LIGHTSOURCE
RENEWABLE ENERGY LIMITED

PLANNING STATEMENT

RETROSPECTIVE PLANNING APPLICATION FOR ROOFTOP SOLAR PHOTOVOLTAIC INSTALLATION



THE GLEED SCHOOL, SOUTH HOLLAND
POST 16 CENTRE, MATMORE GATE,
SPALDING, PE11 2PN

DOC REFERENCE:

Gleed Solar

DATE: July, 2015

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1 INTRODUCTION

1.1 GENERAL

This planning statement has been prepared in support of a full planning application for the retention of a roof mounted photovoltaic (PV) solar energy generation system located on The South Holland Post 16 Centre.

The panels are located on the existing roof of South Holland Post 16 Centre, Matmore Gate, Spalding, PE11 2PN. The panels cover approximately 71m^2 of the roof space, as shown on the Layout Plan and Block Plan which accompany this application.

The purpose of the development is to convert daylight into electricity to generate renewable energy for use by the Post 16 Centre. This micro scale solar development has a generation capacity of 9.66 kilowatts (kW), which is similar to the energy requirements of approximately 3 houses, and will result in a saving of approximately 4,830kg in CO^2 emissions per annum.

1.2 PHOTOVOLTAIC PANELS

Photovoltaic panels are designed to absorb daylight and convert it into electricity. In comparison to other energy generation methods, there are very limited environmental effects associated with the construction and operation of small scale PV energy generation systems. The minimal maintenance and the long service lifetimes (25-30 years) mean that any effects on the local community will be limited to the short construction period.

1.3 ECO SCHOOLS SOLAR PROGRAMME

Eco Schools is an international programme guiding schools toward more sustainable operations and enhanced environmental education for pupils. The Eco Schools Solar Programme in the UK was established to utilise the renewable energy Feed in Tariff in order to provide free electricity for participating schools as a well as creating an opportunity for additional learning, through the use of displays showing how much clean energy the school is generating and the carbon dioxide savings.

Winch Energy has partnered with Eco Schools to develop and build PV systems on the roofs of a number of schools participating in the Eco Schools Solar Programme. Lightsource Renewable Energy Ltd is a solar energy company working with Winch to deliver these systems. Lightsource will manage, monitor and maintain each of the PV systems that are installed.

2 SITE DESCRIPTION

The small scale roof based solar energy system comprises of 42 PV modules, with a combined output capacity of 9.66kWp. The panels are mounting on the roof to lie flush with the roof profile, as shown in the Layout Plan accompanying this application.

The school building is located at South Holland Post 16 Centre, Matmore Gate, Spalding, PE11 2PN. The site does not lie within an Area of Outstanding Natural Beauty or any other nationally or locally designated areas. There are no listed buildings within the curtilage of the school and there are no other heritage assets near to the site are on which the panels would have an impact.

The PV panels are wholly contained within the existing roof area, and are set back from the roof peaks to avoid increasing the overall height of the building, as shown in the accompanying plans. The panels are located on the building highlighted in red below.



Figure 1: Aerial showing site and surrounds

3 PERMISSION SOUGHT

Retrospective planning permission is sought to retain the existing solar PV panels on the roof of the school building, installed on 28th March 2012, with a total generation capacity of 9.66kWp. The use of the building will still continue under the current use and the electricity generated will be used by the school.

3.1 APPEARANCE

The proposed installation will not fundamentally change the appearance of the buildings and the wider site. The panels will sit flat on the roof (approximately 40mm above the roof plane). Accordingly there will be no change to the height of the building, or orientation of the rooftop as a result of the installation.

Overall, it is considered that the proposed panels would have relatively limited visibility, and would in any event be consistent with the existing nature of the site.

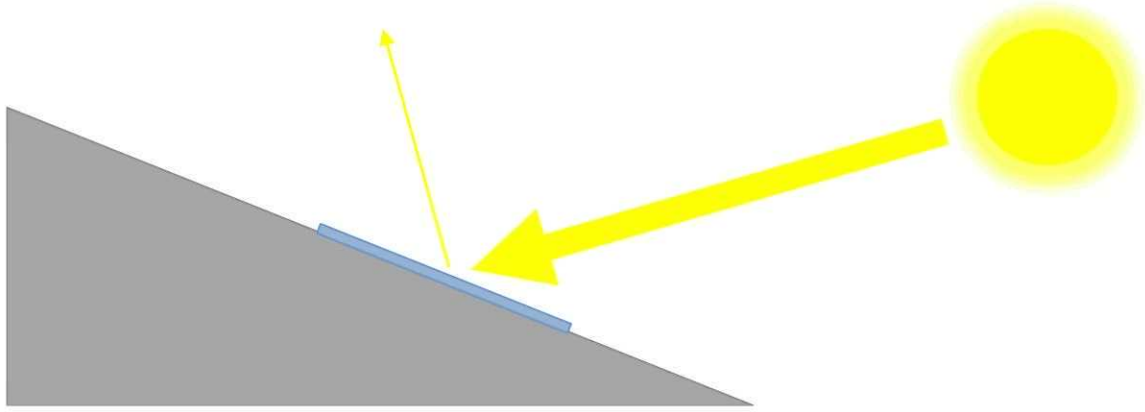
3.2 OPERATION

Solar PV systems require little maintenance, with post-construction activity limited to occasional visits to clean, check and repair the panels, by personnel using small vehicles (4x4 or transit van type).

