Ed Davey visits Kingston based European Engineering & Consultancy firm working on first ‘GPS’ to be sent to the moon

By Eli Haidari

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The Liberal Democrat MP for Kingston and Surbiton, Sir Ed Davey, spent Thursday morning at the European Engineering and Consultancy (EEC) base in Surbiton, where engineers are in the midst of ground-breaking work on a 'GPS' which will be sent to the moon in 2024.

The EEC is a specialist engineering company providing world leading electronic and mechanical solutions to space, high technology science and industrial markets.

EEC founder, Dr Ben Kieniewicz, was on hand to guide the Liberal Democrat Leader through a presentation explaining the purpose their global navigation satellite system (GNSS) will serve when it is sent into low orbit around the moon.

The space-born receiver will be flown aboard the European Space Agency's (ESA) Lunar Pathfinder Spacecraft in a low orbit around the moon which is due for launch in 2024.

EEC were granted their contract after approaching the UK Space Agency in a bid to secure funding to bid on the ESA Moonlight Navigation project.

The UK Space Agency pledged their support and after a 400-page bid in conjunction with a Swiss based company (SpacePNT) who would be providing their vast experience in GNSS algorithms, the EEC pulled off a momentous win.

Dr Ben Kieniewicz said: "The world is heading back to the moon. The major space players including NASA, SpaceX and ESA are advancing towards a permanent colony on the moon.

"In preparation for this, ESA has commissioned the Lunar Pathfinder Spacecraft (LPS). This spacecraft will be placed in a low orbit around the moon to provide high speed communications from the moon to the earth.

"We will provide the navigation system for the LPS, which is a world first and we're delighted that EEC has been chosen to be part of it."

Earth-based GPS technology does not currently work on the moon making it impossible to accurately locate satellites in its orbit or astronauts and other objects on the surface.

The LPS aims to change this by flying an ultra-sensitive high-gain antenna receiver pointing towards Earth. The antennas would pick up weak signals from Earth-based

GPS which would leak into space, allowing an accurate position fix timing and velocity anywhere around the moon or on its surface to be generated.

The antenna and its components are being designed, manufactured and tested at the EEC's laboratory in Kingston and Dr Kieniewicz underlined the fact he and his team have the opportunity to achieve unprecedented success in GPS space navigation.

He added: "If successful this will be the first demonstration of navigation using GPS away from the Earth and it will enable precise navigation, timing and positioning on the moon's surface. It is a once in a lifetime opportunity."

EEC have made significant investments to bolster their production capabilities including a new ISO-Class-7 cleanroom and thermal test chamber allowing the company to minimise contamination from unwanted particles during construction.

After Dr Kieniewicz's presentation, the morning meeting was concluded by the EEC founder guiding Mr Davey around the laboratory, including taking him inside the cleaning room to give him a first-hand view on the company's progress.

Prior to the scheduled launch for December 2024, the EEC are contracted to supply two engineering models and one flight set.

For more information on the EEC's projects, visit their website here.