

Press release

Munich-based clean-tech startup Electrochaea and Hungarian utility MVM establish power-to-gas joint venture

World's first grid-scale power-to-gas plant developed in Hungary.

Munich/Budapest, October 24, 2016 – The Hungarian utility MVM (Magyar Villamos Művek) and Munich-based clean-tech startup Electrochaea GmbH are building the world's first grid-scale power-to-gas plant together, which has a power consumption of up to 10 megawatts. The plant will be located in Hungary. For this purpose, Electrochaea and the MVM Group-related research and development incubator Smart Future Lab Plc founded the company Power-to-Gas Hungary Ltd (PtG Hungary Ltd). The contracts were signed in Budapest on October 17.

The facility employs a power-to-gas technology based on biological methanation that is unique in the world and was developed by Electrochaea. A proprietary biocatalyst converts low-cost and stranded electricity from renewable energy sources and carbon dioxide into pipeline-grade renewable gas. The core of the system is a selectively evolved microorganism – a methanogenic archaea. The produced biomethane can be stored and directly injected into the existing natural gas grid. The foundations of the technology were established at the University of Chicago. Electrochaea is successfully operating a grid-scale plant with a power consumption of one megawatt in Denmark since April 2016. Further plants in Switzerland and the USA are under construction. In the medium term, plants of up to one gigawatt of capacity are targeted.

Via the research and development incubator Smart Future Lab Plc, a spin-off of the Hungarian MVM Group, the new company PtG Hungary has direct access to the Hungarian electricity and natural gas grid. The MVM Group, which is majority-owned by the Hungarian state, is the largest energy provider in Hungary and is among the 40 largest companies in Central and South-East Europe. By 2020, the MVM Group is aiming for a profit (EBITDA) of around 821 million EUR.

Zsolt Bertalan, Managing Director of the MVM subsidiary Smart Future Lab Plc: “Electrochaea has found a way to solve the problem of storing renewable energy whilst at the same time contributing to the permanent reduction of climate-damaging carbon dioxide. The potential of this disruptive technology is enormous. We are always on the search for such innovative solutions for a safe, clean, reliable and affordable energy supply for today and in the future.”

Mich Hein, Managing Director of Electrochaea GmbH: “Via Smart Future Lab and the joint undertaking PtG Hungary, we will continue to grow very strongly, not just in Hungary, but in the whole of Central Europe as we continue to market our technology worldwide. This is a real milestone in Electrochaea’s development and advances our goal to enable development of more grid scale high-performance plants.”

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About Smart Future Lab Plc: Smart Future Lab is a subsidiary of the Hungarian utility MVM. With its headquarters in Budapest, the technology and business incubator was founded to promote disruptive technologies and startups and to profitably introduce them to the market. CEO is Zsolt Bertalan. In total 8.106 employees work for the MVM Group.

About Electrochaea GmbH: On the basis of biocatalysis, Electrochaea offers a power-to-gas key technology which has been patented internationally. It cost-effectively recycles CO₂ and simultaneously produces storable and usable biomethane from surplus electrical energy. The first industrial scale plant operates successfully in Denmark. Plants of more than one gigawatt of capacity are targeted by 2025. 20 employees work for Electrochaea in Denmark and at the head office in Munich. CEO is Mich Hein.

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