Smart Meter Testing Made Easy with New Portable Devices

There is a smart movement in the energy world which has upgraded cities to smart cities, meters to smart meter and grids to smart grids. Optimization has become a driving force in the quest to ensure every part of the energy realm is functioning at its highest capacity, and companies like MTE Meter Test Equipment AG have shaped their products based on the current demands of the energy market. With many countries worldwide required to advance the rollout of installation of smart meters, more advanced technology and intricate ways of solving testing challenges have become a necessity. There also does not seem to be a slowdown of installations in sight. In fact, a new study estimates '572.3 million smart electricity meters will be deployed in China, India, Japan, and South Korea during 2021–2025.'

With the Asian smart meter market expanding rapidly, it will be critical for utility companies and others involved in the rollout to find the right partner with the know-how to attempt to satisfy any challenges of this rapid transition. Companies such as MTE are leading the change with innovative technologies founded on decades of expert knowledge. The family-owned company, MTE, celebrates its 25th anniversary this year, but its history goes back much further to the early stages of Landis+Gyr in Switzerland. "Our roots come from Landis+Gyr, which built test equipment for more than 60 years. Nowadays, this long-term expertise meets young and ambitious R&D team spirit, which finally ends up in products like the genX family," said Horst Adams, Regional Sales Manager of MTE. The recently launched genX products are a variety of high precision test and monitoring systems for clients such as utilities, meter test laboratories, industries and meter manufacturers. "Monitoring of meter installations as analysis of local mains conditions, all kind of electrical parameters and associated circuits are very important. These features are supported by a modern, innovative operation tool, such as huge storage capabilities, integrated user manual and web server, touch screen, easy and self-explanatory operation for young users & engineers," according to Adams.

Some of the standout MTE offerings are the newest portable devices created for ease of use and due to an unfulfilled demand in the market. The produced devices have state-of-the-art functions, such as a built-in web server and various data transfer and communication possibilities. These options are user-friendly with easy operation and genX firmware on all devices. MTE portable devices are used for several applications, and they can vary from country to country and which depends on the privatization stage of the energy industry, sociological structures, legal structures, introduction of smart meters and electricity price. Speaking of cost, another benefit of MTE portables is that they potentially pay for themselves over time. "With introduction of an onsite testing program, the utilities find a lot of irregularities, particularly connection problems… It results in big financial losses. Hence, the return of investment into portables is very high," Adams said.

When we consider the reasons for testing on-site, according to Adams, they demonstrate fair treatment of end-customers, handling customer complaints, and reduction of non-technical losses inclusive of:

- Energy theft
- Detection of metering tampering
- Poor meter quality
- Hacking of meters
- Mistakes in meter and CT/PT connections
- Detecting wrong CT ratios
- Fraud attempts through CT burden increasing

In the end, it is not enough to simply install smart meter without any foresight on how the team will utilize them. It is absolutely necessary to train staff and equip them with the right tools such as MTE portables. After educating the users, only then can utilities expect to conquer the trials in the field such as clarification of results, installation errors, or fraud detecting, especially when they employ MTE portables as their secret weapon.