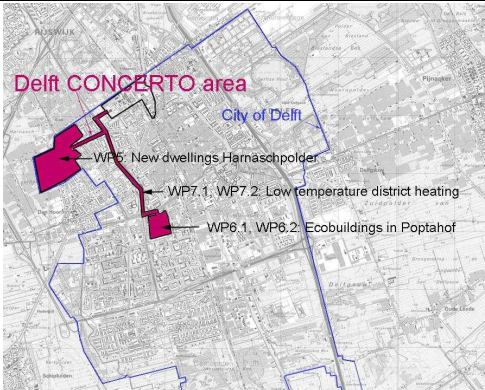



Eneco Delft – the new local district heating company (Delft, The Netherlands)

Keywords	District heating, cogeneration, public private partnership, heat pump, individual metering
Photos	 
Objectives of the action	Realisation of one of the major local climate goals by establishing a new local district heating network
Description of the action	<p>The Delft Climate Plan 2003-2012 included among others a major project: the Delft Industrial Residual Heat. A CO₂ emission reduction was foreseen by building a new district heating system for new and existing (housing) stock. The first idea focused on a municipal heat company producing heat from local industry and sewage plant, transporting this heat into town and selling it to a distribution company. Later on, both the production and distribution systems were integrated, as well as technical and business management.</p> <p>The District Heating Company, Eneco Delft Ltd, is a Public Private Partnership, initiated by the Municipality of Delft. The energy-utility Eneco New Energy is the mother company of the District Heating Company, owing 97 % of the shares. After approximately 5 years, the company will supply heat to the equivalent of about 20,000 homes in Delft.</p> <p>Heat is produced in different locations:</p> <ul style="list-style-type: none"> - North: Residual heat from sewage treatment plant Harnaschpolder. Low temperature residual heat is upgraded by means of a heat pump and small CHP in 2 separated circuits. The heat is used in a new development (about 1,600 home equivalents) at a temperature of 40-70°C. Back-up and peak demand is supplied by gas boilers. - South: A large CHP plant (about 24 MW) will supply heat to new and existing houses, utility buildings and small existing district heating systems in Delft, totalling about 20.000 home equivalents. The electricity that is generated is then fed into the national grid. Peak demand and back-up is provided by gas boilers, in a separate facility at a separate location. <p>Within the next years, the District Heating Company Eneco Delft Ltd will build the production units, the main part of the total distribution grid and connect new buildings and collective boiler systems. Up till 2012 about 2/3 of the total connections will be made. In parallel with this, the District Heating Company Eneco Delft Ltd, will try to integrate the future geothermal heat source that will be built at the Delft University of Technology. In the future, other renewable energy sources (like biomass) can be connected..</p>
Results / achievements	<p>Finally the District Heating Company, Eneco Delft, will achieve a CO₂ emissions reduction of at least 18,500 tons of CO₂ compared to the 2008 reference. The reference is based on individual high efficiency condensing boilers (new housing) and present collective boilers in existing housing.</p> <p>Investment costs sum up to about 120 million euros (production and distribution). On a project basis, the District Heating Company, Eneco Delft, has an IRR (Internal Rate of Interest) of at least 7.4%. Tax measures and a national grant for the residual heat pump station are included.</p>
Friendly advice for replication	In a free energy market, Public Private Partnerships (PPP) represent good opportunities to implement large scale projects on energy production. A PPP should work under normal market conditions, but supported by public partner(s) via other measures. All partners have a specific role in the partnership, related to their own responsibilities and knowhow. The number, but especially the tempo of connecting (existing) buildings is essential for the performance. A city wide collective heating system gives future possibilities for other renewable energy sources and represents a tremendous opportunity for CO ₂ emissions reduction.
Online information	Detailed description (incl. monitoring mechanism and the structure of partnership): http://www.concerto-sesac.eu/IMG/pdf/New_District_Heating_Company_in_Delft.pdf More: www.gemeentedelft.info ; www.warmteindelft.nl
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