

# International visit in Sonderborg

On the 26th of September, Sonderborg's ProjectZero received two international delegations from Belarus and Estonia.

By Brian Egering



Wednesday morning started off with a speech by vice mayor, Aase Nygaard, followed by a presentation of ProjectZero by Peter Rathje. Afterwards, the delegations were taken on a tour, which began at Sonderborg's Production school where the guests were introduced to its CO2-reducing entities. They were then taken to Danfoss headquarters in Nordborg and ended with a quick visit at the Diamond, which is a CO2-neutral sports facility located in Fynshav.

Last week a delegation from Chengde in China arrived in Sonderborg for a tour around the city that also included visiting danfoss headquarters in Nordborg.

The delegation from Tartu in Estonia is, along with Sonderborg and Vitoria-Gasteiz in Spain, a part of a 35 million euro Smartencity project in 2020. The delegation from Belarus showed great interest in joining the Smartencity cooperation.

## Common interest in fourth generation district heating

One of the things the members of the delegations had in common was their big interest in fourth generation district heating. During the introduction at Danfoss director of the heating segment, Jan Eric Thorsen, presented fourth generation district heating. The members of the two delegations had, just like the Chinese delegation the week before, many questions to this topic.

There has been four generations when it comes to district heating. The first was based on steam systems. The second on pressurized super-heated water at temperatures above 100 degrees. The only difference between second and third generation district heating was that where the temperature of the second was above 100 degrees, the third was below.

Fourth generation district heating is a smart heating system, developed in 2010, based on pressurized water at temperatures of 55 degrees (peak 70 degrees). In short, fourth generation district heating provides the same service, but with a lower temperature and at a higher rate of efficiency.

## The future of district heating

Fourth generation district heating is paving the way for the future due to it, not only fitting very well with modern low energy buildings, but also being compatible with older houses. Fourth generation district heating is also compatible with apartment buildings and, apart from reduced heat loss, it also includes bonuses like reduced noise and a one heat meter for all heat consumption. Jan Eric Thorsen notes that even for non-renovated buildings 50 degrees supply temperature is sufficiently high for around 78% of the year. With moderate renovations like new windows, low-temperature supply can be used for around 93% of the time and around 99% with extensive renovations. Several experiments have been conducted and have shown great results, like a mere 14% percent heat loss compared to 41% for a traditional system.

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