



# **2G Energy AG**

**Continuous growth for a decade!  
Well prepared for accelerated growth!**



## Agenda

1. **2G at a glance.**
2. Key products.
3. Order situation.
4. Situation USA.
5. Further trends.
6. 2G is prepared.
7. Investment case.



## 2G at a glance.

- **Foundation:** 1995 – HQ in Heek, NRW, Northwest of Germany
- **Market Cap:** app. 400 Mio. Euro
- **Free float:** app. 55%
- **Net sales 2023:** 365.1 Mio. Euro (thereof 200 ME machines, 165 ME service + parts)
- **Net sales 2024e:** 360 to 390 Mio. Euro
- **EBIT 2024e:** 8.5% – 10.0% EBIT
- **Net sales 2025e:** 430 to 450 Mio. Euro (CAGR: 11,2% last 10 years)
- **Equity ratio:** above 50%
- **Employees:** app. 900 worldwide



## 2G at a glance.

- **Foreign subsidiaries:**
  - 8 Internat. Sale/Service comp.: G7 (USA, CA, UK, F, I, E) + Pol + NL
  - 1 Competence centre: NRGTEQ B.V. in NL
- **Importance to the (European) energy supply:**
  - above 7'000 CHP plants in more than 50 countries
  - app. 2 GW actual capacity  
(compared to average German nuclear plant of app. 1.3 GW)
- **Competitive situation:**
  - Germany: General market leader (in our engine class)
  - **H<sub>2</sub>:** Technological leader (worldwide)

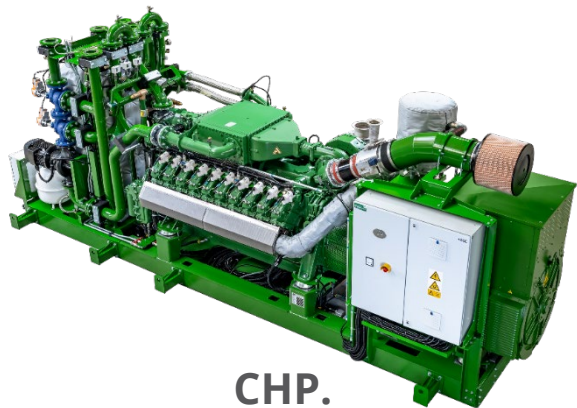


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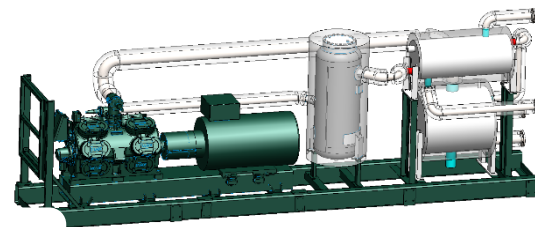


## Key products – Machines.



**CHP.**  
Combined Heat & Power

**Synergies:**  
R&D, sales,  
project management,  
procurement,  
production.

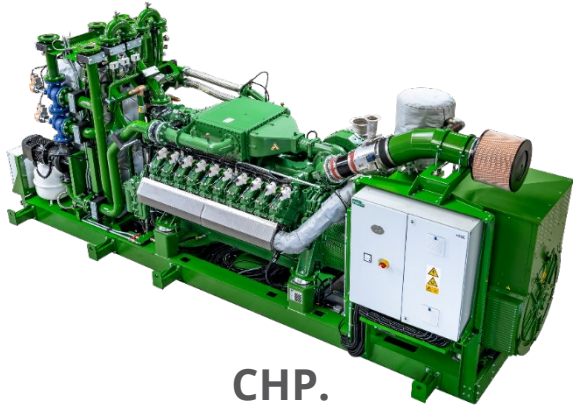


**Heat pump.**  
Heat only/Thermal energy



**Demand Response.**  
Power only

## Key products – Combined Heat and Power – CHP.



**CHP.**  
Combined Heat & Power

# Energie & Management

from 01.10.2024 - Cover story

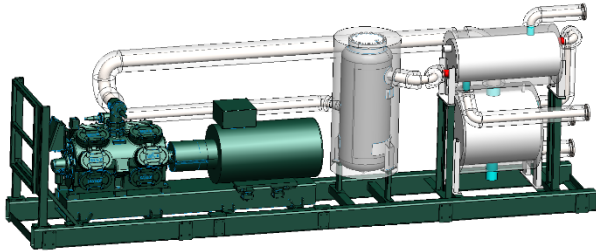
**Speyer's head of municipal utilities Bühring** concluded by emphasizing that renewable energy sources must be sensibly backed up by decentralized CHP plants.

***It simply wouldn't work without CHP.***

CHP plants should therefore be consistently included in the energy infrastructure, [...]  
Only then could the further expansion and development of a “green” heat supply succeed.

**CHP: From grey workhorse to green team player.**

## Key products – Heat only – Heat Pump.



### Heat pump.

Heat only/Thermal energy

#### Future expectations:

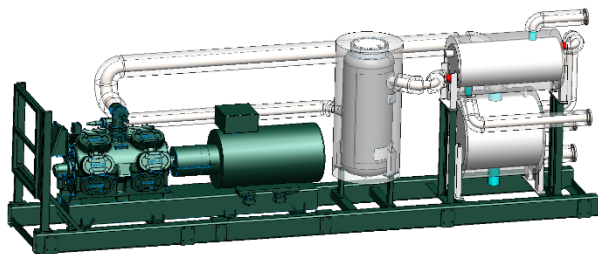
- Germany:
  - 2026: Municipal heat planning mandatory  
Large cities
  - 2028: Small cities
- Rest of Europe: Main instrument for saving fossil energy
- Future sales focus: Germany (via 2G) + Benelux (via NRGTEQ), EU | RoW opportunistically
- Prerequisite: Full industrialization, integration into the product configurator
- Ramp-up: start of marketing in 2024
  - 2025: < 10 Mio. Euro (order intake)
  - 2027: 45 Mio. Euro (order intake)
  - Long term: Comparable to CHP in G20 countries

