Of Energy (LCOE), which describes the ratio of total lifetime costs (capital and operating) of a specific generator to the total amount of electricity expected to be generated over its lifetime, both expressed in present value terms. This is shown for a range of generation sources in **Plate SE.1**.

SE38 Whilst it is cited by some that the 'polluter pays principle' is an unnecessary burden to the consumer, in considering the future sustainability of our electricity generation it should be considered appropriate to encourage cleaner energy generation and in the interest of reducing consumer bills.

SE39 The energy regulator, OFGEM, provides guidance on the components of electricity bills (OFGEM, 2021a). As shown at **Plate SE.2**, the average proportions of elements making up an electricity bill in the UK are: Wholesale costs (29.28%); Network costs (23.37%); Operating costs (16.34%); Environmental and social obligation costs (25.48%); VAT (4.76%); and other direct costs (2.09%).

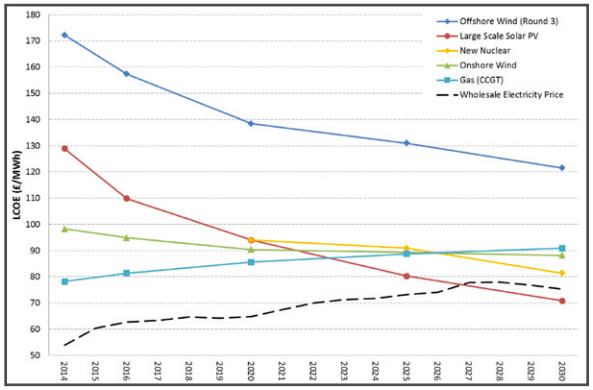

Plate SE.1 - *DECC LCOEs for Selected Technologies (£/MWh, 2014 prices) (Cebr, 2014)*

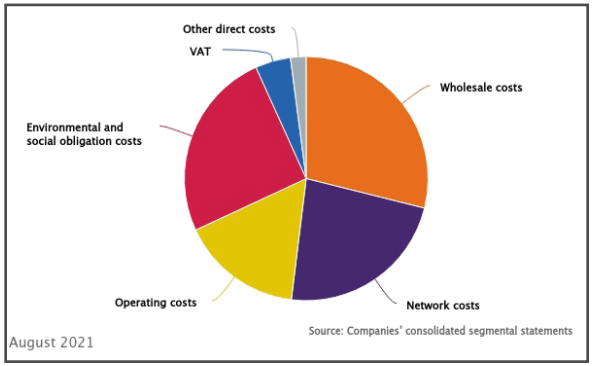

Plate SE.2 - *Breakdown of an Electricity Bill (OFGEM, 2021a)*

SE40 Clearly with the cost of energy and networks forming the majority of the overall electricity bill (53%), consumers are primarily exposed to fluctuations in the cost of gas over any other component. Increasing renewable generation breaks the link between wholesale gas prices and electricity costs, and consequently the consumer's exposure to these price pressures.

SE41 Energy bills increased quickly in the UK between 2004-2008 (CCC, 2017). This was due to rising fuel costs, despite generally reduced consumption. Energy bills continued to rise to a peak around 2013, and remained fairly stable to current levels (OFGEM, 2021b).

SE42 The average UK domestic electricity price (incl. taxes) in the second half of 2020 was above the median EU price. The Price per kWh for electricity in the UK during this period was 18.9 pence, which was the 9th highest in Europe (OFGEM, 2021b).

