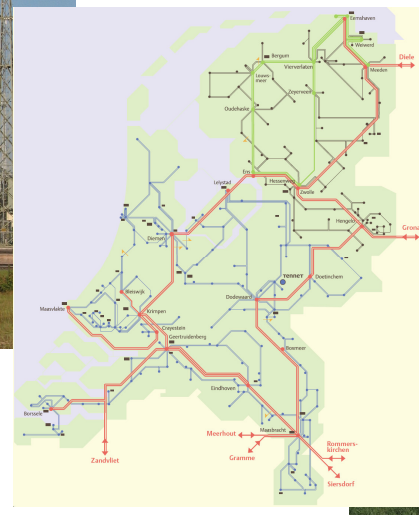

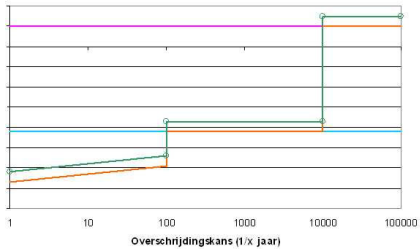

Flood risk assessment construction height of 380kV stations

TenneT manages the national high-voltage transport grid in the Netherlands. It consists of two rings: a smaller ring (220 kV and 380 kV) in the northeast of the country and a larger ring (380 kV) that more or less serves the rest of the Netherlands. Two 380 kV grids branch off from the larger ring: one serving the Randstad region and another serving the province of Zeeland.

The ring-shaped structure of the national grid has one important advantage: in the event of a power failure TenneT can continue to supply power to almost all of the Netherlands by reversing the direction of the electrical current. TenneT is working on extension of the capacity of the high-voltage grid. New lines and stations are constructed.

Svašek Hydraulics has executed several flood risk assessments to determine the construction height of new 380 kV stations. The construction height of new stations must be at such level that a station is able to operate, even when surrounding area is flooded. The consequences of failure of primary dikes, secondary dikes, flooding of a separate polder, and extreme rainfall are taken into consideration. The flood risk of an individual station is considered together with the flood risk of the neighbouring stations. Svašek Hydraulics has investigated the flood risks for stations Lelystad, Wateringen, Borselle, Westerlee, Simonshaven, Breukelen, Bleiswijk and Eemshaven.

Client
TenneT TSO BV

Location
Various locations in The Netherlands

Date
2003 - 2008

Services
Flood risk assessment construction height

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