**High-capacity heat pump: Highly cost-effective producer of CO<sub>2</sub>-free heat.**



## Key products – Heat only – Heat Pump.

Future expectations:



**Heat pump.**  
Heat only/Thermal energy



**High-capacity heat pump: Highly cost-effective producer of CO<sub>2</sub>-free heat.**

## Key products – Power only – Demand Response.



**Demand Response.**  
Power only

### Future expectations:

- Positioning:
  - Between a CHP power plant and an emergency power generator
- Annual operating hours:
  - Emergency power generator: app. up to 500 hours
  - Demand response: app. 500 – 2'000 hours
  - CHP: above 2'000 hours
- Ramp-up:
  - Main market: USA
  - 2025: First installation with launch partner
  - 2026: Full market launch

**Demand Response: The fast and cost-effective temp power.**

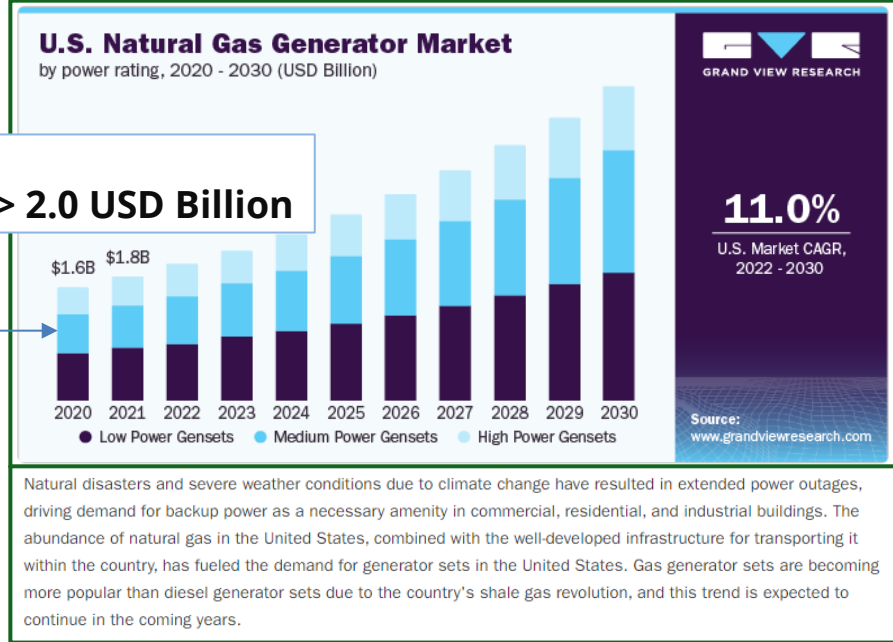


# Key products – Power only – Demand Response.



Future expectations:

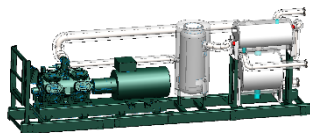
**Medium Power Gensets:  
CAGR: 15-20%, app. 0.5 => 2.0 USD Billion**



**Demand Response.**  
Power only

**Demand Response: The fast and cost-effective temp power.**

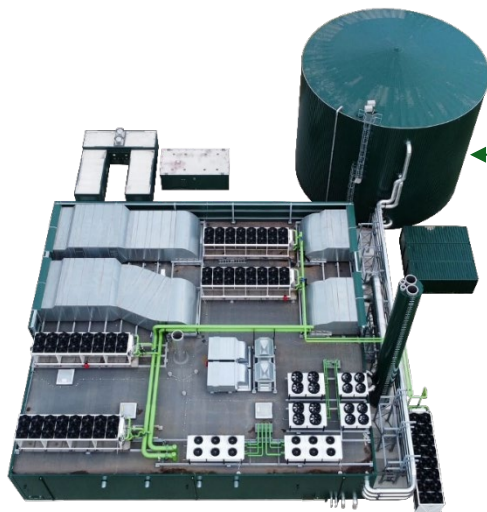
## Key products - Green Cube.



**Heat pump.**  
Heat only/Thermal energy



**CHP.**  
Combined Heat & Power



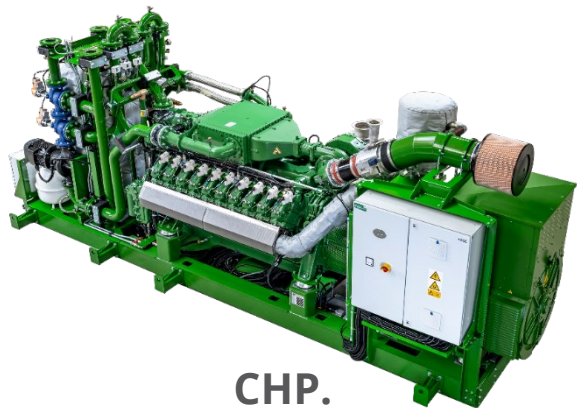
### **Green Cube.** Decoupled Heat & Power

- Combined with storage facilities.
- Tailored to the individual needs for local authorities and private investors.
- Locally available environmental heat sources, existing wind and solar parks, bioenergy, industrial waste heat ... are included.
- Modularly configurable standard product.
- Containerised solutions as turnkey projects.

