

INDUSTRIAL STRATEGY CONSULTING

Partners who successfully lead to the set goal

go management go biogas

ABOUT THE COMPANY

COMPREHENSIVE MANAGEMENT OF THE HIGH-BUDGET INVESTMENT PROJECTS



go management

Establishment of go&management was designed for professional creation of complex-investments project management processes.

We act as **advisory body** for the decision-making individuals in overall projects execution at all stages of their progression. Our staff consists of **high-class specialists** in the field of management and technology, holding EMBA and Ph.D. degrees.

Together, we have successfully completed projects with a total value exceeding 1 billion EUR in the refining, petrochemical, chemical and energy industries.



In response to the market needs and legislative changes, we established go&biogas.

At go&biogas, we offer a support in the implementation of the biogas plant investment projects (bioCH₄/bioLNG/bioCNG/ bioH₂) at all stages. In cooperation with trusted technology suppliers, we provide the highest quality services with attention to each detail.

We believe that the key to the investment success is a **precise preparing of the feasibility study** in terms of location, substrates and profitability. Nevertheless, we offer also the possibility of cooperation in the field of **project implementation up to the commissioning and start-up**.

We are a member of many industry associations









OUR EXPERIENCE AND INDUSTRY KNOWLEDGE



Founder and CEO go&management i go&biogas Andreas Golombek



Engineering&Construction expert in the petrochemical, refining and energy industries, effectively supporting decision-making units in the implementation of high-budget investments. In his career, he acted as a member of the management team in international concerns, including LURGI A.G, CIECH S.A., Air Liquide Global E&C Solution

Poland S.A. Currently, Chairman of the Supervisory Board of UNIMOT S.A. Thanks to leadership and negotiation skills, he **effectively leads the client to the set goal.**

Board Member go&biogas Tomasz Bukowski



Energy and gaseous fuels expert with over twenty years of experience. In his career, he held key positions in leading national companies of the energy sector, including Lotos S.A., PGNiG, and to this day he has been conducting business and management consulting activities. Using his deep market knowledge as well as managing and inter-

personal skills, he successfully **creates and implements ambitious business strategies** and sets trends in the development of the energy industry.

Together, we have successfully completed projects with a total value exceeding 1 billion EUR.

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OUR PARTNERS





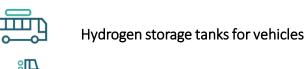


Hexagon Purus is an international group with design offices and production centres in Europe, Asia and North America.



Hexagon Purus provides technical solutions for the storage and logistics of high-pressure hydrogen for land transport (LDVs, HDVs, trains), marine, aircraft, as well as the wide-ranging industry (stationary storage, transport containers, refuelling systems).

Rozwiązania mobilne Compressed hydrogen storage cylinders Liquid hydrogen storage cylinder



Battery systems

| | Infrastruktura | |
|----------------|----------------------|---|
| 00 | Stationary storage | |
| H ₂ | Bundles | |
| | Refueling systems | |
| 0000000 | Distribution systems | 6 |







Thyssenkrupp Uhde is the leading partner in the field of design, construction, commissioning and service of plants and systems for almost all industries with over 40 years of experience. In close cooperation with the client, TKIS provides specifically designed services, setting standards of quality and efficiency, while caring for the environment. The company portfolio includes over 2,500 projects worldwide, especially in the chemical and petrochemical industries.

COMPREHENSIVE RANGE OF SERVICES

- ✓ Operations of industrial plants optimizing
- ✓ Process energy efficiency evaluation / improvement
- ✓ Emission assessment for existing and newly created plants
- ✓ Water consumption analysis
- ✓ Economic analysis
- ✓ Pollution and land reclamation analysis
- ✓ Greenhouse gases emissions analysis



