

SAIPEM: AGREEMENT WITH KITEGEN FOR TECHNOLOGY TO GENERATE POWER FROM HIGH ALTITUDE WIND

San Donato Milanese (Mi), 13 March 2019 - Saipem S.p.A. and KiteGen Venture S.p.A. have signed an agreement to support the development, construction and commercialisation of a technology to produce electricity from high altitude wind. The aim of the agreement is to make it more efficient to generate power from strong and stable wind present at an altitude of over 1000 m from ground level by means of powerful wings (kites), and hence to increase the global use of green energy.

This breakthrough technology, patented by KiteGen, facilitates the harnessing of airborne wind to produce clean energy with kites connected to a ground-based generator that will produce up to 3MW of electricity.

The advantages of this technology versus conventional wind turbines are several. High altitude wind is more present (6-7,000 hours per year) and has a higher and more constant speed (15 m/s or 2 kW/m on average), resulting in a greater capacity factor that is a solution to wind discontinuity. The structure of the kites is much lighter, thus entailing significant savings in fabrication costs. Furthermore, the electricity generated by the kites would have a lower cost, thereby granting access to green energy to a greater number of users. Finally, the generators can be positioned at a shorter distance from each other than the traditional wind turbines, thus obtaining more energy while taking up less space.

KiteGen is at the forefront of the industry and has been a pioneer in the generation of power from kites since the early 2000s.

From among other operators present on the international landscape who are developing high altitude wind devices, Saipem has chosen to support the KiteGen solution on the basis of an in-depth evaluation of its strong points: namely, it has patented all of the possible valid deep offshore architectures of the tropospheric wind farm which are of particular interest to Saipem; it offers a light and secure structure; and, finally, the solutions adopted by KiteGen are protected by 40 patents in over 70 countries.

The specificity of the systems used by KiteGen to manoeuvre and control the sail used for the production of energy (sail release and recovery systems, light and high-strength cables, advanced automation and control systems), perfectly match the knowledge that Saipem has acquired in the performance of traditional deep water business, accelerating on one hand the industrial development of technology and on the other the search for new fields of application of the same technology.

Among the possible developments of the KiteGen technology, Saipem is also working on its possible offshore application since the system, due to its lightness, can also be suitable in deep water, where wind turbines can't be used.

The lightweight features of the KiteGen technology will also allow Saipem to offer its customers hybrid solutions that integrate the production of high-altitude wind power to traditional solutions in the O&G sector. The aim is to accelerate carbon neutrality, improve energy efficiency, and increase the use of renewable energy.