SE43 In 2017 the Committee on Climate Change published a report '*Energy Prices and Bills - impacts of meeting carbon budgets*' setting out independent analysis of how the UK's carbon budgets and related policies affect energy bills for households. Key findings of this report are:

- *'Household bills in 2016 were below 2008 levels as higher prices resulting from low-carbon policies and network costs were more than offset by reductions in energy use.'*
- *'Bills are about £115 lower in real terms since the Climate Change Act was passed in 2008, having risen around £370 from 2004 to 2008 as international gas prices rose.'*
- *'Meeting the fifth carbon budget, including sourcing 75% of UK generation from low-carbon sources by 2030, will add around a further £85-120 to the annual bill [...] Added to the impact on current bills, this implies that low-carbon policies will add £190-225 in total to the average annual bill in 2030 [...]'*
- *'Households could more than offset this bill impact from energy efficiency improvements between 2016-2030, which would save around £150 on average if prices remain at current levels. The majority (85%) of this saving is available from replacing appliances, lights and boilers at the end of their lives with the latest equivalent models.'*
- *'However, other factors, particularly rising wholesale gas prices, are expected to add over £200 to bills [...] If wholesale prices do rise, the saving from improving energy efficiency would be even larger.'*

SE44 The CCC reports that low-carbon initiatives add cost to the household energy bill but these costs could be offset with improved energy efficiency measures. The projected impact of low-carbon measures on annual household energy bills is demonstrated in **Plate SE.3 on page 8**.

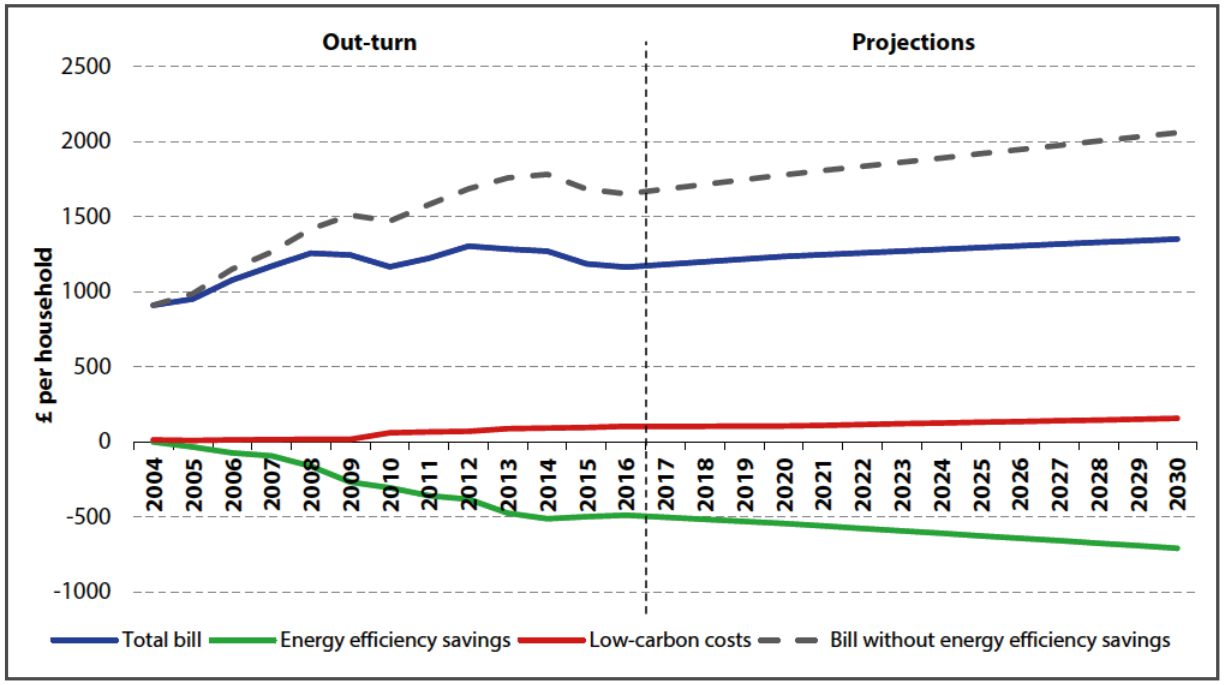

Plate SE.3 - *Annual Energy Bills, Low-Carbon Costs and Energy Savings (2004-2030) (CCC, 2017)*

SE45 Extra-ordinary circumstances have recently led to exceptional increases in the cost of energy which have over-ridden previous trends. These effects are not anticipated to abate in the immediate future, although previously existing trends are likely to re-establish within the timeframe of the construction of the Proposal.

