Vale Clydach Advanced Energy Project

Investing in low carbon technology and safeguarding local jobs

Everything you need to know about the proposal...

Vale Europe Ltd is planning to construct an Advanced Energy Plant at their existing site at the Clydach Nickel Refinery which will produce energy (electricity and heat) for use within the existing processes.

Vale Clydach Nickel Refinery makes essential products that form the backbone of the global drive for smarter, cleaner, low carbon technology. But our operations are energy intensive, and as we all know energy from traditional sources is becoming increasingly expensive due to increased demand and decreased availability. Added to which we have legal obligations to reduce our carbon emissions under the Climate Change Agreement.

The proposed development is aimed at reducing Vale’s on site carbon footprint by 25% and at the same time improving the global competitiveness of our operations.
What is proposed?

The proposal to construct an Advanced Energy Plant at Clydach is part of Vale’s wider commitment to reduce emissions and energy costs, and improve competitiveness. This is one of the best ways of safeguarding local jobs.

The advanced energy plant is a new generation of clean technology which can be installed inside existing buildings on the Clydach site. After a thorough review of potential technology options, we have selected Advanced Pyrolysis Technology as our preferred option.

We are preparing a detailed planning application and environmental impact assessment which will be submitted to the local planning authority.

How does it work?

Pyrolysis is the thermochemical decomposition of carbon-based material at elevated temperatures, typically above 850ºC, in the absence of oxygen.

It can be used to produce a synthesis gas (“syngas”) that is similar to natural gas. The process also creates a solid residue rich in carbon (“char”) which can be used as a carbon fuel in other local manufacturing industries.

We will be using a fuel that is rich in “biogenic” carbon (otherwise known as ‘renewable’), called “Refuse Derived Fuel” (RDF). It is made up of small scraps of material following sorting and separation of waste material that is uneconomical to recycle. This material would otherwise be sent to landfill where it would sit for hundreds of years, slowly releasing methane (a potent greenhouse gas).
Why do we need it?

The cost of energy has increased rapidly and prices remain volatile. Vale needs to find alternatives in order to secure the long-term sustainability of the refinery.

By using renewable fuels, investing in clean technology and increasing our energy efficiency, we will considerably reduce our impact on the environment.

The Advanced Energy Project not only enables the Clydach refinery to reduce its on site carbon footprint by 25%, it will also provide regional and national carbon savings associated with the diversion of material from landfill, avoiding even more carbon emissions.

Vale’s objectives to reduce their carbon emissions, and ensure greater sustainability of their operations, underpins the objectives of the Welsh Government who seek to move Wales towards a low carbon energy based economy.

In total, up to 10.3MW of electrical power will be generated. 6.5MW will be used on site to run existing processes and 3.8MW will be available for export to the National Grid which is enough power to provide electricity to 6,740 homes (i.e. a town approximately twice the size of Clydach).
The planning application and next steps to be taken

Vale has been engaged in an extensive Environmental Impact Assessment (EIA), together with a detailed and stringent planning approval process and detailed discussions with regulators and statutory consultees.

The planning application will be submitted shortly; however as part of this process we are holding local exhibitions on 20/21 January 2012 at the Community Centre Clydach to talk to local residents, groups and the workforce about our proposals.

Friday 20 January 2012 from 10am to 7pm
Saturday 21 January 2012 from 10am to 4pm

The EIA assesses the possible impacts and benefits of the proposed project on the local area. The EIA has confirmed that there are no detrimental effects on ground conditions, air quality, noise levels, human health, the landscape and transport levels.

Photomontages have been produced which indicate that the discharge stack at 41m is in keeping with the scale of the existing industrial development stack.

We’d like to hear your views.
You can find out more about the project on our website. Please fill out one of the feedback forms, or contact us using one of the options below if you wish to submit any comments regarding our proposal.

All of the feedback received and the results of the environmental impact assessment will be used to inform the final planning application, which will then be considered by Swansea Council. Once planning permission is granted, we expect the first stage of the new energy efficient facility to be operational within 15 months, and for it to be fully functional by 2015.

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