

FRENCH GUIANA REGION TO INSTALL WORLD'S LARGEST POWER STATION WITH 140 MWh RENEWABLE ENERGY STORAGE.

Power plant will generate 100% renewable energy, delivering steady, competitively-priced electricity supply, 24/7 to over 10,000 households in French Guiana.

Mana, French Guiana, 28 May 2018

Hydrogène de France (HDF Energy) has announced the launch of a world first in the history of renewable energy with the creation of its CEOG project (French Western Guiana Power Plant). The project harnessed via HDF Energy's *Renewstable*[®] solution will deliver 100% clean, affordable and reliable power 24/7 – with no fluctuations and at reduced costs – to an area of more than 10,000 households beset with energy delivery issues.

This major innovation is expected to revolutionise the energy sector and mark the start of a new era in energy delivery. The project is backed by a EUR 90 million investment from the company, private investment partners and leading banks.

HDF Energy is the world's first producer of a stable electricity supply based on intermittent energies. The *Renewstable*[®] solution combines a 55 MW solar farm with the world's largest renewable energy storage solution to provide a ground-breaking 140 MWh, based on hydrogen. This is supported via secondary storage in the form of batteries.

The CEOG will address the crucial need to generate clean, reliable energy and will yield economic benefits for French Guiana. With coordination from public agencies in French Guiana, the plant will be located in a territory hampered by electricity production resources (currently a 20 MW deficit). The *Renewstable*[®] solution will boost the electricity grid for 20 years, by providing a reliable energy source at a lower price than the current real cost of production in Western Guiana, and without any subsidies.

How can a steady source of renewable energy be competitive in relation to conventional electricity production?

The CEOG does not use any fuel or combustible material, which means that it does not use any supply logistics, unlike traditional plants. As for the storage of hydrogen, HDF Energy is proficient in the use of technologies supporting mass storage of energy at a competitive price so that it can be redistributed over a long period (all night and on days with little sunshine and wind). This *Renewstable*[®] plant only uses water and sunshine, and only releases oxygen and steam.

The CEOG will be installed in Mana municipality. Connected to the EDF station in Saint-Laurent-du-Maroni, it will generate a fixed electrical output every day of 10 MW a day until evening and of 3 MW during the night. With the stable production of electricity guaranteed, the service provided by the CEOG will be the same as that of traditional plants, the difference being that there will be no greenhouse gas emissions.

The President of the Regional Council of French Guiana, Rodolphe Alexandre, has welcomed the first-of-a-kind project to support the country's move towards energy independence:

"By offering to provide clean electricity as guaranteed to the inhabitants of French Western Guiana, the CEOG project will meet the objectives for producing renewable energy set out in our Multi-Annual Energy Programme," he says.

"It highlights that French Guiana can aspire to energy independence, which can actually be achieved with the installation of plants of this kind. It also proves that energy transition can be instrumental in creating permanent jobs as part of a healthy economic activity. We will be delighted to have this world first in our country, which will also raise the profile of French Guiana abroad," he continues.

Damien Havard, CEO HDF Energy, also comments:

"The CEOG is an example of our Renewstable® concept, which marks a milestone in energy transition. The dramatic fall in the price of solar and wind energy, combined with the emergence of suitable solutions supporting mass storage of energy, makes it possible to implement projects of this type in a competitive economic environment. HDF Energy is the number one producer in the world of a stable electricity supply based on intermittent energies."

The project is scheduled to start in summer 2019, with commissioning planned for autumn 2020. The CEOG project will create around 100 jobs during the construction phase, with around 30 permanent jobs which cannot be relocated during the 20 years of the plant's operation.

About HDF Energy: creator of the *Renewstable*® electricity plant concept.

Specialising in hydrogen-based technologies, HDF Energy develops, finances, builds and operates industrial energy infrastructures: high-power fuel cells (more than 1 MW), mass storage units connected to an electricity grid, multi-megawatt *Renewstable*® electricity plants generating clean, non-intermittent electricity 24/7.

HDF Energy, a pioneer in its field of activity, will achieve a world first in 2018 in Martinique with its partner in the Caribbean-Guiana region, SARA (Société Anonyme de Raffinerie des Antilles), a subsidiary 71% owned by the RUBIS Group and 29% owned by SOL: the commissioning of a high-power fuel cell (1 MW) using hydrogen, jointly generated by the SARA refinery by converting it to electricity. As a global operator, HDF Energy is working on projects involving multi-megawatt *Renewstable*® electricity plants in a dozen countries.

HDF Energy is working on designing the next generation of high-power fuel cells, as part of an exclusive partnership with a global manufacturer. This new generation of cells, specially designed for applications supporting the mass storage of electricity, will be assembled in France.

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