

Hydrogen: AREVA H₂Gen is heading to China to show off their high-tech electrolysis at CHFCE 2017, from the 28th to the 30th August 2017

Stand B 01 Hall E1
<http://en.chfce.com/>

Les Ulis, 24th August 2017 – French manufacturer of Electrolysers, AREVA H₂Gen, will be participating in China's Hydrogen and Fuel Cell Exhibition (CHFCE), the largest Chinese International exhibition regarding hydrogen and this promising energy carrier. With their 60MW hydrogen production plant concept, AREVA H₂Gen have positioned themselves into the market with high potential.

AREVA H₂Gen is working on cutting-edge French technological solutions to produce hydrogen, and store massive quantities of energy with a low carbon cost. Situated in France, close to Paris, the plant creates latest-generation electrolysers to produce hydrogen from water and electricity.

At the CHFCE in Beijing, AREVA H₂Gen will have a stand dedicated to presenting their innovative concept for high capacity (60 MW) electrolysis plants, as well as the heart of their technology, a 1 MW power stack.

The concept for PEM technology electrolysis plants offered by AREVA H₂Gen is aimed at the international market, including those markets which favour the industry. The 60 MW plant will be able to produce hydrogen for industrial applications such as petrochemistry for example.

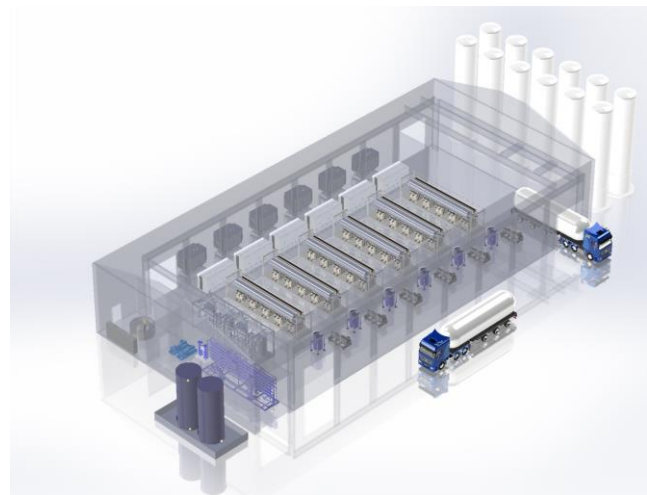
However this type of plant will be essential for promoting renewable energies - Power to Gas - where part of the production is actually lost.

The Chinese market typically requires this type of solution.

For example in China, their large dams lose an impressive quantity of energy which is effectively produced, but not in a usable state. This loss is evaluated at 40 TWh of hydraulic energy which is not injected into the electricity grid. This electricity represents a market of, *at least*, 5GW of electrolysis, which equates to a potential of two hundred projects of around fifty MW.

In Northern Europe, developed at an electrical power network node through which large quantities of renewable energy pass, an electrolysis plant will allow the electricity network to balance. It will absorb and store the ad hoc production surplus, and will then return it as required. The hydrogen stores therefore smooth out the disruptions linked to the intermittency of renewables.

200 to 500 MW wind farms such as those found in Northern Europe for example, could develop an energy storage capacity which represents between 10 and 30% of their rated output. One several dozen MW electrolysis hydrogen production plant will allow the renewable energy producer to store,



and then subsequently value the total energy output which cannot be injected into the network at time T. This will allow for significant added value.

Hydrogen in support of the energy transition

Hydrogen, when it comes from electricity produced by renewable electricity, is a **totally carbon free energy carrier**. Hydrogen allows the surplus of these intermittent energy productions to be stored for long periods of time. AREVA H₂Gen's PEM electrolyzers are the best adapted technological component to storage of kWhs of renewable electricity in the form of hydrogen.

The AREVA H₂Gen PEM (Proton Exchange Membrane) electrolyser comes from more than 25 years of R&D. It is a compact, flexible, simple to use and reduced operational maintenance tool.

As the only French electrolyser manufacturer, AREVA H₂Gen intends to address a rapidly evolving global market. As an industrial manufacturer, the company is responsible for the engineering of projects.

Application sectors are the electricity network services, the clean movement of fuel-fired battery-operated electric vehicles and industrial usages.

The production of hydrogen as an energy carrier represents a strategic potential that the public powers have positively identified. The law on energy transition for green growth and the *health-friendly mobility* solution from the New Industrial France program attests to that.

In fact, the environmental assets of hydrogen and its excellent energy density are allowing us to evolve towards a more sustainable earth. With massive storage of their overproduction, renewable energies will be better integrated into networks. This type of storage facilitates a flexible and decentralised operation.

AREVA H₂Gen grew from the fusion of an R&D company and the electrolysis assets of AREVA in May 2014. They received the support of the ADEME Investment for the Future programme. AREVA H₂Gen is an industrial start-up which regrouped AREVA, ADEME and SMART ENERGIES. It is partnered with many French and European R&D and development programmes.

About:

AREVA H₂Gen, the French leader in electrolysis, manufacture proton exchange membrane electrolyzers (PEM). The hydrogen is produced from water and electricity, preferably originating from renewable energy production (solar and wind power). Their markets consist mainly of the electricity network service sectors, clean mobility (hydrogen fuel cell vehicles) and industrial uses.

Areva H₂Gen press contact: Martine Cartier

Tel : (+33) 139707268 - (+33) 615232859. martine.cartier@cartier-rp.fr

Iconography and information available at: www.cartier-rp.fr - Twitter : [@cartierconseil](https://twitter.com/cartierconseil)

Areva H₂Gen :

Stéphanie Grenault, Marketing and Communications Manager: 0181871253

stephanie.grenault@arevah2gen.com

More information can be found here:

<http://www.arevah2gen.com/fr/>