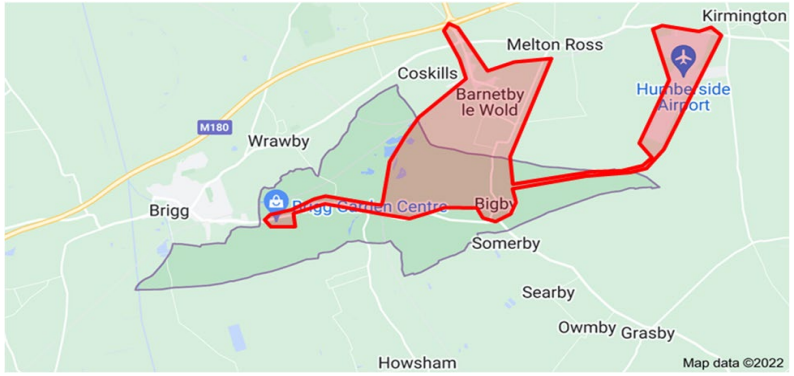
Bigby Renewable Energy Strategic Vision

RCEF Stage: 1



The Story

Bigby Parish is in the West Lindsey district of Lincolnshire, lies on the Viking Way, about 10 miles south of the Humber Bridge, and 4 miles (6 km) east of the town of Brigg. The village lies in the Lincolnshire Wolds, a designated Area of Outstanding Natural Beauty. Parish members began a discussion about developing a 'Sustainable Village' during the Covid-19 lockdown. A supportive local farmer has up to 54 hectares of ex-gravel pit land available, and following a community survey of opinion, the Parish Council appointed Arup as consultants. The specification asked for a project that covered power generation and commercial possibilities. It was a successful partnership that produced a detailed 'prospectus' of strategic options for power generation and sustainable business development looking forward to 2039. It feeds into national and international strategies for the environment, and sustainable development, as well as the 'levelling up agenda' of the current UK Government. A critical factor for success was the willingness of the Parish Council, Landowner and Arup staff to think creatively and their preparedness to welcome new insights and options.

Challenges & Risks

The initial idea was a solar farm for the village. This would require about 4 hectares of land BUT no substation or grid connection was available. Once 54 hectares became a possibility on grade 3b land it opened up various options for power generation and potential usage in situ. The best solution would be a Grid connection to enable rural supplies to be fed to national use to sustain a long-term business case. There could be up to 25000 homes supplied with green energy from the development.

Lessons Learned

Need to engage in local dialogues, commit time to researching all areas of thinking on the internet and make contact with significant others as local and regional stakeholders. All sustainable development requires partnership dialogues.

Key Facts

Power Generation	Solar, Geothermal, Onshore Wind, Anaerobic, Ground Source Heat, Water Source Heat, Hydrogen
Storage	Battery Methane Hydrogen Production
Utilisation	Local private wire, export of hydrogen and methane, via grid.

Key Figures

Project size: Multiple energy sources	54 hectares of Grade 3b land (Ex-gravel workings)
Energy Generation	Up to 50 MWh from solar
Private finance leveraged	None to date
CO2 savings	In excess of 140,000 tonnes Co2 long term.
RCEF grant	Stage 1 £39,000

Further Notes

LEP area: Greater Lincolnshire

Link
https://bigby.parish.lincolnshire.gov.uk/