

Site Visit 8

A visit to Spannenburg, one of Europe's largest and most innovative groundwater treatment plants

Vitens

A lot is going on in the Province of Friesland when it comes to smart water technology. Vitens is Netherlands largest supplier of drinking water and serves over 5,4 million customers including the Province of Friesland. Spannenburg is Vitens largest drinking water production facilities (25Mm³/yr) being the main supplier to the northern Province.

Besides being one of the largest groundwater treatment plants of Europa Spannenburg is using some highly innovative technologies on its way becoming a production plant without waste streams.



Methane collection sphere

Resource recovery

Spannenburg is housing two highly innovative technologies that enable resource recovery of methane and humic acids on a unique level. Firstly on annual basis Vitens is extracting over 1.000 tons of methane gas and reuses it partially for energy production. This saves energy with an equivalent of 1.250 average households.

Next to high methane concentration the groundwater originating from peat lands also contains relatively high organic matter.

These humic acids cause a slightly yellowish coloration to the drinking water. Since some years Vitens removes these humic acids with ion exchange. After extensive studies, the ion exchange regenerate appeared to be a very powerful and valuable fertilizer and feed additive instead of an expensive waste stream. Nowadays this concentrated humic acid is being distributed as HumVI for agricultural and animal feed use.



Ion exchange vessels

Smart Grid

The province of Friesland is also a live playing field for the Vitens Smart Water Grid. In the year 2016 the complete province is equipped with innovative sensor technology. Vitens is executing leading international collaborative research in this field funded by the European Union: SmartWater4Europe.

The Program

- 09:00 - 09:45 Travel to Spannenburg by bus
- 10:00 – 11:00 Presentation Smart Water Grids
- 11:00 – 12:00 Tour production site
- 12:00 – 13:00 Travel back to Leeuwarden