

Excursion 1: visit Royal Cosum Dinteloord & OMR Moerdijk Departure – Return Delft: 9.00-16.30



In the morning busses will leave from the Delft conference centre to Dinteloord in the south-west farmlands of the Netherlands to visit the anaerobic biomass digesters of Royal Cosun. This company is an agri-industrial group, consisting of Aviko, Duynie, Sensus, Suiker Unie, SVZ

and Cosun Biobased Products. Royal Cosun was established nearly 120 years ago by Dutch sugar beet growers who united themselves in a Cooperative. Royal Cosun's companies produce food ingredients and products that make their way to the food industry, foodservice sector and retail channels.

Cosun's ambition is to get the most out of its raw materials: this is good for the environment, profitability and meets society's demand for responsible products and production methods. From the biomass waste, they supply products to the animal feed sector and residual products are used to produce biogas, while N, P and K is recovered to bring back to the farmers lands as fertilizer. We will visit the largest biomass digesters of Royal Cosun, in which yearly 100,000 tons of beetroot is converted in 10 million cubic meter of biogas, that is converted to 3,5 million cubic meter of natural gas quality to add to the grid or to be used as fuel. We will get some insights in the developments to get more products from the agri-waste, such as recovery of Fibres, green chemicals like pectins and even Arabinose.

In the afternoon we will continue the excursion at the BEWA group in Moerdijk (OMR), the industrial area next to the famous Rotterdam Harbours. OMR processes food waste to green electricity and heat using a biomass fermentation.

Produced biogas is converted to electricity and heat in their CHPs; the heat produced is reused for heating purposes, both internally (sister companies) and externally (adjacent businesses). We will visit the full treatment line, from the collection and sorting of the green waste from restaurants and supermarkets, to the anaerobic digesters and the adjacent wastewater treatment plant. We will learn more about the internal process water reuse and the full line of fruit and vegetable waste processing.



We expect to leave Moerdijk around 16.00 and if traffic is still cooperating, we will reach back in Delft at 16.30.

Excursion 2: Visit RWZI (Water Treatment Plant) Amsterdam West & PepsiCo Broek op Langedijk

Departure -Return Delft 9.00-16.30

Climate change, growth of the world population, shortage of raw materials and fast-growing cities lead worldwide to the necessity of changing our behaviour towards water, energy and waste materials: use less, and recycle more on a high level quality. A circular approach contributes to a green economy and asks for integrated solutions. To see such integrated solution, we will leave in at 9.00 in the morning by buss from the Delft conference centre to isit the largest Wastewater Treatment Plant of Amsterdam (1 million p.e.). This WWTP delivers its digested sludge and biogas to the largest Waste to Energy plant in the world. More than 1.5 million ton of waste and sludge is incinerated at this plant. In return the sewage treatment plant receives electricity and heat from the waste incineration plant, preventing the emission of 1,800 ton CO₂-eq per year. Another 15,000 ton CO₂ emission is prevented by the yearly distribution of 25,000 MWh elektricity and 75,000 GJ heat to local households.

Furthermore, you will see a struvite reactor in operation and take some fertilizer for your own garden.

After this visit, we will take the bus to go a bit further north, past Amsterdam and the Dutch “waterlinie” to visit one of the production locations of PepsiCo, Broek op Langedijk, where Cheeto’s and Lays crisps are produced. Unfortunately we cannot see the crisp factory, in which a potato is transformed in its crispy counterpart, packed and in a truck to the supermarket within 20 minutes. What we will see is their water treatment installation (UASB and Carrousel) and laboratories.

We expect to leave PepsiCo around 14.30 and if traffic is still cooperating, we will reach back in Delft around 16.00.

Excursion 3 : Amsterdam (09.00 – 18.00 hrs)

Full day excursion Amsterdam by coach and escorted by an English speaking guide (10.00-17.00 hrs) along the highlights a.o. Begijnhof and flower market followed by some free time for lunch in Leidseplein area and a regular boattrip along the world famous canals. On foot to the Van Gogh museum for a closer look at the Vincent van Gogh paintings.

09.00 Transfer by coach from Delft to Amsterdam

10.15 Citywalk Highlights of Amsterdam.

12.15 Free time for lunch at Leidseplein area.

14.15 Blue Boat canal cruise.

15.30 end of canal cruise and on foot to the Van Gogh Museum

15.45 Visit Van Gogh Museum.

17.00 Transfer to Delft.

18.00 Arrival in Delft.



