

“Windel Willi” – First Plant to win Heat from Diapers

The incineration plant for diapers, named “Windel Willi”, produces heat from 5 000 t waste from care homes of the Foundation Liebenau and from private homes each year since 2006. With this pilot plant a new and unique technology has been developed to win energy from waste of the care sector.

The Liebenau foundation works with 5 800 employees for the well being of 15 000 disabled, elderly and indigent people. The headquarters is in Liebenau near the Bodensee and the foundation has enlarged to locations in 90 cities and communes in Germany, Austria and Switzerland since 1870. Except of social services there are also commercial companies in the foundation offering services for the foundation and for external clients.

The idea of the “Windel Willi” was born because the foundation Liebenau is aimed at sustainability in social, economical and ecological aspects. Another point has been the big amount of waste which is produced in the daily work in care homes and for which the cost intensive way of waste disposal can be avoided. But not only clean energy sources are important, also the saving of energy is essential according to Marco Nauerz, head of the construction division: “Of course we follow the current ordinance on energy savings (EnEV) for all our buildings. And we always try to even be better.”



The new energy station in Liebenau (Source: Ligas)

In the new developed energy station in Liebenau heat and electricity is generated by the new “Windel Willi” (1225 kW_{th}), two woodchip boilers (2269 kW_{th}) and two Stirling engines (2x35 kW_{el}). The energy station feeds heat in the two heating nets of the foundation, which supply all commercial and private buildings in Liebenau and Hegenberg,. In Liebenau the new plant also provides heat for the greenhouses and hot water and steam for the laundry and the canteen kitchen of the constitution for the disabled. The waste heat of the “Windel Willi” is used in a plant for kiln drying of the forest enterprise of the foundation. Because of the different consumers, the generated energy of the “Windel Willi” can be used up to nearly 100 %.

The diapers waste is now delivered from ca. 150 houses of the foundation and from other constitutions of the surrounding regions. Some communities are linked to the disposal logistics as well and offer the pick-up service of diapers to families with babies and to incontinent people.

The SAVE AGE project gives best practices for energy savings and will help the management of care homes to get a view on saving potentials in their situation and to compare their own energy consumption to that of partner institutes.

For more information see (german):

www.ligas-gmbh.de

<http://www.Stiftung-Liebenau.de>