

Passion meets Adaptability

The story of 2G Energy began with oil-fueled combined heat and power systems for the agricultural sector. The transition to biogas was followed by entering the stock market. Today, the portfolio contains products and services for target groups all over the world.

It was in the spring of 1995, when a highly motivated Christian Grotholt, who recently had gotten his degree in electrical engineering, crossed paths with Ludger Gausling, a consummate entrepreneur from Heek. A sliding doors moment, as it turned out: In November of that same year, they founded 2G Energietechnik GmbH and laid the foundation for a cogeneration success story that continues to this day.

And it all started with agriculture. Due to a rising demand for alternatives to straw beddings in livestock husbandry, many barns now perpetually required heat and electricity – a demand that could be perfectly met by oil-fueled combined heat and power systems (CHP). The first few systems went to local customers in the Münsterland region. After 27 years, one stock market launch and thousands of installed systems all around the globe, the company's product portfolio and general size have changed drastically. What remains unchanged, however, is the conviction that the energy supply of the future must be a local affair.

Trailblazing flexibility

A crucial transformation was put into motion only three years after the foundation of 2G: the transition from heating oil to biogas. This was prompted by the rising heating oil prices in 1998 and the simultaneously falling electricity prices due to the market liberalization, a

combination which meant heating oil CHP were no longer economically efficient. The company had to adjust its entire portfolio. Shortly thereafter, in the year 2000 to be precise, the



Through its products and services, 2G strives to contribute to the success of the energy transition.

Renewable Energies Act (EEG, short for *Erneuerbare Energien Gesetz*) provided a light at the end of the tunnel: the conversion of biogas into electricity was to be subsidized for the first time. Christian Grotholt, who has since become the CEO of the 2G Energy AG – publicly traded since 2007 – recalls: “Several of our customers of the first few years concretely asked about the operation of our CHP on biogas, so that they could benefit from the newly created regulations. In doing so, they created real pressure on us to push for new developments, which we were able to ultimately turn into success. Just in time for the amendment of the EEG in 2004 and the growth of the biogas market it entailed, we had ready-

made products and were in a position to profit on the growing market volume.” There were also many lessons learnt during this period, as Grotholt admits: “One thing became clear back then: if you want to succeed, you must be quick to adjust to market tendencies. Today’s issue of making the operation on hydrogen possible, for example,

is no different from the earlier efforts to transition to biogas.” He adds to this observation: “Especially in evolved company structures, you need a certain dose of passion, agility, anticipation and, more than anything else, a huge chunk of luck to find the right people for this joint effort to always bring the right products to market-readiness. In the end, the team surely is the deciding factor, it’s the people that make the difference.”

While 2G always had an eye on fuel flexibility, the other one has constantly been on maximizing the products’ efficiency. In 2008, the company began developing its own engine concepts, the initial goal being to raise the electrical efficiency of

its CHP systems. Back in the day, the modifications were limited to individual engine components. Nowadays, 2G is an OEM, an original equipment manufacturer, producing its own drives in series.

Customer focus

The customers are and always have been at the center of everything, as Grotholt does not tire to explain: “Our core philosophy has always been that the success of our customers defines the success of our company. Any increase in efficiency directly decreases the customer’s expenses for gas and increases their profits in return – and then we haven’t even mentioned the energy-political importance of energetic efficiency in itself. Accordingly, the customer’s benefit is always the primary objective for us at 2G. That is also the motivation behind the idea of expanding the 2G brand of being a team, an *us* that includes the customer as well as the employees.”

To this day, farmers and biogas-plant operators are among the most important customers of the 2G Energy AG – especially in these times of growing worldwide demand for renewable gases. Over time, however, the range of customers expanded into a panoply of applications that require a stable supply of heat and power – from the common residential complex over hospitals, hotels and industrial complexes to entire municipalities and energy utilities.

2G expanded the electrical output range of its portfolio to a range from 20 to 4,500 kW in response to the broad spectrum

of requirements and energy demands. The expanded portfolio required the development of strong expertise in the sector of system installation, which now increasingly serves as a foot in the door for new projects, as 2G CEO Christian Grotholt explains: “Energy solutions – no matter whether they are for industries or energy utilities – are increasingly complex and nowadays they have to pave the way for climate-neutral energy supply security. Therefore, we currently have numerous projects that require the installation of steam boilers, heat pumps, energy storage batteries or electrolyzers besides the actual CHP.”

The CEO also highlights the importance of not limiting the company portfolio to hardware. A decentral energy supply structure cannot exist without the corresponding expansion of digitalization and services. Besides a comprehensive, global service network consisting of partners and 2G personnel alike, the company also has a subsidiary that offers various financing models, the 2G Rental GmbH.

Backbone technology

The individual projects realized by 2G are merely a reflection of the energy markets’ general situation: the gradual phase-out of nuclear and coal-fueled energy alongside the increase in energy production through wind and sun fuels the demand to link different technologies and systems. Sector coupling is the phrase of the hour. As it stands today, power systems by 2G can already be operated purely on hydrogen. Therefore, Grotholt

perceives his company as the regenerative backbone of an increasingly decentralized energy sector: “2G power systems compensate for heat and electricity shortages, especially those occurring when the wind isn’t strong enough and the sun doesn’t shine.”

On balance, 2G has used the past decades to create the conditions to contribute to the success of the energy transition in Germany and throughout the world by means of its products and services. For some time now, 2G categorizes all strategic efforts into four overarching lead projects. This framework ensures that passion, strategic foresight and adaptability persist long term. Besides the three product-oriented lead projects – digitalization and innovations as well as the process-oriented structurization as part of *Lead2Lean* – Grotholt highlights the *Partner Concept* lead project, which already had a significant impact on the company’s past development: “2G lives and thinks in networks. Without them, our growth would not have been sustainable. In the sales as well as the service department we rely on our partners, service providers and distributors, who serve as our direct link to the end users all around the globe. In a world that is growing ever more complex, we spare no efforts to simplify our processes and reduce the technical complexity that our customers have to deal with to operate our systems, so that we can all continue down the successful path of 2G together.”

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