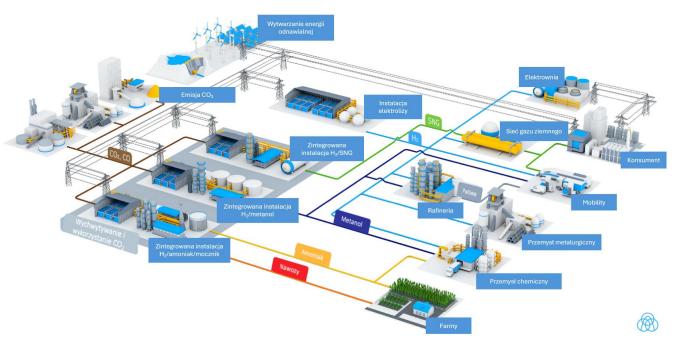


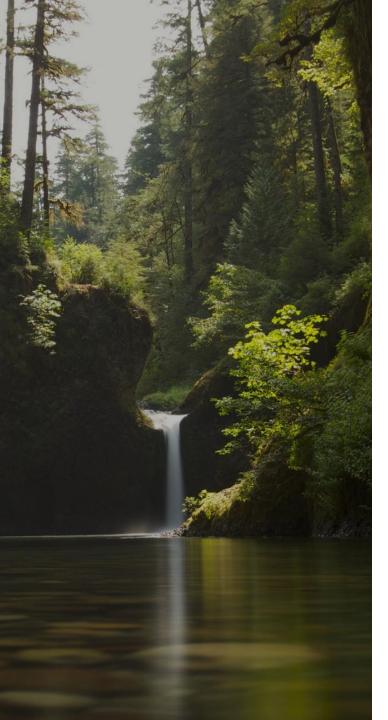


Thyssenkrupp Uhde provides the innovative solutions for the climate protection. The company specializes in converting renewable energy into "green" chemicals, including especially hydrogen, methanol, ammonia and methane.

You can't copy the experience:

- √ #1 supplier of the electrolyzers producing
 hydrogen (48% market share)
- ✓ 600 electrochemical plants worldwide
- ✓ Over 10 GW of the power installed









Kanzler Verfahrenstechnik GmbH (KVT) is an international, process engineering, family-owned company estabilished 1990s in Graz (Austria). KVT offers a full range service from the first concept to a turnkey industry plant. The mission of KVT is to develop, design and implement innovative solutions in order to achieve lasting economic and ecological benefits. The proposed engineering services focus on maximizing economic efficiency within the confines of sustainability, environmental protection and responsible use of resources.

PRODUCTION TECHNOLOGIES

Biogenic glycerin

Epichlorohydryna

Epoxy resins

TREATMENT TECHNOLOGIES

Brine

Waste gases bearing sulfur compounds

Waste gases bearing VOC

Industrial and municipal sewage

Wastes incineration

SYSTEMS

Wet electrostatic precipitators

Platinum catalyst

Hot gas filter







Glaconchemie is a German subsidiary of KVT located in Merseburg. Company's core business is **production of glycerin from technical to pharmaceutical and cosher quality**. Additionally, Glaconchemie is constantly developing innovative **glycerin-derivatives** as an alternative to petrochemicals. The portfolio of Glaconchemie includes a number of plant-based products manufactured with special care for the environment and process economy.

PRODUCTS - "GREEN" GLYCERIN DERIVATIVES

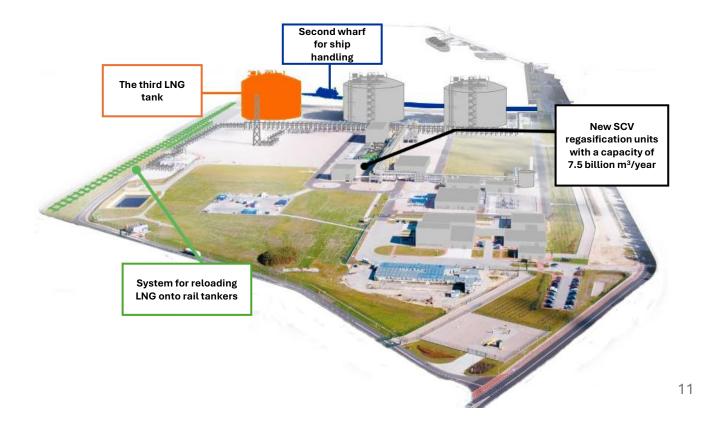
| Various grades glycerin | \longrightarrow | GLYCAMED® | |
|---------------------------------------|-------------------|------------|-----------|
| Antioxidant /Stabiliser for biodiesel | \longrightarrow | GLYCAFUEL® | |
| Solvent/Active compounds carrier | → | GLYCAMAL® | GLYCASOL® |







