



POSITION STATEMENT ENERGY PRODUCTION

SUMMARY

This position statement should be read in conjunction with our Climate Change position statement.

The main issues in Gloucestershire concern the generation and distribution of electricity. As we expect the county will continue to depend on major generating plant outside the county and that fracking for gas is now on hold, the matters of principle concern are:

- *renewable energy projects in all their forms;*
- *the possible resurrection of proposals for some sort of Severn barrage or tidal lagoons*
- *the potential for new transmission lines from major new generation sources outside the county such as nuclear power stations, and offshore wind farms in the Bristol Channel;*
- *the severely limited agricultural use to which farmland that has been utilised for PV solar farms can be put, set against the need to maintain food production.*

Because energy generation will always cover a small proportion of the county's demand, we consider that the pursuit of renewable energy targets should not be at the expense of the unique environmental assets of landscape and biodiversity in the county.

The statement outlines our approach to a number of energy technologies. In summary we support small scale dispersed energy generation facilities, those renewable energy technologies which produce energy continuously and solar panels on roofs or in carefully sited arrays. We believe that there is only limited scope for wind turbines in Gloucestershire without unacceptable adverse effects on the landscape.

While the development of tidal power in the Severn Estuary is currently on hold, it is possible that it will become apparent that the government's legal commitment to achieving net zero greenhouse gas emissions by 2050 cannot be met without recourse to less economically attractive large schemes such as in the Severn Estuary. We will oppose a complete barrage but look favourably on proposals for lagoons which do not cause damage to the unique ecology of the estuary.

On transmission lines we will oppose any routes through the Cotswolds or Forest of Dean. We will also expect that it can be shown that the best alternative route has been chosen minimising visual impact and using existing infrastructure where possible and that pylons use modern designs.

Where the visual impact would affect a wide area and/or particularly valued landscape we expect that the alternative of undergrounding will have been properly evaluated.

Introduction

The provision of reliable sources of all forms of energy is vital to living standards and to the vitality of the country and the countryside. However how it will be produced and consumed now needs to be considered in the context of the Government legal commitment that requires the UK to bring greenhouse gas emissions to net zero by 2050.

The most important rural issues for combating climate change are outlined in our Climate Change Statement including the very important planning issue of raising the standard of insulation in new built housing and retrofitting existing buildings to meet the highest standards of energy efficiency.

Whatever the source, all forms of energy need considerable infrastructure for their production and transportation to consumers and this can, but need not have a damaging effect on our landscape.

Potentially, in the longer-term unconventional fossil fuel activities involving fracking for gas or oil, coal bed methane extraction, and underground coal gasification (UCG) could be developed in the county but because of the commitment to achieve net zero greenhouse gas emissions by 2050 this seems now to be unlikely. Furthermore, the Government policy on fracking has changed: there is now a moratorium on further development until the risks of earth tremors can be properly mitigated.

For Gloucestershire the most important issues concern electricity supply. This is because the infrastructure for transport fuels is already in place and it is unlikely to need expanding. Similarly, with the completion of the Wormington to Sapperton pipeline it is unlikely that further major projects for gas transmission will be needed in the county for some while.

Less than 15% of Gloucestershire's electricity needs are met from production facilities in the county. The largest facility is the Javelin Park energy from waste incinerator. We do not foresee any other major generating plant. However in the unlikely event that fracking for gas or development of unconventional fossil fuels proceeded there would be a need for significant additional industrial facilities to enable extraction and chemical processing, and infrastructure developments to enable distribution of either gas or electricity into the respective grid. The valuable lessons to be learnt from the Wormington to Sapperton pipeline project should be applied to any new pipeline proposed.

The issues which are most pressing concern:

- renewable energy projects in all their forms;
- the possible resurrection of proposals for some sort of Severn barrage or tidal lagoons
- the potential for new transmission lines from major new generation sources outside the county such as nuclear power stations, and offshore wind farms in the Bristol Channel;
- the severely limited agricultural use to which farmland that has been utilised for PV solar farms can be put, set against the need to maintain food production.