SE46 In February 2022, OFGEM announced (OFGEM, 2022) time-limited market intervention measures in an attempt to stabilise the retail supply market. This was in response to what it called "*a huge challenge due to the unprecedented increase in global gas prices; a once in a 30-year event*" that led to the failure of a number of large energy retail suppliers.

SE47 Price cap changes and proposed modifications to the frequency at which the retail price cap is reviewed were also proposed to further protect consumers from surging wholesale gas prices.

SE48 Solar energy is increasingly cost competitive with conventional forms of energy generation. The most recent DBEIS report (2020b) estimates that the cost of solar generation (£44/MWh) will effectively be half the cost of CCGT electricity generation (£85/MWh) for projects commissioned in 2025.

SE49 Between 2004-2016 electricity prices rose 61% (CCC, 2017). Although the majority of this rise was down to wholesale and network costs, 40% was attributed to climate policies, which include:

- price support for low carbon generation;
- EU Emissions Trading System allowances;
- UK Carbon Price Support;
- energy efficiency policies aimed at reducing CO_2; and

- upgrades to transmission and distribution networks to accommodate renewable generation, heat pumps and electric vehicles.

SE50 Until 2016 there were three mechanisms for promoting renewable energy in the UK: the Renewables Obligation, Feed-in Tariffs (for small to medium scale schemes) and Contracts for Difference for larger scale projects. These mechanisms are funded through the electricity retail market and are not supported through the UK Treasury.

SE51 These mechanisms have successfully stimulated the development of the renewable energy industry without the need for capital development grants.

SE52 According to National Grid, 2020 was the greenest year on record for Britain's electricity system. Solar power set records for its highest ever level of generation (9.7GW) and its highest share in the electricity generation mix (34%), comfortably providing a third of Britain's electricity supplies on several occasions in May (National Grid, 2021).

SE53 2021 continued to break records with the all-time lowest carbon intensity electricity generation (the measure of CO_2 emissions per unit of electricity consumed) being recorded on 5th April 2021. On this day, wind turbines and solar panels were generating 60% of the nation's electricity (The Guardian, 2021).

SE54 In July 2022, OFGEM published its report "Net Zero Britain: developing an energy system fit for the future" (OFGEM, 2022). The market modifications set out to accelerate the path toward net zero, also reduce the nation's exposure to global events, stating:

"The unprecedented rise in gas prices over the last twelve months only reinforces the need to accelerate the shift away from fossil fuels, strengthening the case for decarbonisation."

SE55 The report recognises that renewables will meet most of the new demand associated with the electrification of the domestic transport and heating sector.

SE56 Whilst:

"higher cost reliable low carbon power such as nuclear, hydrogen power plants, and gas plants with carbon capture and storage to fill the gaps, with fossil fuels playing a diminishing role."

SE57 The report also recognises the need for a rapid growth in electricity storage. To address these needs, the report proposes wholesale and retail market reform as well as the establishment of a body referred to as the Future Systems Operator (FSO). OFGEM proposes the FSO take a strategic planning roll in future energy at the national and local level.

EMISSIONS

SE58 It has been predicted that the proposed solar farm will generate an annual average of approximately 43 700 000kWh (net) of electricity (to 3 S.F.).

SE59 The generation of this electricity will offset electricity generated from other sources. The project is connected in to the local distribution network and all electricity generated by the site will offset the import of power from the National Grid. This means that whilst the solar array is generating electricity, it in turn reduces demand on the large fossil fuel and high cost power stations.

SE60 Different organisations have historically made differing assumptions for calculating the emissions offset associated with renewable energy generation, varying in their view of the power generation technology that is actually offset.