TGE has experience of **40 years in its field of business** from the initial concept / feasibility study to the turn-key lumpsum execution of complete projects as the main partner for the customers. TGE target is to provide to their customer the knowledge of "milions of m³" executed **liquefied gas storage** and to be added value to the projects of customer.









EnviTec Biogas is a **full-service biogas provider** who covers the entire value chain for the production and processing of biogas. European market leader with the highest installed capacity in the biogas sector - over 710 modules worldwide with an **installed capacity of> 514 MW**.

Since July 2007 listed on the Frankfurt Stock Exchange.

EnviThan - a proprietary gas treatment solution:

- Designed and assemblied in EnviTec Biogas AG
 factory in Saerbeck (Germany)
- ✓ Containerized system up to 53-foot container
- ✓ Scaleable plant size. Reference sizes between 100 Nm³/h and 2000 Nm³/h of biogas input (sizes for single container)

- Continuous process analysis and assessment allows to ensure constant gas quality
- ✓ Possibility of obtaining food-grade CO₂
- ✓ Membrane based technology, patented Evonik
 3-stage upgrading method
 (methane yields over 99%)

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REFERENCES





S LOTOS

Expansion of the Gas Terminal in Świnoujście

Investor: Polskie LNG

Location: Świnoujście, Polska

Year: 2020

Investment value: 1.9 billion PLN

EFRA - Effective Refining

Investor : Grupa Lotos

Location: Gdańsk, Polska

Year: 2015

Investment value: 2.3 billion PLN

Construction and commissioning of a salt factory

Investor: Ciech Soda Deutschland

Location: Staßfurt, Niemcy

Year: 2020

Investment value: 150 mln EUR

Polimery Police - propane dehydrogenation plant

Investor: Grupa Azoty Location: Police, Polska

Year: 2019

Ivestment value: 1.5 billion EUR

ssLNG terminal - feasibility study

Investor: Grupa Lotos Location: Gdańsk, Poland

Year: 2020

Investment value: 300 mln PLN



GRUPA GAZ-SYSTEM

I Ciech

Construction of a docking station for LNG cryogenic tank containers

Investor: Remontowa LNG Location: Gdańsk, Poland

Year: 2020

Investment value: 20 mln PLN





SUPPORT FOR BIOGAS INVESTMENTS



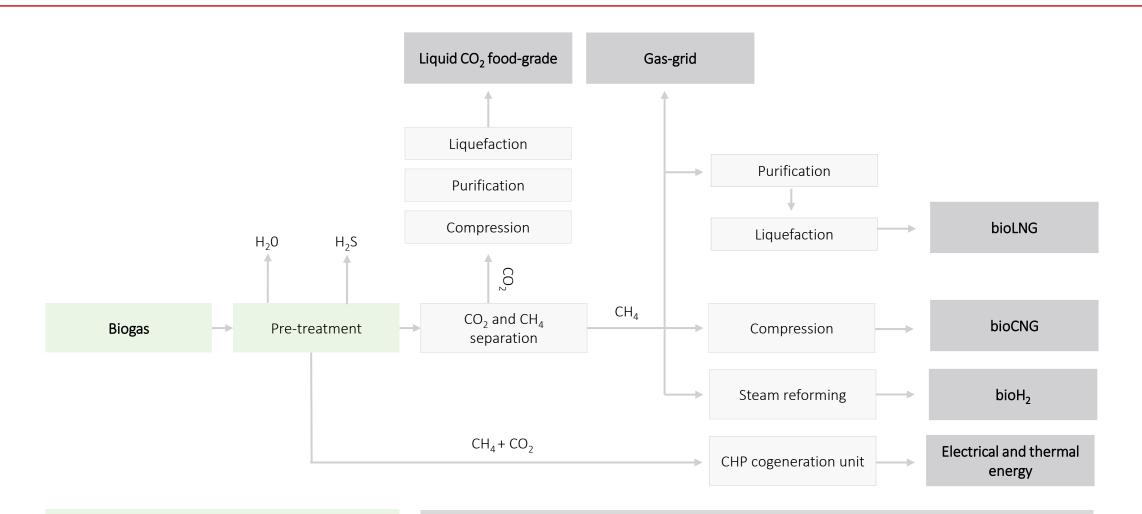


ASSESSMENT REALISATION Production technologies: Biogas biomethane bioLNG bioCNG Service bioH₂ bioLCO₂ Commisioning Financing Construction model Technological OPEX project, Detail project, CAPEX Building Technology permits Inventory Location

Support in choosing the technology



EnviTec Biogas



Decision on the way of biogas management



ONGOING PROJECTS Agricultural biogas plant 1 MW