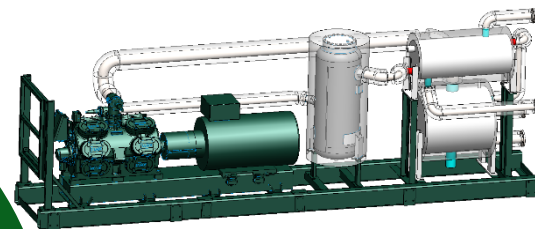
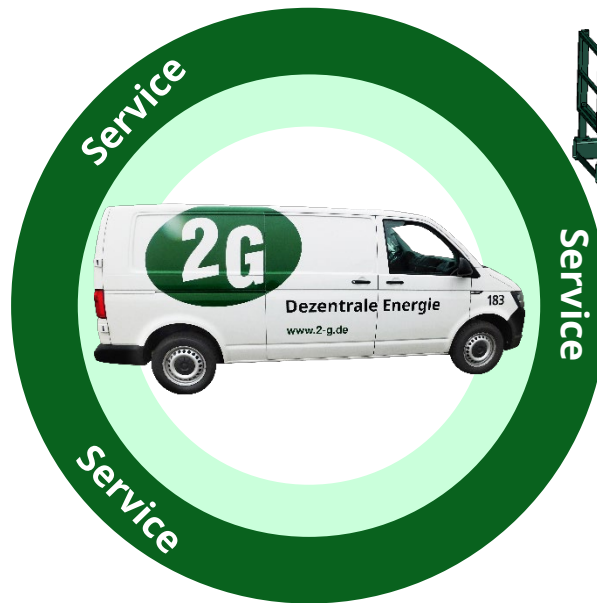
**2G as solution provider.**



## Key products – Machines + Service.



**CHP.**  
Combined Heat & Power



**Heat pump.**  
Heat only/thermal energy



**Demand Response.**  
Power only

## Key products - Service.



**Service.**  
Worldwide

### Main aspects:

- Constantly growing revenues with service and parts
- Downside potentials:
  - Lower annual operating hours reduce the need for servicing
- Upside potentials:
  - Increasing number of full maintenance contracts due to
    - More professional management of sales potential
    - Growing dependence of system owners on the availability of their power plants
  - Increasing sale of own design parts due to
    - Growing share of own engines (instead of purchased engines)
    - More and more self-designed components and wearing parts
  - Supplementing and/or replacing partner service personnel in foreign markets with our own staff
- Cost effectiveness:
  - Implementation of a comprehensive ERP system specifically for service
  - Increasing use of artificial intelligence for predictive maintenance

**Service: Reliable and crisis-resistant cash flows over time.**



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## Order intake Q3 2024 by region.

Order intake Q3 2024	2024		2023		Change	
	in MEUR	in %	in MEUR	in %	in MEUR	in %
Germany	21.0	28 %	26.1	62 %	- 5.1	- 19 %
<u>Rest of Europe</u>	41.9	56 %	6.0	14 %	+ 35.9	+ 598 %
<u>North America</u>	10.5	8 %	1.4	3 %	+ 9.1	+ 650 %
Asia/Australia	4.4	6 %	1.2	3 %	+ 3.2	+ 267 %
Rest of the world	2.5	3 %	7.3	18 %	- 4.8	- 66 %
<b>Total</b>	<b>80.4</b>	<b>100 %</b>	<b>42.0</b>	<b>100 %</b>	<b>+ 38.4</b>	<b>+ 91 %</b>





## Order intake Q3 2024 by region – Rest of Europe.

Order intake Q3 2024	2024		2023		Change	
	in MEUR	in %	in MEUR	in %	in MEUR	in %
Rest of Europe	41.9	56 %	6.0	14 %	+ 35.9	+ 598 %
<b>Total</b>	<b>80.4</b>	<b>100 %</b>	<b>42.0</b>	<b>100 %</b>	<b>+ 38.4</b>	<b>+ 91 %</b>

### Rest of Europe – Eastern Europe

- The large-scale destruction of energy infrastructure by the Russian army is having an impact on private and public decision makers in Eastern Europe.
- CHP units demonstrate some of their major advantages: rapid availability, robust operating mode, relative independence from other infrastructure.
- Various project partners have placed some substantial orders in Q3.
- We expect order intake to remain strong.



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## Order intake Q3 2024 by region – North America.

Order intake Q3 2024	2024		2023		Change	
	in MEUR	in %	in MEUR	in %	in MEUR	in %
North America	10.5	8 %	1.4	3 %	+ 9.1	+ 650 %
<b>Total</b>	<b>80.4</b>	<b>100 %</b>	<b>42.0</b>	<b>100 %</b>	<b>+ 38.4</b>	<b>+ 91 %</b>

### North America

- The market continues to be characterized by large-volume projects.
- Inflation Reduction Act remains a strong driver.
- In Q3, further promising projects were processed but not signed.
- In Q4, strong order intake expected.

## Order intake Q3 2024 by region – Major order from the USA.

- **Market situation:**  
**More than 1000 so-called skilled nursing facilities (“SNF”) are required by law (AB2511) to guarantee a 96-hour power supply.**
- **Strategic importance:**  
SNFs are forced to reconsider their local energy supply, which opens the door for planning (and improving) based on CHP.
- **Affected product:**
  - CHP
- **Affected markets:**
  - California (32 CHP Sept.(Oct. '24, more will follow).
  - Other US states could follow this example.

AB 2511

### Skilled Nursing Facilities: New Regulations Demand 96-Hour Backup Power



December 21, 2023

New Bill AB2511 requires 96-Hour backup power for Skilled Nursing Facilities. Keep your facility safe by understanding California's New Power Source Requirement.

