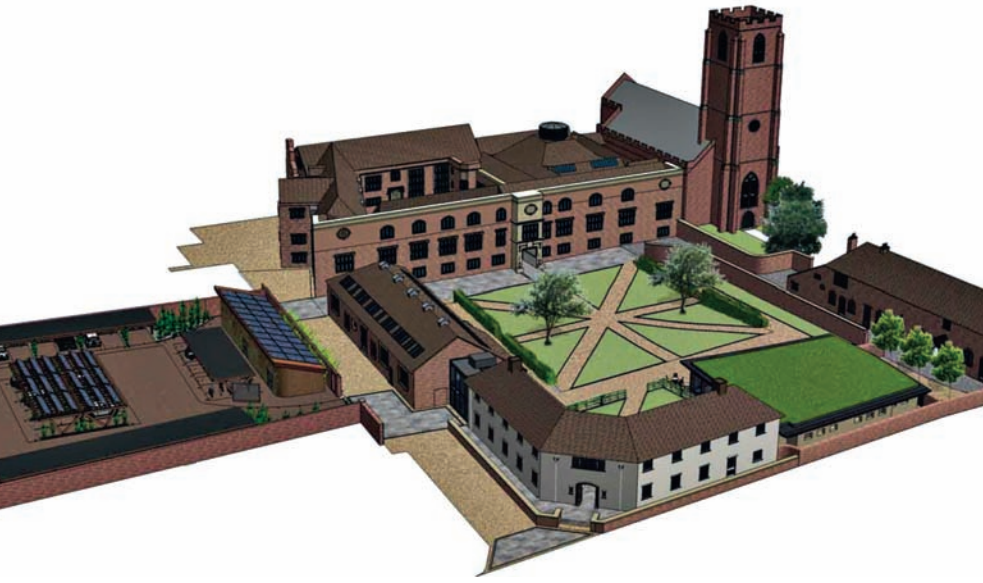
50 SOLUTIONS
FOR THE CLIMATE

LOW-CARBON ELECTRICITY
AND RENEWABLE ENERGY

Geosolar heat pump for a forward-looking campus

EDF Energy has chosen to install its 21st century training campus in a 12th century convent in Cannington, southwest England. Fully refurbished in 2015, it has 50 bedrooms, a restaurant and social centre, and classrooms where engineers and technicians will be trained to become experts in tomorrow's low-carbon energy solutions against climate change. By definition, a centre like this had to achieve an exemplary environmental performance – and it does.



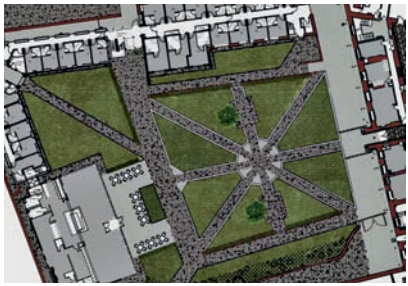
The innovative solution adopted by EDF Energy is based on a **high-efficiency geosolar heat pump.** For every kilowatt-hour it consumes, the pump puts out between 4 and 5 kWh of heat. The combination of geothermal and solar energy meant shallower bores could be drilled to harvest heat from the ground, but above all it **halves the installation's CO_2 emissions** compared with a conventional gas installation. Additionally, the geosolar heat pump is coupled to photovoltaic solar panels that also generate low-carbon electricity, which is partly used to supply the campus's electric vehicle charge points. In all, **100% of the campus's heating and cooling needs** are met by renewable energy produced on site.

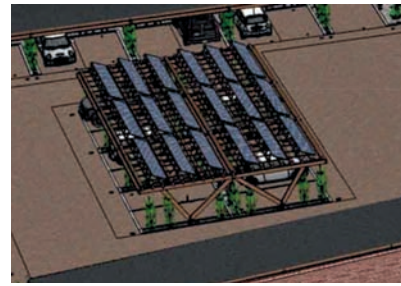
ADVANTAGES FOR THE ENVIRONMENT

100% of heating and cooling needs met by renewable energy

50% reduction in CO_2 emissions compared with a gas installation

INTERESTING FACTS





AN OPEN CENTRE

Cannington Court will include a visitor centre so EDF Energy can share information about the history, restoration and the innovative new technologies used in the centre to other businesses and the local community.

WORKS SCHEDULE

- May-June 2013: approval of the Energy Centre's design.
- July 2013: drilling work.
- November 2013: installation of the skid-mounted heat pump.
- January 2015: bores and heat pump commissioned.
- March 2015: installation of thermal and photovoltaic solar energy.
- Summer 2015: centre open and fully operational.

See all our solutions on:
edf.fr/en/cop21

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