The project involves the **construction of an agricultural biogas plant 1 MW** operating in the combined production of electricity and heat (CHP).

| Substrates | Amount | | Products | Amount | |
|----------------------|--------|-----|-------------------|--------|------|
| Cattle manure | 1 100 | t/a | Biogas annually | 2 mln | m³/a |
| Waste from agri-food | | | Electrical energy | 499 | kW |
| production | 3 650 | t/a | Thermal energy | 518 | kW |
| Maize silage | 6 300 | t/a | | | |

Scope of the project:

Plant dimensioning and selection of the technology

Obtaining of the replacement building permit

Investment realization

Continuous consultation and support of the Client





ONGOING PROJECTS

Biomethane plant 2 - 3 MW with bioLNG liquefaction possibility



The project involves the construction of a 2 MW biomethane plant with a potential extension up to 3 MW. Two possibilities of gas utilization are assumed, i.e. upgrading to biomethane or liquefaction into bioLNG.

| Substrates | Amount | | Products | Amount | |
|--------------|--------|-----|-----------------|---------|------|
| Maize silage | 9 000 | t/a | Biogas annually | 7.9 mln | m³/a |
| Chicken dung | 27 000 | t/a | Biogas hourly | 900 | m³/a |
| Pig slurry | 24 000 | t/a | Biomethane | 478 | m³/a |
| Milk sludge | 10 000 | t/a | | | |

Scope of the project:

| Location selection | Plant dimensioning and selection of the technology | Obtaining of the connection conditions | Obt. of the necess. decisions, incl. the environm. dec. | Signing contracts for the substrates supplies | Obtaining of the building permit |
|-----------------------|--|--|---|---|----------------------------------|
| | | | | | |







ONGOING PROJECTS

Biomethane plant 5,5 MW with bioLNG liquefaction possibility

The project involves the **construction of a 5,5 MW biomethane plant**. Two possibilities of gas utilization are assumed, i.e. **upgrading to biomethane or liquefaction into bioLNG**.

| Substrates | Amount | | Products | Amount | |
|--------------|---------|-----|-----------------|--------|------|
| Maize silage | 30 000 | t/a | Biogas annually | 26 mln | m³/a |
| Chicken dung | 130 000 | t/a | Biogaz hourly | 4 400 | m³/h |
| Beet pulp | 20 000 | t/a | Biomethane | 1 300 | m³/h |
| | | | | | |

Scope of the project:

| Location selection | Plant dimensioning and selection of the technology | Obtaining of the connection conditions | Obt. of the necess. decisions, incl. the environm. dec. | Signing contracts for the substrates supplies | Obtaining of the building permit | |
|-----------------------|--|--|---|---|----------------------------------|--|
| | | | | | | |

Thank you!

Please feel free to contact us

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