Gas Shales in the Netherlands - A First Inventory

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The Netherlands is the second largest gas producer in Europe and is producing gas mainly from conventional reservoirs. However, the Dutch government stated that the Netherlands will become a net importer of natural gas by 2025. As this gas province continues to mature and with field size inevitably decreasing, the attention shifted to the assessment of unconventional gas reservoirs in the last years.

A first assessment of possible unconventional gas reservoirs in the Netherlands was made, examining the potential of e.g., shallow gas, tight gas, shale gas, basin centered gas and coal bed methane. From these resources shale gas is the least explored in the Netherlands.

Currently TNO is participating in a European wide research program on gas shales called GASH, aiming to predict shale gas formation and occurrence in time and space. GASH is an interdisciplinary Gas Shale research program executed by a multinational expert task force drawn from research institutions, geological surveys, universities and consultants. It focuses on the potential gas shales of Europe. It also integrates proven US gas shales (e.g. Barnett Shale) for calibration of key variables. Within the context of the GASH program a database for gas shales in Europe, including their occurences and their geochemical attributes, is in development.

The first results of the assessment of shale gas show that the subsurface of the Netherlands contains a significant number of interesting shale layers. The most interesting shale layers are the Lower Carboniferous Shales and the Lower Jurassic Shales. This assessment is based on rock descriptions and already available geochemical data such as vitrinite reflectance, TOC and Rock-Eval analyses.