Ecobuild 2017: the role of Cogenpower for urban regeneration

Cogenpower PLC (CGP.L) is proud to announce its participation at **Ecobuild 2017- London ExCeL - from 7th till 9th of March 2017** to present its Artificial Intelligence Anaconda technology for urban regeneration and the evolution of District Heating and Cooling across 4 generations. You will discover the role of Cogenpower in the transition between the 3rd and the 4th generation of District Heating and Cooling (DHC).

Transforming the energy system towards a Smart Energy System (SES), a system in which electricity, gas, heating, cooling in cities are combined, integrated and coordinated, based on high share of fluctuating renewable sources for heating and cooling demands defined by individual end-users (and not by a centrally-planned authority), and, at the same time, reducing specific building energy consumption as well as supply and return temperatures call for further development of DHC systems.

This development path is characterized by the ability of technology to reach the 4th generation of DH that implicitly calls for *cooling* as well and therefore it is better described in terms of DHC. The concept of DHC has to be seen as an integrated part of future SES, including also electricity and gas grids as well as buildings HVAC systems.

The technology of DHC must still be fully developed: in fact, even though some features of the 4th generation DHC concepts are already applied in existing DHC systems today (i.e. biomass conversion, biomass CHP, centralised district cooling), the general implementation or the period in which a stable and proved best available technology is expected to show up will start from 2020.

Cogenpower listed on AIM at London Stock Exchange under CGP.L, is transitioning from the 3rd generation of DHC system to the 4th generation of DHC in its CHPDHC (combined heat and power district heating and cooling) system in Borgaro, near Turin in Italy. The town has around 12,000 inhabitants and over 4,500 of them are served by our intelligent district heating network – a 6.5 kilometre, heavily insulated underground pipeline.

This site has been the Company's technical centre where it has researched, developed and proved a collection of Artificial Intelligence technologies known collectively as the **Anaconda technology**. The company places great importance on the Anaconda technology developed with the help of our partners at the Universities of Turin, Milan, Nantes and Paris because this Artificial Intelligence system is able simultaneously to produce electricity and heat in an efficient way and distribute it by means of a 3rd generation district heating network. This capability gives Cogenpower PLC (CGP.L) access to a **well-established and growing €30bn market**.

The primary driver for developing further this technology is concern over climate change caused by the burning of fossil fuels. As a result there is a growing demand for alternative, lower carbon energy generation and delivery. In this context, CHPDH systems provide an alternative energy production and delivery method that uses less primary energy, generates lower carbon emissions and is more efficient than popular alternatives based on direct use of electricity or natural gas for heating purposes.

Artificial Intelligence Anaconda technology includes the following key features:

- It is a low-carbon technology that can be scaled up to suit communities of up to 50,000 people or scaled down to as low as 2,000 users
- It is a quick, cheap and reliable way of providing energy security and meeting environmental targets
- It is able to produce as much energy as alternative, less-efficient systems but with a very low CO_2 content
- It can use more than one fuel to operate efficiently - natural gas and/or solid biomass
- It can both significantly reduce consumption of fossil fuels for communities and optimise the substitution of renewable sources without undermining energy security or relying on Government subsidies

Cogenpower PLC (CGP.L) has successfully completed a project of DHC in Borgaro and it has now enough confidence in this development to be able to replicate it to other sites.

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