



Laborelec
RESEARCH & INNOVATION

POWER QUALITY MONITORING SERVICES FOR GRID OPERATORS

Rapid detection and analysis of Grid Operator's power quality issues

It is essential for Grid operators to maintain a consistently high level of power quality in their network, and to monitor the power quality continuously. This is becoming increasingly challenging, given the growing presence of distributed power generation systems and the variety of power electronics devices connected to the network. ENGIE Laborelec provides state-of-the-art power quality monitoring services to help Grid Operators invest wisely in monitoring equipment and rapidly detect and analyse any issue that might occur.

POWER QUALITY MONITORING: INCREASINGLY NEEDED, MORE COMPLEX THAN EVER

While regulatory authorities require the power quality in transmission and distribution grids to be monitored continuously, Grid Operators find this increasingly challenging. Indeed, the steady increase in decentralized production such as PV and wind power, and the growing number of industrial and domestic applications requiring power electronics can **negatively impact the power quality in various ways**. In addition, power quality monitoring has become a **field of special expertise**, given the diversity of potential quality issues and the growing range of monitoring equipment available on the market.

PUTTING THE HARDWARE IN PLACE AND REPORTING ON ANY ISSUE THAT MIGHT OCCUR

Engie Laborelec provides a comprehensive service to unburden Grid Operators from this monitoring challenge. Our experts give independent advice on the equipment that is needed, provide installation assistance, and collect all relevant monitoring data on a permanent basis. They also provide comprehensive reporting services

through an online power quality portal, a weekly spreadsheet report and a yearly PDF report. Tailored reports can be provided, evaluating the power quality of a particular site under suspicion or the performance of specific assets within the grid.

Laborelec also monitors the installed equipment, reporting any defect that might happen and providing advice for maintenance or upgrade.

BENEFITS

- **Complete monitoring service**
We allow Grid Operators to outsource their power quality monitoring activities completely.
- **Independent from equipment manufacturers**
Since we are manufacturer-independent, we always work with the best material and tools available on the market.
- **Peace of mind**
We also monitor and maintain the installed equipment, providing complete peace of mind.

ADDED VALUE

Our team of experts has decades of valuable experience in monitoring the power quality in transmission, distribution grids and industrial power grids all over the world.

HOW IT WORKS

Laborelec's power quality monitoring service for Grid Operators includes the following activities.

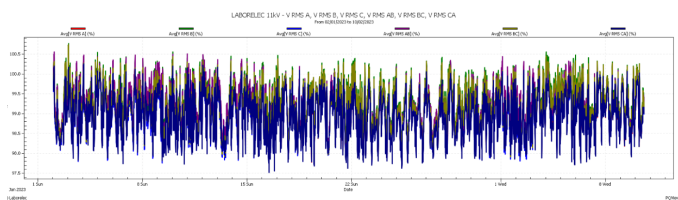
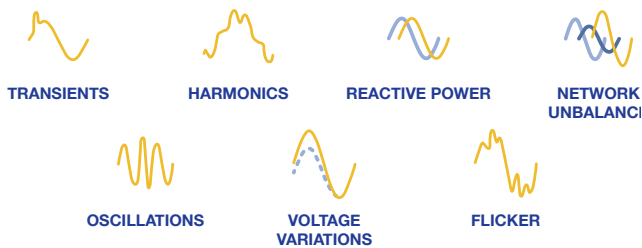
INDEPENDENT HARDWARE ADVICE AND SUPPORT

Our experts continuously monitor the market of power quality monitoring equipment, assessing their levels of quality, robustness, and compliance. Based on this knowledge, we give tailored advice to Grid Operators as to what hardware would best be purchased. The service includes assisting Grid Operators in developing specifications for hardware RFPs or framework agreements. We also assist Grid Operators remotely during commissioning tests.

In addition to this upfront advice, we also monitor the installed equipment, reporting any defect that might happen and providing advice for maintenance or upgrade.

CONTINUOUS POWER QUALITY MONITORING

All data are monitored 24/7. We also collect, validate, and backup the data from all monitoring devices each day. Our software solution analyses the data and signals any permanent voltage quality issue (magnitude, unbalance, harmonics, flicker) and events (dip, swell or interruption).

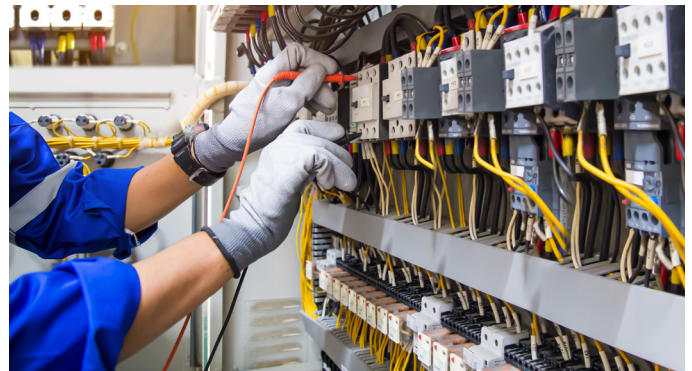


ONLINE PORTAL, AND WEEKLY AND YEARLY REPORTS

All monitoring data are made available through an online power quality portal. We also provide two standard reports:

- A weekly Excel report, listing the main power quality indices and clearly indicating any exceedance of the standard. This allows the Grid Operator to quickly monitor the entire fleet of appliances each week.
- An annual PDF report, providing a comprehensive statistical analysis of the equipment fleet compared to previous years.

Tailored reports can be provided, for example to evaluate the power quality of a particular site under suspicion or to underpin strategic advice with respect to the performance of specific assets within the grid.



**WOULD YOU LIKE
TO KNOW MORE?**

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