FITUP – Publishable summary (1st reporting period)

19 market-ready fuel cell systems from two suppliers (Electro Power Systems and Future-E) have been produced and installed as UPS (Uninterruptible Power Supply) backup power sources in selected sites across Europe (Italy, Switzerland, and Turkey). Real-world customers from the telecommunications industry use these fuel cell-based systems, with power levels in the 3-12 kW range, in their sites. The project aims at demonstrating a level of technical performance (start-up time, reliability, durability, number of cycles) that qualifies these fuel cell power systems for market entry, thereby accelerating the commercialisation of this technology in Europe and elsewhere.

The demonstration project involves the benchmarking of units from two fuel cell suppliers according to a test protocol developed during the first 6 month of the project itself. The test protocol has been developed for performing extensive tests both in research centres (ICHET and JRC) and in field trials in sites selected by final users in Italy, Switzerland and in Turkey. The performance will be logged and analysed to draw conclusions regarding commercial viability and degree to which they meet customer requirements, as well as suggesting areas for improvement. A lifecycle analysis using data from the project will be carried out to determine economic and environmental value proposition over incumbent technologies such as batteries and/or diesel generators.

A the end of the project the systems manufacturers will use the results of the tests, and obtain valuable first hand feedback from customers, optimise their systems as needed, and demonstrate commercial viability. On the other hand, final users from the telecommunications industry will experience first-hand the advantages of fuel cells for their applications under real world conditions.

The optimisation of the fuel cell systems produced is evaluated since the start of the manufacturing to the completion of installations, permitting to better understand and analyze difficulties and risks associated to the use of such systems. Using the expert advice of TÜV Süd the project is also studying a common certification procedure concerning the Installation Process valid in all countries where the fuel cells have been installed

The dissemination of project progress is geared mostly towards getting the word out to final users through presentations at specialised conferences, thus improving the visibility of market-ready fuel cells and pave the way for market penetration.
For achieving the above mentioned objectives, a web-site has been created (www.fitup-project.eu) and a dissemination and communication guideline has been developed in order to standardize and manage all communication and publications among project consortium and towards outer audience.

Finally the participation and representation of final users in trade fairs and other public events on the fuel cells and telecommunications markets (such as Hannover Fair, GSMA) and in official FCH-JU events permitted the project consortium to publish posters and information sheets to inform of the objectives and results of the FITUP project and therefore to get the project known to the broader audience.

Below some pictures of the systems installation performed within the fist year of project.