SE61 For carbon dioxide these assumptions range from 860gCO_2/kWh (based upon coal generation) to 355gCO_2/kWh (based upon gas generation).

SE62 The National Grid itself is dynamic and electricity is sourced from a variety of generators including coal, gas, oil, nuclear and renewable energy. As shown in **Plate SE.4 on page 11** (as also discussed in **Chapter 2 - Development Rationale** of the ES), electricity is also imported from overseas.

SE63 It would therefore be incorrect to base any emissions offset calculation upon a single source of energy, particularly given the shifting energy mix as identified in **Plate SE.4**.

SE64 A conservative approach is to utilise the UK Government Greenhouse Gas Conversion Factors (DBEIS, 2021c) for company reporting of annual carbon emissions.

SE65 It is a legal requirement for all UK quoted companies (listed on London Stock Exchange, EEA market, New York Stock Exchange or NASDAQ, unquoted large companies and large LLPs) to report on their global energy use in addition to greenhouse gas emissions.

SE66 The Government update the Greenhouse Gas Conversion Factors on an annual basis, and these include the average carbon emissions for UK electricity generation and UK transmission and distribution. The Government also require quoted Companies to use these conversion factors to calculate the emissions offset associated with their own renewable energy generators.

Table SE.2 - *2021 GHG Conversion Factors (DBEIS, 2021c)*

	kgCO_2e/kWh
Electricity Generation	0.21233

SE67 These conversion factors are therefore entirely appropriate as the basis for calculating the emissions offset associated with this proposal. As they are based upon the mix of generation sources (as shown in **Plate SE.4**) they can be considered conservative as this mix includes for renewable energy sources and renewable energy generation is not used to offset itself.

SE68 The conversion factors for 2020, published in June 2021, provide the most up to date figures as shown in **Table SE.2**.

SE69 On this basis the electricity produced by the Fair Oaks Renewable Energy Park will offset approximately **9 270 000kgCO_2/annum or 9 270 tonnes CO_2 per annum** (to 3 S.F.). This can be considered a conservative estimate of the carbon offset by the Fair Oaks Renewable Energy Park.

SE70 DBEIS report that the CO_2 emissions associated with the average Nottinghamshire resident was 1.24 tonnes of CO_2 per annum based upon per capita emissions in 2019 (DBEIS, 2021d). The 9 270 tonnes of CO_2 offset by the solar array would therefore compare to the total equivalent domestic emissions of some 7 480 (to 3 S.F.) average Nottinghamshire residents.

