Biomass plants face wood supply risks

Report warns giant new biomass power plants will be hugely reliant on wood chip imports

James Murray, BusinessGreen 18 Nov 2009

The rapid expansion of the UK's biomass energy sector could be undermined unless businesses move to resolve the supply chain issues that could leave them struggling to find the wood supplies necessary to keep plants running.

That is the stark warning contained in a report from analyst Verdantix, which predicts the expansion of large-scale biomass plants will leave generators largely reliant on biomass from overseas such as wood chips, elephant grass, palm kernels and olive pellets.

"The demand will soar over the next few years as projects from Drax and MGT Power come on line," said report author James Pinney. "Their biomass plants will be using in the region of one and a half to two million tonnes of material a year and finding that capacity in the UK will be a challenge."

According to separate figures from the Forestry Commission, timber imports are expected to rise 150 per cent from 20 million tonnes now to 50 million tonnes by 2015.

Both Drax and MGT Power, as well as a number of other biomass specialists, have signalled that they will make up any shortfall in feedstocks by importing wood chips from sustainable forests in the Americas, Scandinavia and Russia.

However, Pinney warned that any supply deals will have to be well structured to ensure reliable and cost-effective supplies, particularly given demand for wood from sustainable forests is likely to increase as more countries increase their use of biomass power plants. "Uncertainties surround the reliability and cost of importing biomass from countries such as Canada, Malaysia, Russia and Sweden," he added.

The report also highlighted that the increased demand for biomass fuel could create opportunities for a number of firms, including biomass importers, forestry companies, dedicated logistics companies, and processing firms such as Biojoule, Land Energy and Silvigen which specialise in turning raw materials into more efficient biomass pellets.

Pinney said that the potential challenge of importing biomass could also raise the prospect of a different approach to the development of biomass plants, built around smaller facilities with a capacity of between 5MW and 10MW that can rely on raw materials provided from the local area.
"The problem with using UK biomass is that if you have to transport it more than 60 miles, the logistics costs mean the economics don't work," he said. "But if you develop a network of smaller biomass plants, they could access enough raw material from their local area."

Some green groups have also questioned the environmental credibility of importing biomass after an Environment Agency study concluded that the carbon emissions associated with shipping the timber could halve the potential carbon dioxide savings from biomass power plants.

However, Pinney said that as long as the biomass was sourced from sustainable managed forests, it would still deliver significant emission reductions. "The sustainability credentials are affected by shipping, but we have to keep this in perspective," he said. "Whichever way you look at it, it is going to be a lot cleaner than coal."

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