#### Who does this apply to?

All Skilled Nursing Facilities (SNFs) across California are facing a significant shift in regulatory requirements with the introduction of Senate Bill AB 2511. A skilled Nursing facility is defined as a health facility that provides skilled nursing care and supportive care to patients whose primary need is for availability of skilled nursing care on an extended basis are subject to Senate Bill AB 2511.

#### What needs to be done?

Come January 1, 2024, SNFs need to comply with AB 2511, which emphasizes the importance of maintaining an alternative source of power. The definition of “alternative source of power” includes various options like emergency generators, large capacity batteries, and renewable electrical generation facilities. The goal of this is to protect residents' health and safety during extended power outages.

#### Why is the bill important?

With over a thousand SNFs caring for approximately 400,000 Californians, AB 2511 addresses the vulnerabilities of residents relying on electrical-powered life support systems. The bill aligns regulations with the escalating frequency of power outages due to factors like wildfires, ensuring SNFs can withstand prolonged disruptions.



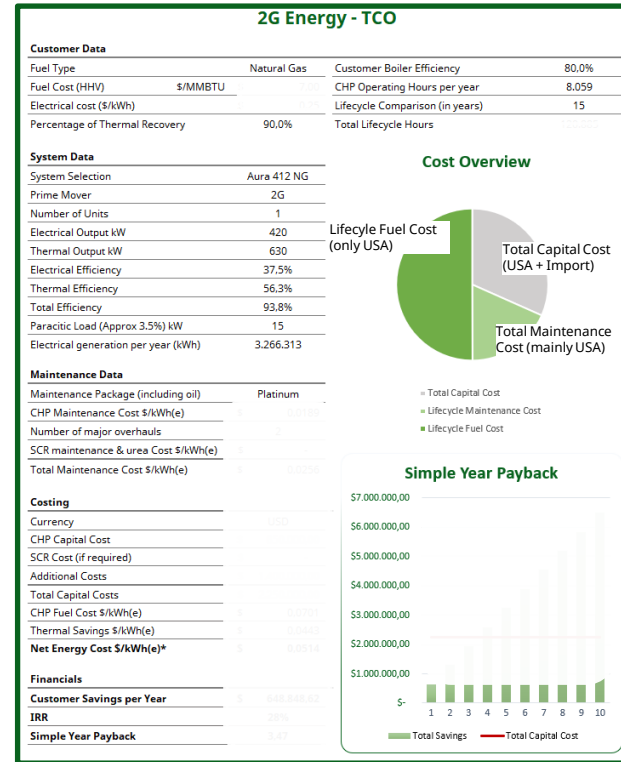
# Possible import duties on the US market.

## ■ Import duties:

Even very high import duties only lead to marginal additional costs in terms of electricity generation costs over the total live cycle.

This is because important costs are largely US-based costs:

- Project planning,
- Customer installation,
- Commissioning,
- Fuel,
- Maintenance,
- Insurance,
- Decommissioning,
- etc.





## Agenda

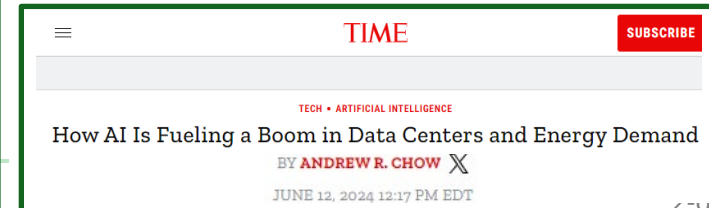
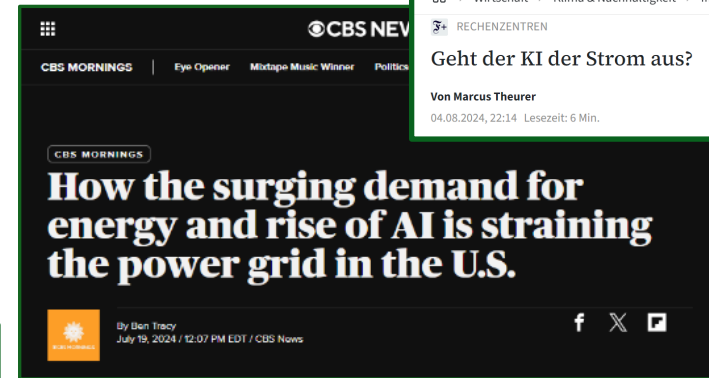
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2G Energy - Well prepared for accelerated growth.

# Sharp rise in electricity consumption.

in USA, G7, G20, Europe, Indo-Pacific, RoW  
due to AI boom, electromobility, phase-out of fossil heating energy ... on short notice.

- **Strategic importance:**  
Electricity consumption worldwide is rising much faster than new large-scale power plants (gas and nuclear power) will be available.
- **Affected product:**
  - CHP
  - Demand response
- **Affected markets:**
  - Worldwide



## Gas engines fill supply gaps.

**[Germany's largest energy supplier] RWE plans gas engine power plant at Gundremmingen nuclear power plant site [120 MW].**

- **Strategic importance:**  
Gas engine power plants are becoming part of the large-scale energy transition and thus part of the official German power plant strategy (“Kraftwerksstrategie”).
- **Affected product:**
  - CHP
  - Demand Response
- **Affected markets:**
  - Germany
  - App. 50 further such power plants are necessary!