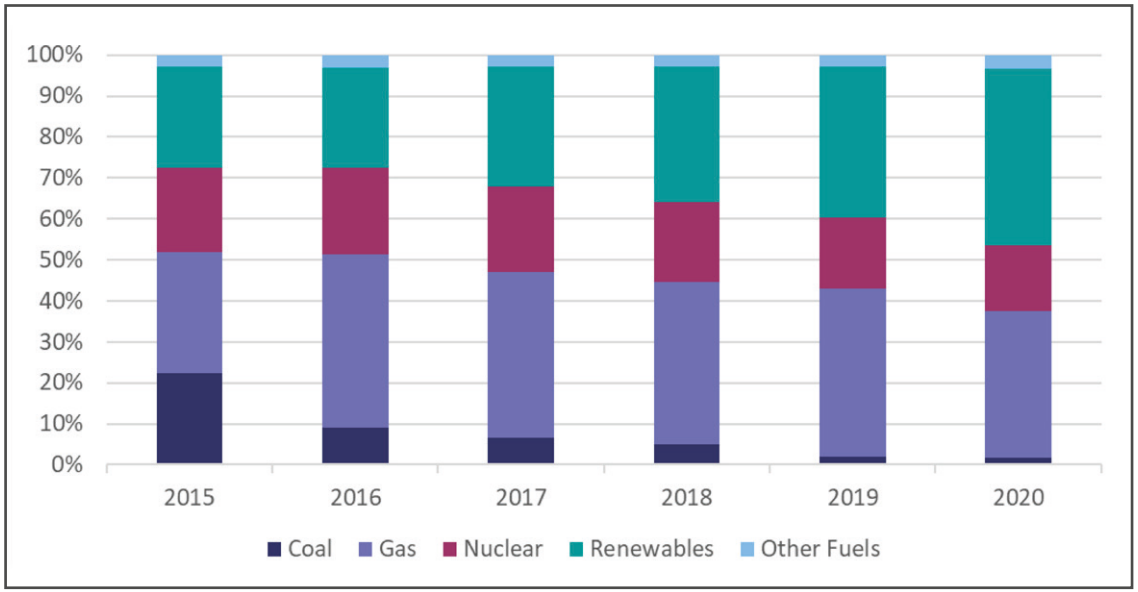

Plate SE.4 - *2015 Electricity Fuel Mix Compared to 2020 Electricity Fuel Mix (Source: Digest of UK Energy Statistics (DBEIS, 2021)*

SE71 This project therefore provides a material contribution to the net zero target by 2050 at both National (through the Climate Change Act) and Local level. The renewable energy and energy storage provided by the Proposal demonstrates supportive action to the 'Climate Emergency' Rushcliffe Borough Council declared in March 2019.

EMPLOYMENT AND LOCAL BUSINESSES

SE72 As acknowledged by the Committee on Climate Change (2017), '*the UK low-carbon economy is already estimated to employ hundreds of thousands of people and contribute around 2-3% of GDP*'.

SE73 Materials and services for the proposal will be sourced, where practical, from suitably qualified local and regional contractors. Further employment roles such as security, maintenance and cleaning will be required during the operational phase of the development.

SE74 The Business Register and Employment Survey (BRES) reports employment by sector in the County (NOMIS, 2022). The latest data (2021) show that the largest sectors of employment in the county are the vehicle retail and repair sectors. This is higher than the national average (16.7% versus 14.9%). Relevant sectors to the construction and decommissioning phase, and potentially also to a lesser degree operations include hospitality and transport where employment is broadly in line with national averages. Construction accounts for 6.5% of employment, significantly higher than the national average (4.8%). There is clearly a skill and service capability within the County relevant to the proposal.

SE75 Each phase of the development with regard to employment is considered in the following sections.

Development Phase

SE76 Local accommodation and services have been used during visits to the area and local venues for public exhibitions. Refreshments at exhibitions were sourced from local businesses and local nurseries used for tree saplings given away at the exhibitions. This reinforces the importance of the renewable supply chain as an employer in the region.

Construction Phase

SE77 Should the site be consented, the construction of the Fair Oaks Renewable Energy Park would have the potential to benefit the local economy through the award of construction contracts and associated sub-contracts.

SE78 It is likely that local companies will be best placed to source some construction materials, labour, equipment and services, and will have the skills and capacity to undertake many elements of the construction activities.

SE79 The Applicant will ensure that local businesses get a chance to win business directly and indirectly from the construction project, by creating a local supplier database.

SE80 It is intended that the supplier database would cover all elements local businesses could supply to the contractors, such as accommodation, catering and supplies, plant hire, vehicle and equipment hire, concrete and aggregate supply, electricians, power cable suppliers and installers, crane hire and any other services.

SE81 Suitably qualified and experienced local industry sectors would have the opportunity to be involved in areas of work including:

- civil engineering design;
- geotechnical ground investigations;
- civil works (access track construction, panel installation, substation building, cable trenching);
- onsite electrical network design;
- onsite electrical network installation and commissioning;
- aggregate supply;
- haulage;
- plant hire; and
- ancillary and tertiary sectors relating to supplies, accommodation, catering, etc.

