Press release

German company plans using an innovative energy storage technology for Solar Energy distribution in Botswana and Southern Africa with Shumba Energy.

Shumba Energy and the German company H_2-Industries are to work together wherever appropriate on the planned construction of solar power plants with its innovative storage technology. The purpose of the plants is to provide the rural regions in Botswana and the SADC (Southern Africa Development Community) with a sustainable and renewable electricity supply capable of meeting requirements where traditional base load power distribution is unavailable or inaccessible.

Munich, 13 December 2018. Shumba Energy and H_2-Industries have announced their collaboration on the development and construction of the photovoltaic plants to use the innovative energy storage technology, Liquid Organic Hydrogen Carriers (LOHC). The designated locations are in the rural regions of Botswana and other SADC regions. The aim is for the modern photovoltaic plant to provide the regions locally with a reliable supply of electricity having captured renewable energy. With H_2-Industries' LOHC technology, the solar power plants will be able to meet load requirements irrespective of weather conditions.

Shumba Energy has been shortlisted in request for proposal (RFP) processes for the development of a hybrid solar power supply and distribution for rural areas (EOI). The winner of the ultimate tender offer processes will be awarded a contract with state utilities such as Botswana Power Corporation (BPC) and/or the SAPP (Southern African Power Pool) for the supply of electricity. In one of Shumba's project's in SADC in Botswana its main partners are DLO Energy Resources Project Development (Pty) Ltd, and the solar technology specialists Juwi Renewable Energies (Pty) Ltd.

The project is part of Botswana's hybrid rural network programme. Its purpose is to provide isolated rural areas with an electricity supply and improve the security and reliability of the energy supply. It also aims to increase the proportion of new and renewable energy in the country's energy mix and reduce CO_2 emissions. H_2 Industries are a serious partner with Shumba for both domestic scale and industrial grid scale energy storage solution when appropriate.

'We are delighted that the complimentary assets, technologies and development objectives of our two companies are so closely aligned and that we are collaborating on the broadest possible front to collectively, aggressively pursue the objectives of commercialisation of energy storage solutions and delivery for energisation of an essentially power grid starved market and continent,' said Alan M. Clegg, Shumba Chairman and member of the Advisory Board of H_2-Industries.

'Our LOHC technology is ideal for establishing electricity supplies as decentralised solutions, independent of grids – but our products are also designed for grid operation. Together with Shumba Energy, we are laying the foundations for a modern, pollution-free energy supply in the heart of Africa,' said Michael Stusch, H_2-Industries' CEO and founder. H_2-Industries' electricity storage solutions enable the establishment of a secure electricity supply using renewable energy sources, without the pollution caused by CO_2- and NO_x-based energy systems.

As a SADC regional example with its high level of solar irradiance, and an average of 3,200 hours of sunshine each year, there is a great deal of potential for photovoltaic systems in Botswana. Solar irradiance reaches an average level of 6.1 kWh/m^2 per day. Yet the country can only produce enough to meet a quarter of its current energy needs. The mining and tourism industries have the potential to be major consumers of solar power. In recent decades the country's development has been stable, with sustained economic growth of 5 to 10 per cent a year.

About H_2-Industries

H_2-Industries develops innovative, effective and environmentally friendly LOHC energy storage solutions. The company was founded in 2010 by entrepreneur Dipl.-Ing. Michael Stusch and is headquartered in Munich. Research, development and production are based in Hamburg.

H_2-Industries' products make it possible to produce hydrogen using any (renewable) source of electricity and store it chemically and safely at ambient pressure and temperature in the oil-like liquid organic hydrogen carrier (LOHC). LOHC-bonded hydrogen can be easily transported and released again when needed. LOHC technology makes it possible to store large amounts (up to several terawatt hours) of electricity safely and cheaply for the first time. This allows H_2-Industries to make renewable energy available anywhere, 24/7.

The aim of H_2-Industries is to industrialise LOHC technology, thus establishing hydrogen as a safe energy source for the future.

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About Shumba Energy

Shumba Energy is a Botswana based energy development company, listed on the Botswana Stock Exchange and that holds the third largest resource of energy coal permitted for exploitation in the SADC region, over 4.5 billion tonnes, within 4 projects. Shumba has also acquired development rights to a significant land position in Northern Botswana with the highest irradiation zone for capture of solar energy with intent under Botswana government development plans to develop a PV installation with its partners.

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