Your Performance Is Our Business



Nitrogen production and natural gas mixing plant

A technical and social chapter in the Dutch gas infrastructure.



Project scope

Bilfinger Engineering & Consultancy provided multidisciplinary engineering, design and construction support for the realization of an advanced nitrogen plant and mixing facility (Zuidbroek-II). This new plant was then integrated with the existing infrastructure (Zuidbroek-I). The project scope also included system integration, automation including fully remote control and commissioning. AirProducts supplied the nitrogen production installation.

Client: N.V. Nederlandse Gasunie Location: Zuidbroek, the Netherlands Project duration: 2016-2024 Market: Energy Capacity: 180.000 Nm3/h nitrogen (10 billion Nm3 'pseudo Groninger gas' per year) Key feature: Earthquake proof nitrogen plant

Key highlights

- Innovative solution for energy supply and energy transition in the Netherlands. The plant enables imported high-calorific gas to be converted for domestic use, ensuring continued energy supply.
- Located on the edge of an earthquake zone, the plant was built with resilience in mind, adhering to recently developed national design standards providing earthquake proof construction. Its robust structures and advanced integrated control technology ensure safe operations even in challenging conditions.
- The plant provides supply security of lowcalorific gas into the Dutch national gas grid, ensuring warmth and energy during times of scarcity.
- The facility's remote-controlled operations highlight Gasunie's sophisticated technology and expertise, ensuring smooth functionality and reliability.

Services provided:

- Design & Engineering
- Environmental & Safety Consultancy
- Compliance Verification
- Construction & Commissioning Support



Seamless Collaboration

The Zuidbroek-II project highlights the importance of teamwork in achieving complex objectives. Despite challenges, Gasunie and Bilfinger Engineering & Consultancy worked closely to deliver an integrated design and ensure the project met its goals. The partnership was focused on leveraging expertise to navigate technical and logistical complexities, demonstrating a shared commitment to the project's success.

Benefits of this Plant

- The plant enables the production shutdown from Groningen's gas fields by converting imported higher-calorific natural gas to the lower-calorific gas quality produced from these fields until recently.
- Enables increased gas imports from multiple sources and supports the Dutch strategic gas reserves.
- Plays a critical role in reducing reliance on domestic gas extraction.

Sustainability and Efficiency

Gasunie is actively contributing to the energy transition through initiatives such as hydrogen and CO2 transport pipeline networks, showcasing its commitment to a more sustainable future. The Zuidbroek I and II projects play a vital role in securing energy supply during the transition in the years to come.

Added value

Bilfinger Engineering & Consultancy contributed to both Zuidbroek-I and Zuidbroek-II by providing multidisciplinary engineering, design, and project management. This effort enabled a threefold increase in nitrogen production capacity, allowing the facilities to produce 180,000 Nm3 of nitrogen per hour.

"We are proud of our contribution to Zuidbroek-I and Zuidbroek-II. This is proof of successful cooperation and shared commitment to innovative solutions." - Daan van der Hoeven, Bilfinger Engineering & Consultancy

"This project not only supports the security of gas supply, but also strengthens the sustainable energy infrastructure of the Netherlands. Bilfinger Engineering & Consultancy provided a broad range of high-quality services to support Gasunie in achieving this flagship project" - Bert Gaster, N.V. Nederlandse Gasunie

