

Utech Launches Project to Develop Hydrogen Gas for Cooking

The University of Technology (UTech) has launched a research project, aimed at developing a commercially viable hydrogen gas to be used as 'regular' cooking gas by householders across the island.

'The research focuses on the production of hydrogen gas from water. The hydrogen will be used for cooking. The idea is to provide an affordable substitute to LPG cooking gas, to reduce dependence on imported fossil fuels,' Project Manager, Dr. Ruth Potopsingh, explained at the launch, which was held at the Courtleigh Hotel in Kingston today (October 18). Dr. Potopsingh said the project, which is a renewable and sustainable energy intervention, will last for 36 months and will receive approximately 421,000 Euros, representing 85 per cent of the total cost. The project is grant funded by the European Union (EU) and is titled: 'The Application of Solar-Powered Polymer Electrolyte Membrane (PEM) Electrolysers for the Sustainable Production of Hydrogen Gas as fuel for Domestic Cooking'. 'There are some areas which need to be perfected, like reducing the energy cost of splitting the atoms in the water to produce the hydrogen, hence the use of optimised solar panels. Safety is another area, especially the materials used to make the containers to store the gas,' Dr. Potopsingh explained. She noted that the successful outcomes of this research are expected to contribute to the reduction in the energy import bill for Jamaica, and the African, Caribbean and Pacific (ACP) states which embrace the technology; make more resources available to meet other basic socio-economic needs; increase the use of renewable energy resources and reduce deforestation caused by the cutting of trees and charcoal burning for cooking. In the meantime, keynote speaker at the launch, Science, Technology, Energy and Mining Minister, Hon. Phillip Paulwell, said the project is the first of its nature to be undertaken in Jamaica, and comes at a time when initiatives like these are needed and can have a meaningful impact on the society. 'When we consider that in Jamaica, 84 per cent of households use Liquefied Petroleum Gas (LPG), which is distributed in cylinders for cooking, we can see immediately that developing the ability to produce hydrogen gas in a sustainable manner, as a fuel for cooking, could contribute significantly to reduce the national import bill for petroleum products,' the Minister said. He noted that the main beneficiaries of the project will be the end users of the product - Jamaican householders. 'There is also the prospect of commercialization, because this product has the potential to provide opportunities for the development of small manufacturing enterprises,' the Minister pointed out. Noting that the government wants to get Jamaica on a different development track and create jobs, he invited the UTech President to work with him, 'towards the full commercialisation of this and other projects, as quickly as possible.' He congratulated the UTech team, and urged all the parties in the project to deliver. 'Jamaica needs innovators and innovations like this. Through education, research, and innovation, we will solve, not just our energy problem, but, indeed, all our problems,' the Minister said. In his opening remarks, UTech President, Professor the Hon. Errol Morrison, said 'we are not only going to develop a pilot or do research to do the doable, we shall take this into the realm of entrepreneurship, so that having demonstrated, we will develop the industry and create jobs for our graduates and jobs for the people.' He noted that this represents a 'win, win' situation for the university, the government and the people of Jamaica. The project represents the first time that UTech is the lead researcher in an EU project and it won the grant from a competitive field of Universities in the Caribbean, Pacific region and Africa. It will be partnering with the University of the West Indies, the Bureau of Standards Jamaica, the Ministry of Science, Technology, Energy and Mining, and Brunei University. Principal Investigator and Technical Manager of the project, Dr. Earle Wilson, said the key areas to be investigated are: power characterisation of the photo-voltaic system (converting sunlight into electricity); colouring the flame of the burning hydrogen gas so that it can be seen; giving a scent to the hydrogen gas in case of leakage; preventing gas flame blow back; gas storage medium and gas stove modifications. JIS