# Electricity supply increasingly insecure.

- **Market situation :**  
**Volatility on the electricity market is reflected in specific bottlenecks and noticeable price peaks.**
- **Strategic importance:**  
The short-term pressure to act draws attention to projects for reliable electricity generation that can be realized in the short term.
- **Affected product:**
  - CHP
- **Affected markets:**
  - Germany
  - EU, G7, G20

**Frankfurter Rundschau**  
Unwetter im Norden löst Strom-Engpässe im Süden aus: Netz nicht auf so viel Windenergie ausgelegt

19.01.2024, 19:07 Uhr  
Von: Lara-Eric Nixelstein

*Am Montag rief ein Netzbetreiber in Baden-Württemberg zum Stromsparen auf. Die Leitungen waren ausgelastet. Ein wiederkehrendes Problem – und das Wetter ist schuld.*


Stuttgart – Zum Wochenbeginn hatte der Baden-Württembergische Netzbetreiber TransnetBW die Bevölkerung zum Stromsparen aufgerufen. Die Maßnahmen sollten zwischen 6 Uhr und 14 Uhr anhalten. Als Grund nannte der Betreiber Stromengpässe in den Leitungen, die jederzeit wieder auftauchen könnte – sobald es in Norddeutschland stürmt.

**zdf heute**  
Politik > Deutschland > Stadtwerke Oranienburg: Keine Neuanschlüsse für Strom

Netzagentur sieht Fehlplanung  
**Oranienburg: Kein Strom für neue Verbraucher**

von Antje Klingbeil, Potsdam 16.04.2024 | 20:15

Wer in Oranienburg bauen will, muss vorerst auf Strom verzichten. Die Stadtwerke können keine Neuanschlüsse bereitstellen. Laut Experten sei das erst der Anfang.



Oranienburg erteilt aktuell keine Genehmigung

**Frankfurter Rundschau**  
Strompreise steigen massiv: Dunkelflaute führt zu Stillstand von Solar- und Windkraft in Deutschland

14.11.2024, 18:02 Uhr  
Von: Theresa Breitschlag

*Aufgrund einer Dunkelflaute schießen die Strompreise in Deutschland auf Höchststände seit der Energiekrise. Nun gerät auch das geplante Gesetz zur Sicherung der Stromversorgung in Engpasszeiten durch das Ende der Ampel-Koalition in Gefahr.*

# Electricity supply increasingly insecure.

- **Market situation :**

**Power supply in Germany (and Europe?) is not as stable as it seems!**

**The SAIDI index only records power outages lasting longer than 3 minutes.**

- **Strategic importance:**

Industrial companies invest into back-up power generation capacity.

- **Affected product:**

- CHP
- Demand response

- **Affected markets:**

- Germany



## Importance of biogas confirmed.

**The German Federal Minister for Economic Affairs and Climate Protection (Dr. Robert Habeck) acknowledges the importance of biogas in securing base and peak loads.**

- **Strategic importance:**  
The further flexibilization of the biogas sector requires a significant expansion of electricity generation capacities using CHP units.
- **Affected product:**
  - CHP
- **Affected markets:**
  - Germany

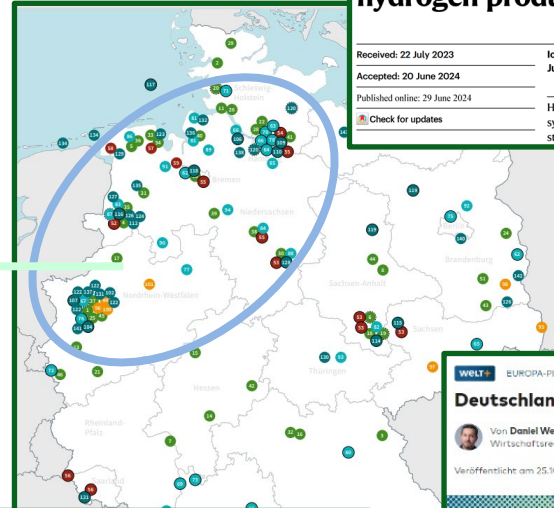



The screenshot shows a news article from VDI nachrichten. The title is "Biogas-Strategie: Habecks überraschendes Bekenntnis". The article is dated 20. Aug 2024 and is by Thomas Gaul, with a reading time of approximately 4 minutes. The text states that Federal Minister Robert Habeck has announced a "comprehensive biomass package", and the industry hopes for a complete bundle of measures. Below the text is an aerial photograph of a biogas plant featuring several large blue cylindrical storage tanks and various industrial buildings.

2G Energy - Well prepared for accelerated growth.

# Hydrogen economy is developing.

- **Market situation :**  
**2G is at the heart of the growing German (and European?) hydrogen center.**
- **Strategic importance:**  
The predictable availability of (green) hydrogen remove the „chicken and egg“ situation.  
However, there is a lack of large-scale consumers in particular (steel mills, fertilizer production, mobility), which opens up potentials for H<sub>2</sub> power generation based on CHP.
- **Affected product:**
  - CHP
- **Affected markets:**
  - Germany, EU, G7, G20



nature communications 

Article <https://doi.org/10.1038/s41467-024-49867-w>

## A unified European hydrogen infrastructure planning to support the rapid scale-up of hydrogen production

Received: 22 July 2023 | Accepted: 20 June 2024 | Published online: 29 June 2024

Ioannis Kountouris<sup>1</sup>, Rasmus Bramstoft<sup>1</sup>, Theis Madsen<sup>1</sup>, Juan Gea-Bermúdez<sup>2</sup>, Marie Münster<sup>3</sup> & Dogan Keles<sup>1</sup>

Check for updates

Hydrogen will become a key player in transitioning toward a net-zero energy system. However, a clear pathway toward a unified European hydrogen infrastructure to support the rapid scale-up of hydrogen production is still under

 Live-TV

IM FOKUS Nahost-Eskalation Ukraine-Krieg US-Wahl 2024

POLITIK | NAMIBIA

### Mbumba: Namibia fertigt grünen Wasserstoff für Deutschland

Josephine Mahachi  
10.10.2024


Namibias Präsident Mbumba setzt bei grüner Energie auf die Kooperation mit Deutschland. Reparationen für den Völkermord während der deutschen Kolonialzeit müssten unabhängig verhandelt werden, betont er im DW-Interview.

