Green energy is the future, according to new report

July 12 2018

Credit: AI-generated image (disclaimer)

The UK should seize a 'golden opportunity' to move away from fossil fuels, towards cheaper, greener energy sources, according to a new report, published by the National Infrastructure Commission.

The National Infrastructure Assessment (NIA) is the first long term view

of the UK's infrastructure needs, and is underpinned by analysis produced by a consortium of the UK's leading universities, including Oxford University, who led on the work.

The report calls for a more joined up view of infrastructure, with significant investments to tackle road congestion, deal with water shortages and provide secure low-carbon energy supplies. It proposes ways of promoting greater innovation, for example through the roll-out of 5G mobile services and the uptake of autonomous vehicles.

The move to renewables has long been framed to be an expensive one, however, the report highlights renewable energy as being a "golden opportunity" to make the UK greener and make energy in general more affordable.

The academic research that informed the report's development includes advanced modelling and analysis which scenarios of the future. This adopted methodology has been proposed by the UK Infrastructure Transitions Research Consortium, a consortium of seven of the UK's leading universities, led from the University of Oxford. The ITRC has developed the UK's first National Infrastructure Model (NISMOD) which was used by the National Infrastructure Commission to conduct the National Infrastructure Assessment.

NISMOD was used to model the changing demand for infrastructure services, including energy and water. The NIC used NISMOD to explore options for provision of secure water supplies in the face of growing water use and uncertain climatic changes. The NISMOD analysis demonstrated that secure water supplies can be provided in future, but doing so requires action to reduce leakage and manage water demand, as well as investment in strategic water supply infrastructure, including pipes and canals to transfer water around the country.

Prof Jim Hall, who leads the UK Infrastructure Transitions Research Consortium and is Director, Environmental Change Institute at Oxford University, said: 'We are very pleased to see the models that we have developed being taken up by the National Infrastructure Commission to conduct the National Infrastructure Assessment. NISMOD has taken us several years to develop, but it now provides a unique capability to simulate Britain's national infrastructure in the future and to inform the difficult choices that the National Infrastructure Commission is having to make.'

The report calls on government ministers to set out a low-carbon route for the economy after previous reports from the Committee on Climate Change warned that it is set to miss its climate targets, despite multi-billion pound efforts to clean up the power sector.

It also cautions that low-cost renewables will only be possible if the right decisions are taken now by government, such as continuing to invest in wind and solar resources, ramping up efforts to improve the energy efficiency of the U.K.'s buildings and enabling a rapid switch to electric vehicles.

Provided by University of Oxford