SE82 The total construction cost for the Fair Oaks Renewable Energy Park is estimated to be approximately £46 to £50 million, of which the Balance of Plant component is expected to be approximately £9 million, which is considered to be a material benefit.

Operational Phase

SE83 Business rates from solar farms are retained by the communities in which they are paid.

SE84 Throughout the 40-year operating life of the Fair Oaks Renewable Energy Park, the general operation of the site, as explained in **Chapter 6 - Development Proposal,** is carried out through 24-hour remote monitoring with visits to site as appropriate.

SE85 The solar panels may also be cleaned during quarterly visits to the site, supporting a renewables supply chain.

SE86 The report noted at **Paragraph SE37 on page 6** (CEBR, 2014) that

rapid growth in the industry propelled the UK into the top ten global markets for installed PV capacity. With political support solar PV deployment of all scales between 2010-2013 was estimated to have attracted £6.4 billion of private sector investment, supporting approximately 14 000-15 000 UK jobs (BRE, 2014c and CEBR, 2014).

SE87 Due to the Feed-in-Tariff support mechanism ending and withdrawal of political support for renewable energy at the planning stage, it is thought that the number of people employed in the PV sector is now significantly depleted from 2013 levels. However, the evidence shows that there is huge potential for economic growth alongside solar PV installation.

SE88 As discussed at **Paragraph SE81 on page 12** there are a range of industries that benefit from solar PV expenditure. Assuming that the majority of equipment (solar panels, inverters and transformers) is imported to the UK, the CEBR analysis estimates that around 45% of the economic investment is directly in the UK. This is higher than UK content ratio for capital expenditure associated with nuclear (44%) and offshore wind (31%).

SE89 CEBR projections find that employment associated with each MW of installed capacity will gradually fall to around 5.6 full time equivalent jobs per MW by 2030. The report concludes:

'Large-scale solar PV arrays deliver substantial output at low input cost, providing value to the UK economy, and deployments of all scales sustain employment across the nation.'

SE90 As such, there are material benefits associated with the operational phase of the proposal.

Decommissioning Phase

SE91 As explained in **Chapter 7 - Construction, Operation and Decommissioning** the decommissioning process is essentially the reverse of the construction process. Similar employment opportunities will likely exist, although over a shorter time, with additional opportunities for the recycling or reconditioning of decommissioned components. As with construction, the benefits associated with this phase are material.

Tertiary Impacts

SE92 **Paragraph SE81 on page 12** listed examples of industry sectors within which local companies may have the opportunity to contribute in the construction process. As well as direct contracts, the construction and operational phases will also benefit local business and the economy through the supply chain. Examples of such areas include:

- tools and consumables;
- catering;
- accommodation; and
- other support and service industries.

SE93 This represents a material benefit to the local economy.

TOURISM

SE94 A number of holiday cottages and private short term rentals, such as Airbnb properties, are located within the wider area surrounding the site.

There are a number of visitor attractions in the immediate area (as discussed further in Chapter 9 - Landscape and Visual Impact Assessment of the ES, including, Rushcliffe Country Park, Nottingham Transport Heritage Centre and Nottingham Heritage Railway, Ruddington Village Museum, the Framework Knitters' Museum and the human sundial in Ruddington and Rushcliffe Golf Club.

SE95 The visual experience of users of the local public rights of way and the tourist attractions are considered in the LVIA as part of the visual assessment (**Chapter 9** of the ES) which includes a full appraisal of potential visual impacts of the proposal and associated mitigation.

SE96 Whist some visual impacts have been identified potentially from the golf club, impacts on local tourism at this venue are not considered to be significant.

PUBLIC OPINION

SE97 Solar energy has been utilised in the UK for several decades, from around the late 1970s. The deployment of solar energy has grown markedly in recent years, particularly in respect of larger scale projects of photovoltaic (PV) solar panels for electricity (rather than heat) generation. This is due to the reduction in costs across the solar PV supply chain, and the changing political climate recognising the need for renewable energy generation in the UK.