WELT | EUROPA-PIPELINE

### Deutschlands Schlüssel zur Wasserstoff-Ära

Von Daniel Wetzel  
Wirtschaftsredakteur

Veröffentlicht am 25.10.2023 | Lesedauer: 5 Minuten

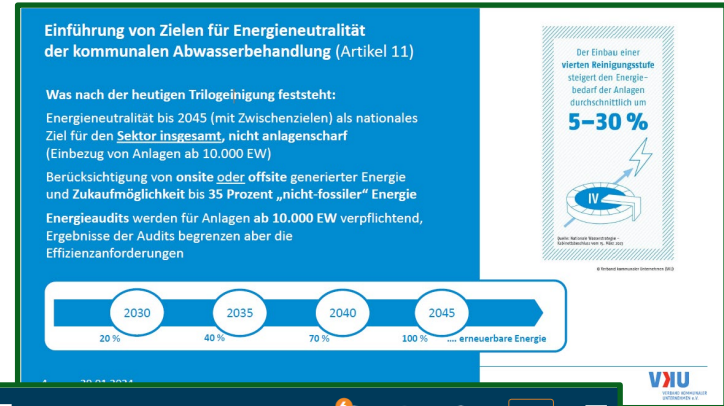


Quelle: Montage: Infografik WELT

Die Versorgung Süddeutschlands mit klimaneutralem Erdgas-Ersatz galt fernab der Häfen als besonders schwierig. Jetzt rückt die Lösung näher: Fünf europäische Pipeline-Betreiber haben sich auf den Bau einer gewaltigen Wasserstoffleitung geeinigt. Sogar die Desertec-Idee wird wiederbelebt.

# The importance of sewage gas is growing.

- **Market situation :**  
**The sewage treatment plants must be given a fourth purification stage and are to become climate-neutral.**
- **Strategic importance:**  
The electricity consumption of wastewater treatment plants is increasing significantly. At the same time the utilization of the sewage gases produced through CHP is the most cost-efficient solution.
- **Affected product:**
  - CHP (with 2G as market leader)
- **Affected markets:**
  - EU



**WELT**

Mehr Gentechnik in der EU erlaubt „Einzige Zugänge“ – Wie die...  
vor 39 Min.

HOME > WIRTSCHAFT > Europäische Union: Laut Studie

**WIRTSCHAFT**

STELLENMARKT GELD MOTOR-NEWS KARRIERE D

LAUT STUDIE

**Schärfere EU-Abwasserregeln kosten Milliarden**

**suez**

**Faites le plein d'énergie**

Les boues issues de l'épuration des eaux usées constituent une source d'énergie non fossile, inépuisable et renouvelable. L'énergie contenue dans le biogaz produit par la méthanisation des boues représente une contribution fondamentale dans la recherche d'autonomie énergétique de la station d'épuration.

Produire de l'électricité et de la chaleur par cogénération du biogaz, utilisables pour des usages internes ou externes à la station



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## 2G is prepared.

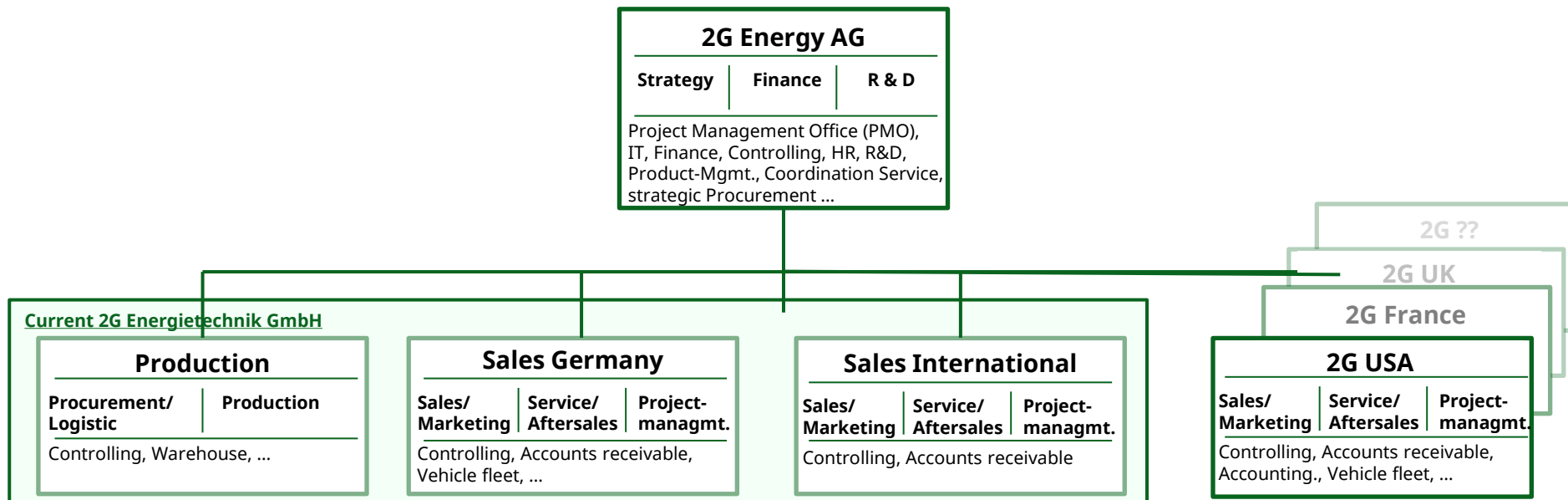
### Regional as well as solution diversification require adjustments:

- **Group structure:**  
Focusing the on international growth.
- **Group-wide IT solution:**  
Empowerment of the organization/people through the introduction of a Group-wide IT solution.
- **Management capacities:**  
Expansion of management capacities through highly qualified key personnel.
- **Modern assembly facilities:**  
Increasing the efficiency of the production site by investing in additional modern assembly facilities.



