

COILLTE AND GLAXOSMITHKLINE TARGET 'ZERO CARBON' WITH BIOMASS ENERGY

Coillte are supporting Glaxosmithkline's (GSK) global sustainability strategy which sets several key 2020 milestones to have 25% of their carbon footprint eliminated; five manufacturing facilities completely carbon neutral and 10% of all energy generated sourced from renewables.



GSK is a science-led global healthcare company that develops a range of medicines, vaccines and consumer healthcare products. Their global ambition is to become carbon neutral across the entire value chain by 2050 from sourcing raw materials to manufacturing, product use and eventual product disposal.

This global ambition starts here in Ireland with the conversion of GSK's manufacturing facility in Dungarvan to carbon neutral biomass energy. The site is home to two manufacturing operations and produces a range of brands in the oral care (OC) and over the counter (OTC) medicine sectors which are exported to more than 70 global markets. With half of GSK's Irish workforce of 1,450 people employed in Dungarvan; the site produces the equivalent of 8

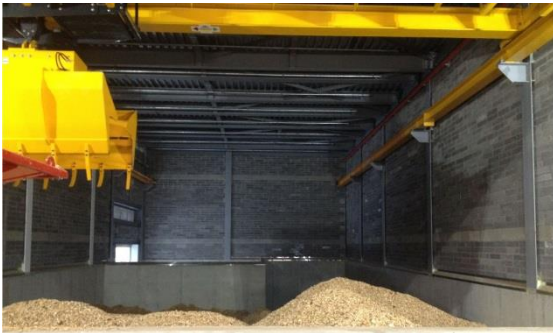
billion tablets and 100million tubes per annum. With a focus on energy efficiency, the biomass boiler enables the Dungarvan site to use locally sourced Coillte biomass to produce steam to serve the production facilities reducing CO² emissions and overall plant energy costs.



Planning was granted for the construction of a 12m high two storey plant room and fuel store located between the OC and OTC facilities. The 800m² ground floor of the plant room is split into 3 zones, the boiler and control room, the main fuel store and a 4m deep delivery pit. A smaller mezzanine area allows access to the boiler and in-feed hopper and provides a service area for the overhead crane.



The crane is used to transfer fuel from the delivery pit to the main fuel store and then into the hopper that discharges fuel into the boiler. The crane operates on a grid pattern and is controlled automatically as the boiler calls for fuel. The boiler is a 4MW installation supplied by Weiss. GSK acknowledged early in the project that securing a long term, secure fuel supply contract was paramount to support a project investment of this scale. Recognising this, they turned to Coillte for a sustainable solution underpinned by our extensive local wood fibre resource base. Contracting with the largest professional forestry company in Ireland gave GSK the security of supply required to finance and advance the project.



Coillte supply the plant from its local biomass fuel processing hub in Clonroche, Co. Wexford which stocks in excess of 15,000m³ of logs for processing into biomass energy. The hub comprises of a large secure log storage yard and fuel storage sheds. Logs are sourced and delivered on a pre-planned basis from both private and local Coillte forestry resources several months in advance. The logs are systematically stacked for open air drying down to the target moisture content.

All wood chip will be produced strictly in accordance with quality specifications set out in I.S. CEN/TS 14961 : 2005. Biomass samples are taken in aluminium sampling trays for testing by the oven dry method and using calibrated moisture testing devices. Particle size is controlled during the chipping process by the provision of the correct size screens on the chipper feed. Regular testing is undertaken to assess the % of fines are in compliance with our clients requirements. The client is invoiced on a delivered energy basis. The contract terms, while confidential, do incorporate a number of unique features in relation to fixed term pricing, price reviews and indexation which provide further reassurance and price stability to our client. Integral. An integral part of the contract was to remove the volatility normally associated with fossil fuel pricing and provide inherent long term biomass price predictability for the benefit of our client.



For GSK, investing in a biomass plant of this scale supports their global carbon reduction objectives and a long term commitment to the Dungarvan site

and the local employment it underpins. With Coillte as an exemplar energy supply partner for this project, GSK are further committed to protecting resources and safeguarding the environment and this project is a significant step on their journey towards a zero carbon value chain.

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