SE98 There is currently approximately 13 500MWp of installed solar photovoltaic capacity in the UK (DBEIS, 2021e). UK-wide attitude surveys consistently suggest support for solar farms is widespread.

SE99 Research into public values, attitudes and acceptability by Butler *et al.* for the UK Energy Research Council in July 2013, found that 61% of those surveyed agree that promoting renewable energy sources, such as solar and wind power, is a better way of tackling climate change than nuclear power. It was also found that '*Solar energy is highly favourable and positively associated with clean energy futures*'. These findings are part of a wider assessment that gathered information over three phases: firstly, stakeholder interviews, then public workshops, followed by a national online survey.

SE100 Public opinion surveys are consistent with the quarterly Public Attitude Trackers published by the Department for Business, Energy and Industrial Strategy. The latest of these reports from December 2021 (DBEIS, 2021f) found strong support for renewable energy:

In Autumn 2021, support for using renewable energy such as wind power, solar energy and biomass to provide electricity, fuel and heat was high at 87%, including 54% of people saying they strongly supported this. [...]. Just 1% of people said they opposed renewable energy.

SE101 For solar energy specifically, the DBEIS (Wave 37) tracker found that support for solar energy remained high and stable at 84%.

SE102 RenewableUK (2021) commissioned a YouGov Poll to explore public attitudes to renewable energy in light of the Government suggestion of a 'green recovery' from the economic downturn as a result of the Covid-19 pandemic measures. This poll found that people overwhelmingly support the prioritisation of renewable energy investment, considerably more than any other aspect of the 10 Point Plan for a Green Industrial Revolution.

Five times as many people support the prioritisation of renewable energy than any other part of the 10 Point Plan (45% v 9%), as shown at **Plate SE.5 on page 15**.

Pre-Application Public Consultation

SE103 Ridge Clean Energy Limited (the Developer) on behalf of Fair Oaks Renewable Energy Park Limited (the Applicant) has carried out a full programme of community consultation in support of its proposals for Fair Oaks Renewable Energy Park. A copy of the documents sent to the development neighbours and officials is contained at **Appendix 5.1** of the ES.

SE104 Letters were sent to Ruddington Parish Council, Gotham Parish Council and Barton in Fabis Parish Council notifying the respective Parish Councils of the proposals through November and December 2021.