# 2G is prepared.

## Focusing the Group structure on international growth.



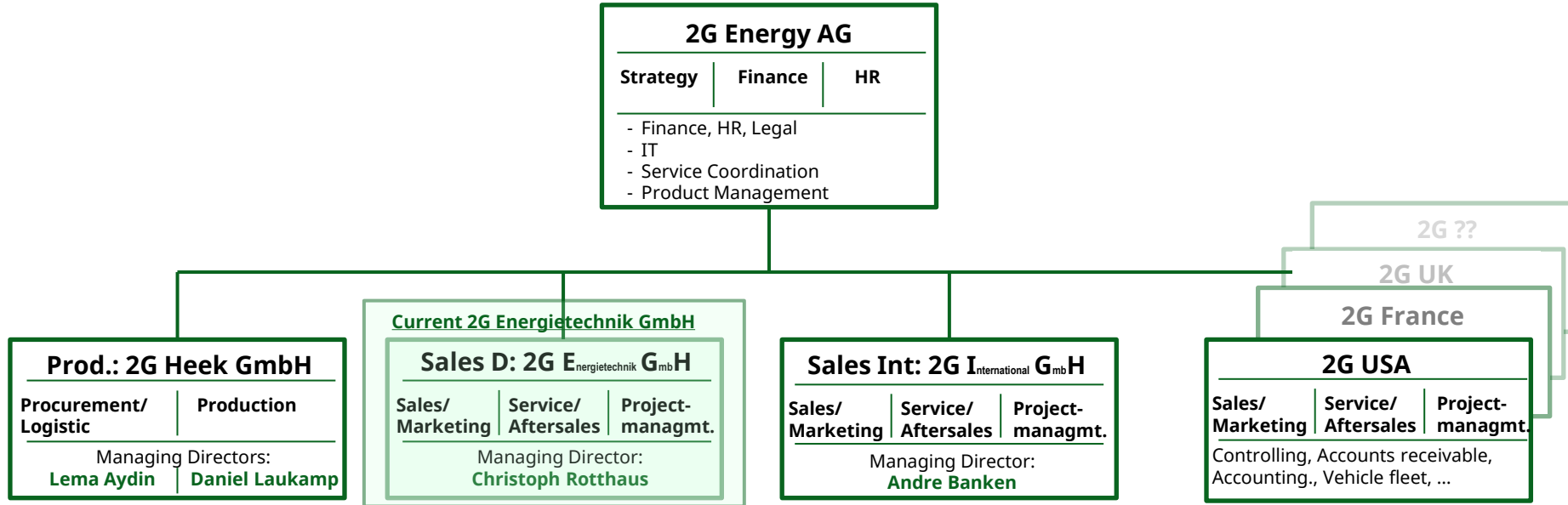
- The parent company Group structure is to be transferred to an operational holding structure.





# 2G is prepared.

## Focusing the Group structure on international growth.



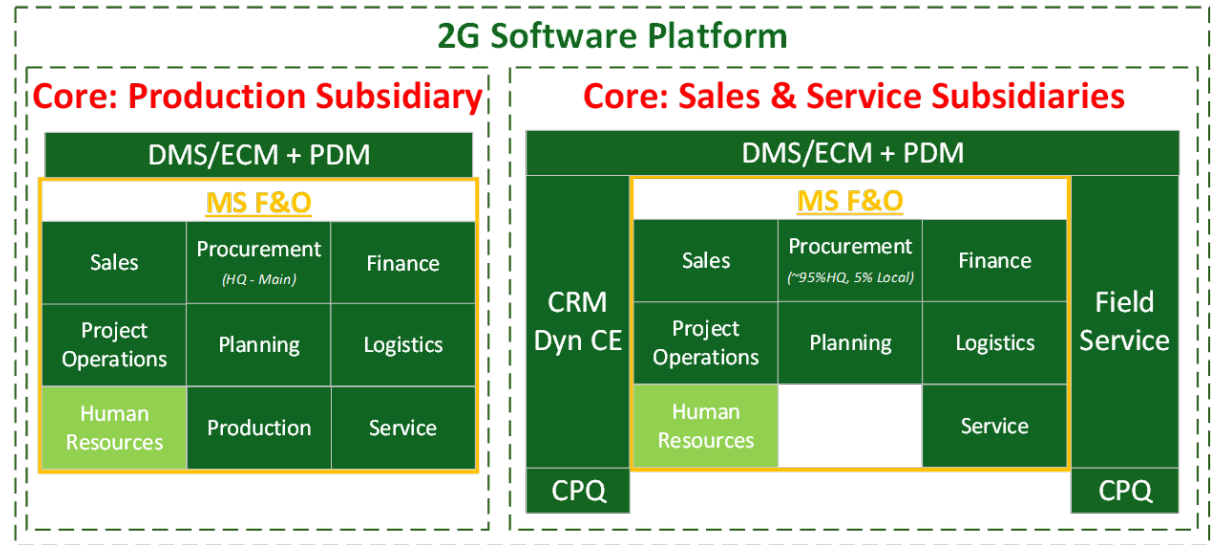
- Clear Group structure enables standardised management, processes and controlling.
- Future sales companies (and possibly production companies) can be easily integrated.



## 2G is prepared.

Empowerment of employees through the introduction of a Group-wide IT solution.

- ERP system,
- Document management system,
- Live cycle management system,
- Configurator,
- Global Homepage,
- Online shop,
- ...



