

## **ARTICLES OF INTEREST**

## **RWE commissions world's largest green wood pellet factory in the US state of Georgia**

- Use of pellets in RWE coal-fired power plants in Europe
- 1 million tons of CO<sub>2</sub> savings per year through coal replacement by biomass
- Production in line with highest international sustainability standards
- Value chain from procurement to power generation secured
- Total investment volume of € 120 million

*Essen/Waycross, 13. May 2011*

RWE Innogy commissioned the world's largest plant for the production of pellets from green wood in the US state of Georgia. The wood pellets produced in this plant will be shipped from Georgia to Europe as of this summer. They will be used in existing hard coal-fired power plants of RWE for the generation of electricity and heat. By replacing fossil fuels with biomass, RWE will save around 1 million tons of CO<sub>2</sub> per year. The annual production capacity of the plant in Georgia totals 750,000 tons of wood pellets. With the commissioning of the pellet plant, RWE is implementing its integrated biomass strategy across all stages of the value chain from procurement and production of the primary feedstock through to the generation of energy.

"The wood pelleting plant built in Georgia is currently the biggest of its kind in the world. We are thus developing our own raw material resources and we become more independent of the world market. With the use of wood pellets in our European power plants, we are raising the share of biomass in electricity generation significantly. This makes us leading in Europe in co-firing biomass in conventional power plants", points out Dr Leonhard Birnbaum, Chief Commercial Officer of RWE AG.

The wood pellets which are produced in Georgia and shipped to Europe are primarily destined for use in the hard coal-fired power plants of RWE in Amer in the Netherlands, where up to 30% of biomass are already co-fired today. This share is to be increased to 50% (Amer 8) over the next few years and to 80% (Amer 9) in the long term. RWE is currently planning the conversion of its coal-fired power plant in Tilbury, UK, to a dedicated biomass-fired power plant. This project will make Tilbury the biggest biomass-fired power plant in the world, until its scheduled closure by 2015 at the latest, with an expected capacity of around 750 MW. The plant would expect to

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use around 2 million tons during the remainder of its life. Around 50% of this could come from Georgia. The conversion is expected to be complete before the end of 2011.

The demand for biomass has been growing at a fast pace in Europe. In order to fulfil the overall European renewable target of 20% of final energy consumption by 2020, biomass plays an important role within the national action plans of the EU member states.

"However, it is already clear today that the feedstock requirements cannot by far be met from the resources available in Europe. In the US, and mainly in the southern states such as Georgia, the situation is quite different. Here, the surplus of sustainable cultivated biomass was around 35% over the last 10 years. Thus, Europe can benefit from these overseas resources to attain its CO<sub>2</sub> reduction targets", says Prof. Fritz Vahrenholt, CEO of RWE Innogy GmbH.

With approx. 10 million hectares, Georgia - after Oregon - is the US state with the largest forest area in the United States. Around 27% of this area is covered by pine plantations. Here, wood reserves have been increasing continually since 1950. Under the influence of the subtropical climate in the south of the US, wood in these regions is growing much more rapidly than in Scandinavia or Russia, for instance. Moreover, the wood market in Georgia has been declining and pulp and paper capacities were cut by 25% over the last 10 to 15 years. Georgia has set up the most stringent sustainability rules for the procurement and processing of wood. As a result, the pellet plant will be operated in line with international sustainability standards (FSC, SFI and Green Gold Label).

Construction of the pellet plant near the city of Waycross in southern Georgia started in March 2010. It was completed after only 12 months and has since been on trial operation. The plant essentially consists of three key elements: In what is called the wood yard, the pine logs arriving on site are barked and coarsely chopped. The material is then transported via conveyor belts from the yard to the dryers where the wood is dehumidified. In the actual pellet plant, the feedstock is further crushed and pressed into pellets. Subsequently, the wood pellets are shipped by train to the port of Savannah which is about 100 miles away from the plant. Thus, around 1.5 million tons of pine wood are processed every year. The total area of the production facility comprises 300 hectares (approx. 400 football pitches). The investment volume for constructing the plant and developing the port in Savannah as required totals about € 120 million.

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Special refining processes, such as the so-called torrefaction (predrying of biomass in a hermetically sealed environment), will enable the feedstock to be used even more efficiently in the future. Together with the Dutch company Topell Energy, RWE Innogy is working on industrial solutions for biomass refining. The first commercial plant for the production of torrefied biocoal pellets is planned to be commissioned in the Dutch town of Duiven before the end of the year. The plant's production capacity will total around 60,000 tons per year. Torrefied biocoal pellets have a much higher energy density and much more uniform combustion properties. That is why they are especially suited for co-firing in coal-fired power plants as, in contrast to conventional biomass, they can be transported and stored together with coal.

*For further information on the pellet factory in Georgia and photos for downloading, please visit our website [www.rweinnogy.com](http://www.rweinnogy.com).*

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