CPRE Gloucestershire supports the need to take seriously the probability of climate change due to continuing emissions of greenhouse gases. However, in Gloucestershire the main sources of electricity supply will continue to lie outside the county and the potential of renewable energy production in the county will be of relatively low supply importance. We therefore believe that the pursuit of renewable energy targets should not be at the expense of the unique environmental assets of landscape and biodiversity in the county. While this view has been reinforced by a high court judgement that environmental damage could not be outweighed by contributing generation of

renewable energy to meet the government's policy aspirations, we are concerned that this judgement has been superseded by the Climate Change Act.

In the longer term, development of nuclear technology such as fusion or small scale reactors could have fundamental effects on where electricity generation capacity is located and how it is distributed in the county. As and when these possibilities become reality we will review this position statement.

What the National Planning Policy Framework says

In planning terms, the key national policy statements on energy are contained in the National Planning Policy Framework (NPPF) updated in February 2019.

In summary, the NPPF says:

To help increase the use and supply of renewable and low carbon energy and heat, plans should:

- 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;
- 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.

Local planning authorities should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood plans.

An energy strategy for Gloucestershire

In February 2019 Gloucestershire County Council adopted an Energy Strategy. This strategy puts heavy emphasis on the generation of renewable energy but also encourages businesses in the county to exploit the commercial opportunities offered by the demand for renewable energy solutions to power generation. We welcome this strategy but we are concerned that it will push District Councils towards affording renewable energy projects priority over the protection of the landscape or built heritage.

CPRE Gloucestershire Policy

The highest priority should be given to reducing energy consumption; this is covered in our Climate Change Policy statement.

Other than this our policies are:

The choice of renewable energy technologies

The focus should be on dispersed small-scale facilities generating power on a continuous basis.

We support the use of the following technologies with some caveats:

- i) Anaerobic digestion (AD). AD systems are being used increasingly as a source of renewable energy. The process produces a biogas which can be used directly as fuel and in combined heat and power plants or upgraded to natural gas-quality bio-methane. A by-product is a nutrient-rich digestate which can be used as a fertilizer. This technology can work very effectively in agriculture, and in the treatment of sewage and food wastes. On farm digesters typically use manures and slurry as feedstock but this can be supplemented with plant material, usually maize.

We support the development of this technology, subject to satisfactory siting, design of the processing plant and that the source of feedstock is local. In addition to farm applications the technology is best applied in community or relatively small town schemes. We are likely to oppose large schemes which rely on bringing in feedstock from more distant areas; these schemes are very often visually intrusive and generate excessive traffic for the local road network. We also have concerns over farm schemes which solely use plant material grown specifically as feedstock, diverting use of land away from food production.

- ii) Ground/water source and air source heating. To be encouraged in new buildings.
- iii) Energy from waste. We support the diversion of waste from landfill and the use of residual waste for the generation of energy and are not opposed to incineration or other combustion processes that can be demonstrated to have insignificant environmental impact. However, in Gloucestershire the probable need has been more than fulfilled by the massive Javelin Park energy from waste incinerator and it is unlikely that any similar plant will be proposed.
- iv) Hydro. There is a limited potential for small scale schemes to harness the energy of our local rivers.
- v) Biomass. The burning of wood or other biomass crops such as miscanthus is usually associated with combined heat and power generation. Great care needs to be taken to ensure that benefits are not lost in transporting feedstock long distances or that excessive planting of biomass crops does not create a monoculture alien to the farmed landscape. To avoid this, we do not support investment in large scale burning of wood or other biomass crops. Any significant increase in the use of land for biomass production would also reduce the area available for producing food. However, more use of local wood fuel for heating can encourage better management of existing woodland with landscape and biodiversity benefits. So long as management is sensitive and there is no risk of loss of ancient woodland or a permanent reduction of afforested areas, greater use of local wood fuel is supported.

