

Start Up Energy Transition Award – The nominated companies



Electrochaea

- Founded in 2014
- Founders: Mich Hein, PhD, Managing Director
- Product: grid-scale carbon & energy storage solution by converting renewable energy and CO₂ into biomethane
- Website: www.electrochaea.com



The idea

To date, the electricity and gas markets have been linked uni-directionally: from gas to power. However, the transition to a 100% renewable energy system is challenging the status quo of electricity generation. Electrochaea's technology reverses this energy flow, to convert electrical power into chemical energy in methane: "Power to Gas". This process allows arbitrage between electricity and gas prices with the greatest possible flexibility to maximize value creation in each side of the market at any point in time.

The biocatalyst-based power-to-gas technology economically recycles CO₂ while simultaneously using stranded electric power to produce biological methane that can be stored on the gas grid. It provides a high efficiency system to convert renewable electrical power and CO₂ into methane, for longterm storage and distribution of renewable energy and CO₂ mitigation.

The technology offers a solution to the pressing problems of excess electricity, lack of green fuels, supply-demand imbalances and need for grid de-congestion beyond software solutions. Increasing amounts of renewable power are not being fully utilized when supply exceeds demand, increasing the need for storing energy. As a result, the global market for energy storage is growing rapidly to supply the need to store excess renewable energy, to further decarbonize the power and transportation sectors and improve grid reliability.

Award Category: Cleantech against Climate Change

Cleantech is doing more with less. It's about decreasing costs, waste, pollution and the use of resources. Which innovative services and technologies can make that happen? Which technologies will help us reduce greenhouse gas emissions.



Mich Hein, PhD

Managing Director

“ By linking the power and gas grids bi-directionally, our process eliminates the time dependency of electricity generation and allows large capacity storage and redistribution of energy with minimal investment in new infrastructure. Consequently, taxpayers and utilities will maximize benefits of the transition to a green economy. ”

The Award

The Start Up Energy Transition Award is the international competition for start-ups and young companies worldwide, who are working on ideas affecting global energy transition and climate change. For the 2017 edition, more than 500 candidates from 66 countries applied for the six different categories. The Start Up Energy Transition is an initiative launched by the Deutsche Energie-Agentur – the German Energy Agency (dena).

Platinum Sponsors



Gold Sponsors



Silver Sponsors



Powered by

