

Country: Switzerland  
**Project name:** Netz Qualitäts System (NQS)  
**Company:** ewz  
Market segment: Power distribution  
Software editor: NetCeler (based on IVPower platform)  
Type of application: Web-based applications for power system fault analysis, equipment monitoring and power quality monitoring.



### Project Description: Web-based integrated solution for power system monitoring

ewz is a power producer and a distribution company, mainly in the City of Zürich. The company decided in 2009 to install UMG devices in selected transformer stations, at the low-voltage level, in order to monitor load profiles and the power availability and power quality. The NQS software collects values from these UMG devices, analyses them and informs the users through a web application, wall display units and e-mail. Among the features offered :

- Visualization of online and archive measurements as tables, load curves...
- Power quality monitoring, i.e. plots of PQ values, visualization of vdips and swells, calculation of quality margin, weekly reports (EN 50160)...
- Monitoring of systems and equipments : under-frequency load shedding, monitoring of power factor, islanding, phase angles...

### Type / Quantity of Measurement Devices:

Currently about 30 UMG devices (mainly UMG 605, and UMG 511+ UMG 503 combinations, to be expanded to approximately 120 devices.

### Communication:

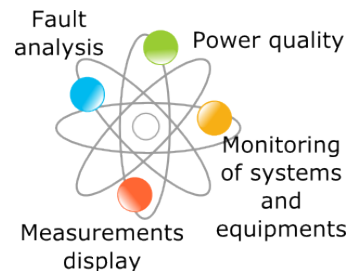
Modbus TCP (for online values) and FTP over TCP/IP.

### Software:

NQS is a Web application running on a Windows Server. It is fully integrated in the IT environment and it is compliant with LDAP, ORACLE, VMWare, Internet Explorer (from version 6 to 9). NQS is based on NetCeler's IVPower product, which has been continuously improved for eight years.

### Customer Benefits:

Various kinds of users see application-specific and role-based overviews of the power system which are all based on the same family of multiple-purpose devices. Applications include simple PQ indicators (total harmonic distortion, asymmetry, voltage events) and also Power Factor monitoring, which ewz uses to control reactive power flow in real time in order to optimize costs.



The screenshot shows the 'Power Quality' section of the NQS software. It displays a table with columns for 'Name', 'Unit', 'Status', 'Parameter', and 'Unit'. The table lists various power quality measurement points like '0101', '0102', etc.