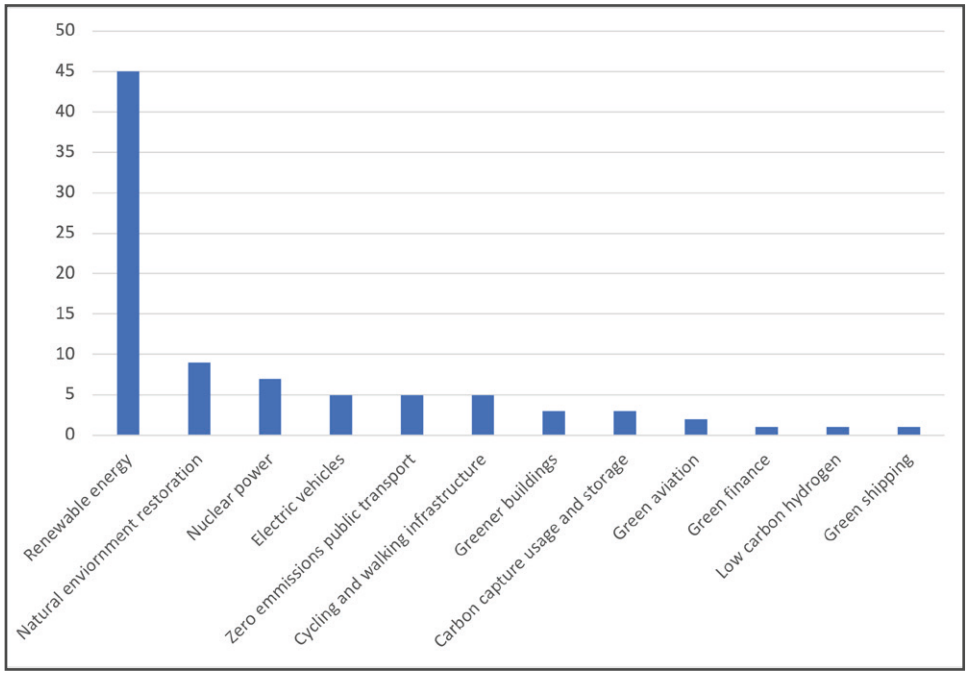

Plate SE.5 - *Percentage of Public Who Consider Each Respective 'Green Sector' as their First Priority for Government Investment (Renewable UK, 2021)*

SE105 In early March 2022, invitations to the Applicant's public exhibitions were issued to residential dwellings. The invitation contained details on the Applicant, Proposed Development, the dates and times for the two exhibitions and the intentions for engagement and working with the local community.

SE106 The Developer hosted two public exhibitions for the Proposed Development, on the 22nd and 25th March 2022 at St Peter's Rooms, Ruddington.

SE107 Over the two public exhibition events held in the Village of Ruddington, at least 112 people were in attendance. Ridge Clean Energy requested all

attendees to complete a feedback form upon entering the venue.

SE108 Respondents had an opportunity to complete the form during the event or after the event through paid-postage envelopes. Fifty feedback forms were collected following the public exhibitions. In response to the question, 'Do you support renewable energy?', 45 out of 50 respondents, or 90 percent, indicated support answering 'Yes'.

SE109 Access for the delivery of equipment was initially anticipated to be routed through Ruddington Village to site via Asher Lane. During public consultation, (as discussed further in E**S Chapter 5 - EIA**), valuable information was provided by the community which the Applicant considered and progressed.

SE110 The Applicant entered into dialogue with relevant neighbouring landowners to identify a suitable alternative. Accordingly, construction access is now proposed to be routed via Pasture Lane from the north, via private land, then along a temporary and non-intrusive road surface parallel to Pasture Lane within agricultural fields to the site. Construction traffic is therefore no longer proposed to be routed via the village centre, as discussed further in **Chapter 7 - Construction, Operation and Decommissioning**.

SE111 A summary of all received comments is included within **Appendix 5.1** of the ES.

COMMUNITY BENEFITS

SE112 As identified in Wave 37 of the Public Attitudes Energy Tracker (DBEIS, 2021f), 75% of those surveyed in March 2021 believed that renewable energy developments should provide direct benefit to the communities in which they are located.

SE113 In addition to the environmental and economic benefits of the project identified in previous sections, if approved, the renewable energy park will bring further material benefit to the local community, including (whilst not a planning consideration) a community fund established by the Applicant to support local social, environmental and community initiatives.

SE114 A Government White Paper entitled 'Local growth: realising every place's potential' (HM Government, 2010) ensures that the Business Rates that would be paid by the solar farm stay within the local area, creating further benefit to the local community:

'The Government recognises that communities hosting renewable energy installations play a vital role in meeting a national need for secure, clean energy, and believes that it is right that these communities should be rewarded for the contribution such installations make to ensure the UK has a secure supply of energy and reduces CO_2 emissions from energy. We will therefore ensure that those local communities that host renewable energy projects are rewarded by allowing them to keep the business rates they generate.'

SE115 National public opinion remains consistent with overwhelming support for renewables. This is further demonstrated by Renewable UK's 2021 assessment which identified key priorities for government investment, with renewable energy identified as the principal desired focus.

CONCLUSION

SE116 This Statement has considered the anticipated socio-economic impacts associated with the proposed Fair Oaks Renewable Energy Park. Material economic and environmental benefits have been identified at both the National and Local level as well as the contribution to global efforts to address climate change.

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