The PV panels do not generate a perceptible noise that would impact on the amenity values of the area.

The development will not result in any emissions or waste, to the contrary it will help to reduce the level of CO^2 emissions in the UK associated with electricity generation.

There is a misconception that PV panels might cause adverse glint and glare effects, with reflected sunlight creating a nuisance or even a safety risk for planes or traffic. This is not the case. The panels are designed to absorb as much daylight as possible, and therefore have a low level of reflectivity when compared to surfaces such as window glass, water or snow. Less than 9% of total incident visible light is reflected by PV panels, whereas normal glass reflects about 17%; the image below illustrates the reflection of sunlight from a solar panel.



Studies have shown that PV panels do not create a risk for aircraft or vehicle traffic[1], due to the absorptive properties and low reflection levels of the panels. In Germany and the USA it is common for PV systems to be installed on airport terminal buildings, or within airport grounds. Therefore, the development will not result in adverse glint and glare effects.

The passive nature and small scale of the proposed development means there will be no significant adverse effects on the local community and it is considered that the installation of PV panels on the roof of the building will not adversely affect the visual amenity of the site or surrounding area

[1] Lightsource commissioned Solar Praxis, a German based company, to undertake glint and glare assessments for two PV projects located within close proximity of airports.

4 POLICY CONTEXT

4.1 INTERNATIONAL POLICY

The UK is a signatory to the EU Renewables Directive (2009), under which our legally binding target is for 15% of total UK energy consumption to be generated from renewables by 2020, with this target rising to 80% by 2050.

The UK's Renewable Energy Strategy (RES) sets out how the UK will increase its renewable energy generation and reduce greenhouse gas emissions. The Strategy is based on a scenario of 30% of electricity, 12% of heat and 10% of transport being generated from renewables by 2020. In 2012 UK electricity generation from renewable sources was 11.3%, an increase of 1.9% from 2011,[2] and in 2013 this had risen to 13.9%.[3] A substantial increase will be required in order to achieve 30% within the next five years.

On behalf of the European Union, the Vienna University of Technology and the Energy Economics Group published an assessment of the progress each EU member state has made towards meeting their 2020 targets. In relation to the UK, the report states that "*it is not expected that its 2020 RES [Renewable Energy Sources] target can be achieved under baseline conditions…Thus, the UK is a candidate for importing surplus RES deployment of other Member States that are not needed for their own target fulfilment. The energy produced from RES has to nearly double in 2020 to fulfil the UK target when compared to the baseline case.*"[4] Unless the rate of deployment for renewable energy generation schemes increases, the UK is likely to miss its legally binding targets.

4.2 NATIONAL ENERGY AND PLANNING POLICY

The UK Government is committed to meeting our renewable energy targets, which are set out in national policy through the Climate Change Act of 2008. Section 13 of this Act states that there is a duty for the Secretary of State to prepare proposals and policies for meeting carbon reduction targets. These obligations fall to Local Planning Authorities.

In 2011 the Department of Energy and Climate Change published the UK Renewable Energy Roadmap, which was updated in 2013. This presents the framework for the delivery of renewable energy deployment in the UK; it reiterates the Government's commitment to meeting our renewable energy targets. 2013 also saw the publication of the UK Solar PV Strategy Roadmap which states that "*Solar photovoltaic (PV) technology is a mature, proven technology and is a reliable source of renewable energy with an important role to play in the UK energy generation mix*." Paragraph 13 of this Strategy notes that presently solar PV accounts for 12% of renewable electricity capacity in the UK.

There are a raft of other National guidance documents relating to energy and renewable energy more specifically which support the Government's aim to significantly increase the amount of electricity generated in the UK from renewable sources.

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[2] Department of Energy and Climate Change (2013) *Digest of UK Energy Statistics*

[3] Department of Energy and Climate Change (2014) *Digest of UK Energy Statistics (DUKES)*

[4] Vienna University of Technology & Energy Economics Group (2014) *2020 RES Scenarios for Europe – Are Member States Well on Track for Achieving 2020 RES Targets?*

The National Planning Policy Framework (NPPF) was published on 27th March 2012, replacing all national level Planning Policy Statements, Planning Policy Guidance, and regional planning guidance for England. The central theme of the NPPF is the presumption in favour of sustainable development, as detailed in Paragraph 14.

Part 10 is of direct relevance to renewable energy generation. Paragraph 97 states that in order to increase the use of renewable and low carbon energy generation:

> "*...local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources*".

It goes on to state that LPAs should have "*a positive strategy to promote energy from renewable and low carbon sources; [and] design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily*."

Paragraph 98 advises that when local authorities are determining planning applications, they should:

- "*not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and also recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and*
- *approve the application if the impacts are (or can be made) acceptable...*"

5 CONCLUSION

It is considered that the existing panels installed on the school have a minimal effect on the building on which they are installed and do not adversely impact upon the surrounding area. The effects of the PV system are negligible in nature and contained within the site.

It is considered that the proposed development is consistent with policy objectives, and that retrospective planning permission should be granted for the 9.66kW PV system.