

13 December 2012

## ***A project worth around €350 million***

### **Alstom will provide and service one of the world's most efficient gas-fired combined heat and power plants in Germany**

Alstom has signed a contract<sup>1</sup> with the German utility, RheinEnergie, for the turnkey construction of a 450 MW combined-cycle heat and power plant (CHP) in Cologne, Germany. In addition, Alstom has also signed a 15-year service agreement for the plant. In total, RheinEnergie is investing approximately €350 million into the project.

The new power plant is part of Germany's energy turnaround programme, which includes the building of highly efficient combined heat and power plants. The Niehl 3 CHP power plant will be based on Alstom's gas-fired KA26 combined-cycle plant design. The project includes the delivery of one GT26 gas turbine, one steam turbine, the turbo-generator, heat recovery steam generator and district heaters as well as power plant control systems. Commissioning of the power plant is scheduled for 2016.

The plant will reach an overall efficiency of close to 85%, making it one of the most effective in the world. Niehl 3 will provide electricity to the local and European grids. The plant has the potential to supply up to one million households with energy. By providing up to 265 MW thermal heats, enough to heat 50,000 homes, the plant will reinforce the district heating networks of Cologne. In addition Niehl 3 will save about 500,000 tons of CO<sub>2</sub> per year compared to the average emissions emitted by German heating installations with a similar thermal heat output.

*"This order confirms Alstom's pioneering role as a manufacturer of very reliable power plants which provide operational flexibility for their operators. The KA26 is designed to offer utilities the flexibility to meet power and heat demand at the same time",* said Mark Coxon, Senior Vice President of Alstom's gas business.

*"The Niehl 3 gas and steam power plant is a key element for energy turnaround. State-of-the-art local power plants, ideally ones that generate both electricity and heat from climate-friendly natural gas, will contribute to CO<sub>2</sub> reduction and form the backbone of supply security in Germany for the coming decades. With the Niehl 3 power plant, our*

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<sup>1</sup> The contract will be executed in two phases. The first is effective immediately and covers the preparation and support of RheinEnergie's construction permit planning process. The second phase will be effective after the full notice to proceed, expected in the third or fourth quarter of Alstom's fiscal year 2013/14.

*generation portfolio in the conventional sector will be upgraded on a long-term basis with cutting-edge technology and flexibility”, said Dr Dieter Steinkamp, CEO of RheinEnergie.*

Alstom technology powers close to 10 GW-worth of gas-fired power plants in Germany. Nearly half this capacity has been built as combined heat and power plants including the recently constructed 876 MW Emsland power plant for RWE and the 385 MW Berlin Mitte power plant for Vattenfall which, at the time of initial operation in 1997, was already one of the most modern and efficient CHP plants in the world.

Gas-fired power plants support grid stability with fast start-up times and high efficiencies even at low load. Alstom’s KA26 combined cycle power plant achieves efficiencies of over 60 % and can be started up in less than 30 minutes. Fully synchronised with the grid, the plant can reliably feed 350 MW into the grid from low-load operation in less than 15 minutes. Close to 70 gas-fired power plants based on the KA24/KA26 technology are in operation or under construction worldwide.

#### **About Alstom**

*Alstom is a global leader in the world of power generation, power transmission and rail infrastructure and sets the benchmark for innovative and environmentally friendly technologies. Alstom builds the fastest train and the highest capacity automated metro in the world, provides turnkey integrated power plant solutions and associated services for a wide variety of energy sources, including hydro, nuclear, gas, coal and wind, and it offers a wide range of solutions for power transmission, with a focus on smart grids. The Group employs 92,600 people in around 100 countries. It had sales of €20 billion and booked close to €22 billion in orders in 2011/12. In Germany, Alstom has a workforce of 9,000 people who are working on 23 sites in power generation, energy transmission and rail infrastructure.*

#### **Press contacts**

Emmanuelle Châtelain, Isabelle Tourancheau – Tel +33 1 41 37 38 /39 95

[emmanuelle.chatelain@chq.alstom.com](mailto:emmanuelle.chatelain@chq.alstom.com), [isabelle.tourancheau@chq.alstom.com](mailto:isabelle.tourancheau@chq.alstom.com)

Sapna Lalwani (Alstom Thermal Power) – Tel +41 79 486 3798

[sapna.lalwani@power.alstom.com](mailto:sapna.lalwani@power.alstom.com)

Tanja Kampa (Alstom Deutschland) – Tel: +49 621 329 2070

[tanja.kampa@power.alstom.com](mailto:tanja.kampa@power.alstom.com)

#### **Investor Relations**

Delphine Brault – Tel +33 1 41 49 26 42

[delphine.brault@chq.alstom.com](mailto:delphine.brault@chq.alstom.com)

#### **Website**

[www.alstom.com](http://www.alstom.com)