All the above technologies are scalable and are particularly suitable for local smaller scale schemes. In general, we support smaller scale renewable energy generation rather than major centralised facilities – though scale will be determined by technology, the availability of feedstock and the size of the local demand for power/heat.

Technologies which provide intermittently available electricity should play a less significant role in Gloucestershire because economies of scale may be required to make them commercially viable:

- i) Wind power. Though the Government on 3rd March 2020 reversed its position and gave strong support for on-shore wind power generation, we believe that there is limited scope for wind turbines both large and small in Gloucestershire without unacceptable adverse effects on the landscape and wildlife. Government policy will therefore have to be very selectively applied. We will discourage local planning authorities/communities from basing their renewable energy strategies on wind power. Any proposals would need to be judged on their individual merits and be subject to clear assessment of their visual effects.
- ii) Solar. In contrast to wind power, we consider there is greater potential for solar power in carefully selected locations. However many of these locations have been exploited so great care will be needed to avoid panels which are reflective or visually intrusive, and are visually damaging in the landscape, particularly when viewed close-to or from higher ground as well as diverting valuable farm land from agricultural production. For these reasons most acceptable installations will now be small and highly localised - many roof-mounted and permitted development. For these installations there are a number of different panel designs and not all are suitable for prominent positions. We will lobby for inclusion in plan policies of a requirement to choose the best design for the particular situation.

Visually, it is more satisfactory to incorporate solar thermal and photo voltaic systems as an integral component of new development and this should be encouraged and good practice promoted. CPRE has produced two 'good practice' guides: detailed good practice guidance aimed primarily at designers, manufacturers and installers of PV systems; and a short guide, in the form of 10 design tips, primarily aimed at homeowners. Both guides can be viewed and downloaded from the CPRE Gloucestershire website.

<https://www.cpreglos.org.uk/about-us/resources/guides/>

We will encourage Gloucestershire's local authorities to make use of Article 4 Directions to bring roof-mounted solar panels under planning control where solar panels would be particularly detrimental to the character of the area.

We will consider proposals for solar arrays on a case by case basis. Solar arrays can be difficult to accommodate satisfactorily in the rural landscape and potentially take farmland out of production. In assessing proposals we will consider issues such as scale, visual impact individually and cumulatively, land quality and restoration of the site at the end of the life of the project.

It is also possible that improvements in the technology will render battery storage economically viable and large scale installations could become a part of solar panel (and wind turbine) proposals. We will seek to ensure that such installations are sited so as to be well screened from public view.

- iii) Tidal power. The Severn Estuary has long been identified as a potential source of tidal power. Currently proposals for a tidal power project are not being progressed because of the cost and unfavourable economics. However, it is possible that it will become apparent that the government's legal commitment to achieving net zero greenhouse gas emissions by 2050 cannot be met without recourse to less economically attractive large schemes such as in the

Severn Estuary. Should this happen we will be opposed to a full Severn Barrage because of the clear unacceptable impact it would have on the whole of the river. However, the construction of a series of tidal lagoons (the first such project in Swansea Bay has development consent) and other, larger scale projects off Cardiff, Newport and in Bridgwater Bay have been mooted. The Government review of the economics of tidal lagoon power (the Hendry Review) in January 2017 recommended proceeding with the Swansea Bay project as a pathfinder project. This is currently stalled. We will monitor the situation but would be opposed to schemes which individually or cumulatively would do irreversible and significant damage to the environment and unique ecology of the River Severn. If the Swansea Bay lagoon goes forward environmental impacts should be fully assessed over a number of years before further projects are proceeded with.

Landscape and renewable energy

The landscape in Gloucestershire is fine-grained. Its ability to absorb any sort of development including renewable energy can only be judged on a very localised basis. We are therefore opposed to the idea of local authorities designating suitable areas for renewable energy and instead will seek to persuade them to develop criteria based policies including localised landscape character assessment rather than attempt to identify particular areas as suitable for renewable energy.