**Cloud-based solutions enable the rapid and standard-compliant integration of new Group companies.**

## 2G is prepared.

Expansion of management capacities through highly qualified key personnel.

- **Darren Jamison:**

- Former position:  
CEO of Capstone Green Energy, USA
- New position at 2G:  
Managing Director, 2G Energy Inc., USA
- First working day at 2G:  
01 November 2023

- **Key project concerned:**

- Internationalisation/Partner Concept

- **Affected markets:**

- USA



## 2G is prepared.

Expansion of management capacities through highly qualified key personnel.

- **Ulrich Brinkmann:**
  - Former position:  
Managing Director Johnson Controls Germany
  - New position at 2G:  
Sales Director Large Heat Pumps
  - First working day at 2G:  
01 February 2024
- **Key project concerned:**
  - Internationalisation/Partner Concept
  - Innovation
- **Affected markets:**
  - Germany, EU, G7, G20



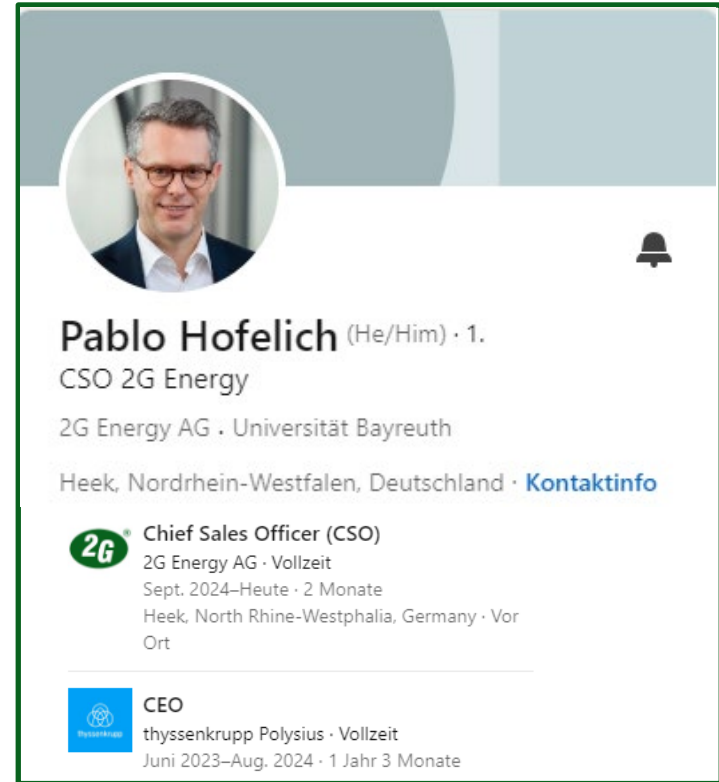
The screenshot shows a news article from the 'CCI DIALOG GMBH' website. The article is titled 'ULRICH BRINKMANN WECHSELT VON JOHNSON CONTROLS ZU 2G ENERGY' and is dated '21. Februar 2024'. It features a portrait of Ulrich Brinkmann and a caption identifying him as 'Ulrich Brinkmann (Abb. © 2G Energy)'. The article text states that since February 1st, Ulrich Brinkmann is the new sales manager for large heat pumps at 2G Energy AG, Heek, and his task is to strategically build up the newly founded area within the company. It also mentions his previous role at Johnson Controls Systems & Service GmbH in Essen, where he was responsible for the sale and service of cold, climate, and heat pump technology in Germany.



## 2G is prepared.

Expansion of management capacities through highly qualified key personnel.

- **Pablo Hofelich:**
  - Former position:  
CEO thyssenkrupp Polysius, Beckum/Germany
  - New position at 2G:  
**Chief Sales Officer (CSO)**
  - First working day at 2G:  
01 September 2024
- **Key project concerned:**
  - All products, product ideas, internationalisation, service ...
- **Affected markets:**
  - Worldwide



## 2G is prepared.

Increasing the efficiency of the production site by investing in additional modern assembly buildings.

### Step 2:

Potential for new assembly building

### Step 1:

Building permission is applied for

app. +40%



Step 3: Conversion of a buffer storage facility into an assembly building.

Motorway A31



## Agenda

1. 2G at a glance.
2. Key products.
3. Order situation.
4. Situation USA.
5. Further trends.
6. 2G is prepared.
- 7. Investment case.**



## Investment case.

- **Huge and rapidly growing market potential (Germany, USA, G20)**
- **Strategic resiliency against political decisions and economic developments due to**
  - Robust country mix and thus independence from individual markets
  - Comprehensive fuel mix (H<sub>2</sub> inclusive polluted H<sub>2</sub>, bio-gas, lean-gas, natural gas, gas mixtures, ...)
  - Complementary product portfolio:
    - CHP
    - Large capacity heat pump
    - Demand Response
- **Strong and growing service business**
- **Company fit for strong growth**  
(organisational structure, IT set up, management and production capacities)
- **Substantial EBIT increase**
- **ISS Prime rating**





## Contact details.



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## Calendar.

### 2024

November 25-26 German Equity Forum, Frankfurt

### 2025

February 05 HIT, Hamburg  
February 22 Announcement of preliminary Net Sales 2024  
April 01 Preliminary results for FY 2024, 2025 guidance  
April 03 Metzler Small Cap Days, Frankfurt  
April 29 Consolidated financial statements for FY 2023  
May 12-13 Spring Conference, Frankfurt  
May 22 Q1 key figures and business trends  
June 12 Ordinary AGM, Ahaus/Germany  
September 4 Consolidated financial statements for H1 2025  
November 24-25 German Equity Forum, Frankfurt