

Hydrogen CHP awarded the EnergyDecentral 2021 Gold Medal

With the agenitor H2, 2G Energy has succeeded in making 100% hydrogen permanently usable in CHP systems and has meanwhile brought the concept to series production. For its successful development, 2G has now been awarded the prestigious DLG Innovation Award.

Heek, 02/12/2020 – The DLG (German Agricultural Society) has been presenting the “Innovation Award” since 2014 as part of the annual Energy Decentral, which is one of the leading trade fairs for the energy industry in Germany. Despite the pandemic-related cancellation of the face-to-face event, the neutral expert commission of the DLG rewarded the hydrogen CHP from 2G as the only innovation with the award of the gold medal from a total of 81 approved innovations. The official presentation will take place as part of the alternative digital EnergyDecentral from February 9th to 12th, 2021.

2G already has a decade of experience in using hydrogen in CHP units

The development of CHP units that run entirely on hydrogen began at 2G more than ten years ago for a funding project in Berlin - long before the nuclear and coal phase-out in Germany was legally decided. "The spirit of innovation that has always been strong at 2G, coupled with many years of experience in the field of gas engine development, was the ideal pioneer to enable the use of hydrogen in CHP units," explains CTO Frank Grewe. "The fact that the time of technical market maturity now goes hand in hand with the increasing identification of hydrogen as an important element of the future energy world is of course very nice," continues Grewe. In addition to a joint project with Stadtwerke Haßfurt, which was named "CHP of the year" by the leading German energy journal „Energie & Management“ 2G has already successfully installed four more hydrogen projects worldwide.

Use of established components – retrofitting possible during operation

All hydrogen-powered CHP units are based on the established gas engine technology from 2G, which is already being operated successfully by thousands of customers around the world. Grewe refers to the established processes and supply chains: "The top priority of every new development is to offer the customer an attractive product. Of course, this also includes an attractive market price. By using many components from the natural gas and biogas sectors as well as almost identical manufacturing processes, we can keep the hardware costs comparatively low. "Another key objective of the development was the possibility of retrofitting existing natural gas or biogas-operated systems for operation with hydrogen. "We already have some pioneers throughout our customers who would rather start operating hydrogen CHP units today than tomorrow. Almost every CHP unit installed today can be converted for operation with hydrogen at a later point in time as part of a regular maintenance activity. We therefore advise every operator: Natural gas today - hydrogen tomorrow."

Hydrogen in CHP plants compensates for volatility of wind and sun

CEO Christian Grotholt is delighted about the award, especially against the background of the ongoing discussions about the changing energy market: "We are extremely pleased to have received the gold medal at the Innovation Award and would like to thank the jurors. The award of this prestigious award at one of the most popular events in the energy industry in Germany is also certainly good evidence of the systemic relevance of decentralized CHP systems." In particular, he is thinking of the efficient interaction with wind and solar energy: "In the course of the increasing volatility in the power grid due to the further expansion of wind power and photovoltaic systems with the simultaneous elimination of conventional electricity production such as nuclear and coal, we need more reliable compensation. We require a kind of backbone power plant, which compensates for the fluctuations in supply-dependent, renewable energy conversion. CHP systems as the backbone and partner of wind and sun enable exactly that. By using hydrogen, this flexible performance can now even be made available in a completely climate-neutral manner and with grid-friendly, rotating masses" says Grotholt.

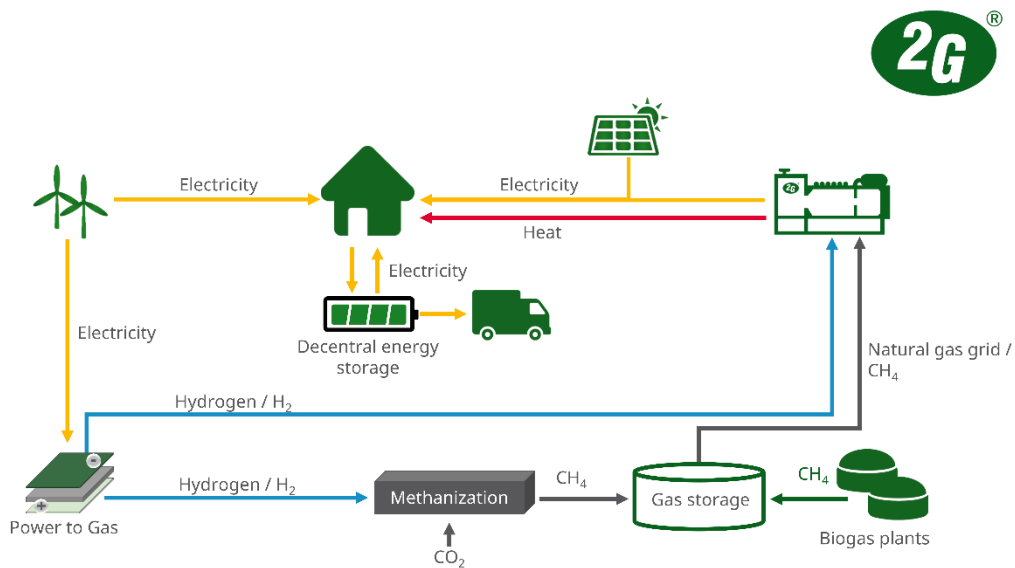
Motivator for the future

However, Grotholt does not want to rest on his success: "We understand the price primarily as a motivation and an invitation to continue on the successful path. With our innovative products and services, we have the great opportunity to make an important contribution to a secure, climate-friendly and affordable energy supply."

Link to the official press statement of DLG (German):

<https://www.energy-decentral.com/de/presse/aktuelle-meldungen#!/news/innovation-awards-der-energydecentral-2021>

Images



Caption:

A functioning energy system of the future requires efficient sector coupling of different systems

Source: 2G Energy AG



Caption:

The agenerator hydrogen series includes an electrical output range from 115 kW to 360 kW with a maximum overall efficiency of 82.2%.

Source: 2G Energy AG

About 2G Energy:

2G Energy AG is one of the leading international manufacturers of combined heat and power plants (CHP) for the decentralized generation and supply of electricity and heat using CHP technology. The 2G product range includes CHP systems with an electrical output between 20 kW and 2,000 kW for operation with natural gas, biogas and other lean gases and biomethane. To date, 2G has successfully installed several thousand CHP plants in 55 countries. In the output range between 50 kW and 550 kW especially, 2G has its own combustion engine concepts with low fuel consumption, high availability and optimized maintenance requirements.

In addition to the headquarters in Heek, Germany, 2G also has a production and sales & service site in St. Augustine, Florida, USA. The customer base ranges from farming to industry, municipalities, residential sector to utility companies and major energy suppliers. The pronounced customer satisfaction is closely connected with the dense service network and the high technical quality and performance of 2G power plants. Through combined heat and power generation, they reach overall efficiency levels of between 85% and far above 90%. 2G is consistently expanding its technological leadership through continuous research and development work in gas motor technology for natural gas, biogas and synthesis gas applications (e.g. hydrogen). In addition to designing and manufacturing CHP systems, the company from Westphalia in Germany offers full solutions from planning and installation to servicing and maintenance services. As part of the energy transition and in modern energy supply concepts, CHP systems are increasingly gaining importance in intelligent networked energy systems, called virtual power plants, due to their decentralization, controllability and predictable availability.

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