In June 2015 the Government advised local authorities that planning permission for wind turbines should only be granted if the site is in an area identified as suitable for wind energy as part of a Local Plan or Neighbourhood Plan and the project addresses planning impacts identified by affected local communities and therefore has their backing. This guidance still stands but could be used to push for the identification of suitable areas – we will oppose any proposal which has not fully taken into account the impact on the wider landscape.

For all proposals, special care is needed in AONBs and within their setting. The NPPF, paragraph 116, says that planning permission should be refused for major developments in these designated areas, except in exceptional circumstances and where it can be demonstrated they are in the national interest.

Transmission

The visual impact of major transmission lines is among the most damaging aspects of the electricity industry. We will seek to ensure that any proposals for transmission lines through Gloucestershire can demonstrate that:

- the route is the best alternative. We will oppose any routes through the Cotswolds or Forest of Dean
- routes are aligned to minimise visual impact
- the recent new electricity pylon designs are considered
- upgrading existing routes should be the first option
- where the visual impact would affect a wide area and/or particularly valued landscape, that the alternative of undergrounding has been properly evaluated giving due weight to environmental damage.

For minor transmission lines we will expect electricity distribution companies to have fully used the allowance they have for undergrounding and do so in sensitive areas. We will lobby for them to look favourably on undergrounding existing lines.

Unconventional Fossil Fuels

In August 2015 the Government awarded licences for unconventional oil and gas exploration in 27 areas. A further 132 areas could also be awarded licences subject to satisfactory environmental assessment. The main objective of exploration is to test the potential to supply gas from shale, which would be extracted through fracking, for coal bed methane extraction, and for underground coal gasification (UCG). Four of these areas lie wholly or principally within the Forest of Dean for the capture of methane from abandoned coal seams and these have been deemed not to be viable by the licencees. At present no potential areas for fracking have been identified in Gloucestershire. It is therefore very unlikely that proposals will be coming forward in the foreseeable future for the exploitation of unconventional fossil fuels.

In any event, on 26th August 2019 the government suspended operations at the only developed fracking site in the UK because of persistent local earth tremors. On 2nd November 2019 the Oil and Gas Authority study into the causes was published; it concluded that it was not possible with current technology to accurately predict the probability of tremors. In the light of this report the government announced a moratorium on any further fracking until compelling new evidence is provided. The Government also withdrew proposals to change planning regulations to allow fracking proposals to be fast tracked.

This is consistent with national CPRE policy which sought a moratorium on approval of further fracking planning applications. However CPRE takes a rather broader approach on the issues which needs to be addressed viz: it must be demonstrated that the technology will contribute positively to meeting climate change targets, not lead to cumulative harm to special landscapes and can be properly controlled by regulation and planning processes.

CPRE Gloucestershire is a party to the national policy. However, should government lift the moratorium on fracking and in the unlikely event that a planning application came forward our primary aim would be to ensure that the location, design and operation of shale gas and other unconventional fossil fuel sites, and the applied methods of extraction, do not harm the present beauty, ecology, and tranquillity of the countryside, prevent promotion of its enhancement, or prove harmful to the health and well-being of both residents and visitors; and that all directly or indirectly associated sites and their surroundings are fully restored when production ceases. We would also be concerned to ensure that the natural resources of the countryside, especially water, are not polluted or used unsustainably. We will oppose any development proposals which fail to meet these conditions.

Gas or other pipelines

The experience of the Wormington to Sapperton gas pipeline is that with good planning and management there need be no lasting impact on the landscape. National Grid Gas was congratulated for the high standards they applied on this project and we will use this as the benchmark for any future projects. An issue is the location of compression or decompression

stations and similar installations. These are few but involve large plant which needs to be sensitively sited and screened.

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CPRE Gloucestershire Position Statements are regularly reviewed and updated as necessary. They should be read as a set.