

CASE STUDY: ENVIOPARKS – ENERGY PARK

AN ENVIRONMENTAL SUSTAINABILITY KTN

Envioparks announces plans to build pioneering energy from waste facility

Envioparks are proud to announce that planning was resolved to be granted in March 2010 for a major £120m waste to energy park on the Heads of the Valleys. This new facility brings a pioneering mix of the world's most advanced, tried and tested energy-from-waste technologies to put Wales at the forefront of environmental technology to create energy and jobs from waste and is a welcome economic boost for the country. The **Environmental Sustainability KTN (ESKTN)** has worked closely with Envioparks and is proud to be associated with this success.



The need

With landfill sites putting up “landfull” signs, local authorities are today paying increasing amounts of landfill tax and facing the strategic challenge as to how to find sustainable solutions for their waste disposal.

There are a variety of advanced technology solutions establishing themselves in the marketplace that not only virtually eliminate the need for landfill but also provide a number of valuable energy sources; power, heat and biofuels, that combine to reduce our dependency on fossil fuels.

In Wales the lack of availability of landfill is placing large strains on the country's waste management infrastructure. It is the Welsh Assembly Government's strategic goal to treat its own waste and maximise the value of this valuable resource

The results

Envioparks spent three years scouring the globe for the best available technologies to produce the most efficient solution for materials recovery and to develop the most modern energy-from-waste facility and today are proud to announce their future plans for the development of their 20 acre facility at Tower Colliery on the Heads of the Valleys in South Wales. Construction will commence mid-2011, with completion set for early 2013, when it is expected to draw £120m into the region as well as creating 200 jobs.

The Valleys is no stranger to innovation, it was here that Trevithick pioneered the world's first steam locomotive. When completed, this innovative integrated energy park will be one of the most advanced recycling operations in the UK. It will include Materials Recycling, a sophisticated Fuel Preparation Area, Advanced Anaerobic Digestion and Advanced Thermal Treatment that combine to produce the maximum energy with minimum residual waste, and minimal environmental impact.

The facility has been designed to the highest environmental standards (BREEAM), with cedar-clad low level buildings, green roofing and landscaping that is sympathetic to the local community. The park's on-site educational resource will inform visitors and enable local schools to learn more about green energy issues. Envioparks is also investing in a fund to improve energy efficiency in the area through insulation and double glazing of local homes and to enhance biodiversity in the natural environment.

Director David Williams who grew up in the region said: *“By integrating the best available technologies we are able to extract value and create maximum energy with minimum waste and environmental impact. Seeing this come to fruition is an exciting time for us, and a defining moment in the evolution of energy from waste.”*

The **Environmental Sustainability KTN** has supported this development over the last 3 years by providing advice and support on technology options, as well as brokering high level introductions to prospective partners and identifying energy-intensive businesses that can co-locate with this facility to utilise both the available heat and power, saving up to 20% on their energy bills.

The Market

The landfill escalator tax is creating the opportunity to build facilities to produce energy-from-waste as the gate fee now makes these increasingly more attractive.

New advanced thermal treatments are now emerging that provide improved opportunities to generate heat and power, whilst reducing our reliance on fossil fuels. Many new technology options are now becoming available and it is clear that no single technology provides all of the answers to extracting the maximum energy value from waste.

Today's latest facilities take a more technology-agnostic approach and use a combination of technologies to provide the best solution for individual waste streams.

Such technology combinations deliver several outputs that include high quality recycled materials, heat for businesses and local communities as well as energy for local use and feeding into the National grid.



“Envioparks will be a key player in the future direction of the UK waste industry.

The support of the Environmental Sustainability KTN’s Knowledge Transfer Manager, Adrian Whyte, has been invaluable in getting Envioparks to this stage.

Adrian and his colleagues’ belief in us, combined with their knowledge and enthusiasm, is greatly appreciated.”

Andrew Williams
Director, Envioparks

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The Environmental Sustainability KTN

The Environmental Sustainability Knowledge Transfer Network is accelerating the UK’s transition to a low carbon, resource and energy efficient economy by connecting businesses, universities, other research organisations and government agencies, and catalysing innovation across a wide range of environmental technologies.

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