

arteche

TECHNICAL CONSULTANCY FOR RENEWABLE ENERGY GRID CONNECTION



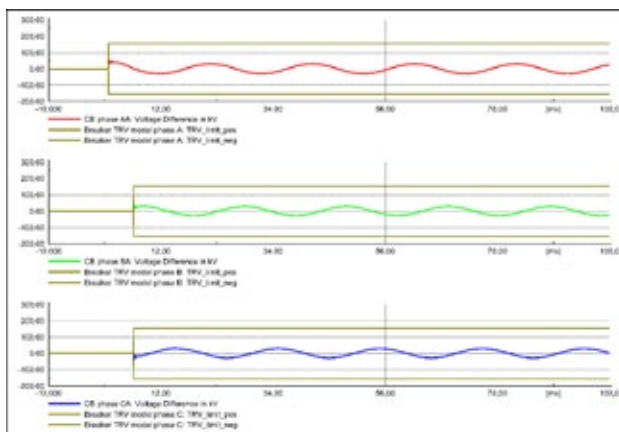
Technical consultancy

Electrical studies make it possible to guarantee and comply with grid code regulations, to optimize the investment in an installation and to improve the target performance. An exhaustive analysis of the initial data and a correct diagnosis will help provide an optimal specification of the solution, as well as of each individual component, in order to comply not only with the regulatory requirements, but also with the specific needs.

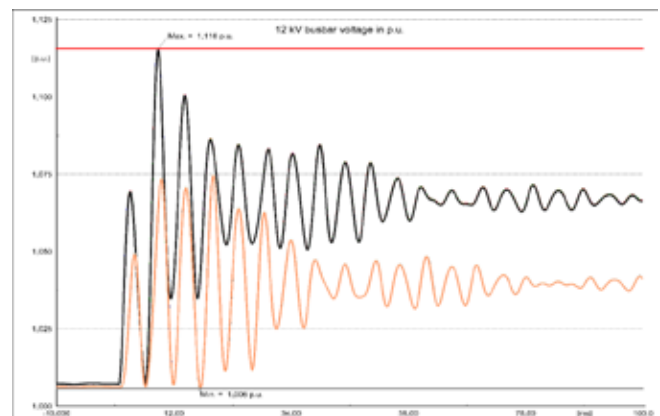
Arteche has a dedicated team of technicians who specialize in Technical Analysis and Studies, backed up by the most advanced and powerful analysis and simulation tools for the diagnosis, proposal, and validation of solutions. In addition, our qualified field technicians and portable equipment enable us to carry out on-site measurements, which support the validation and accuracy of the studies.

More than a decade providing solutions for grid code compliance in different countries such as Australia, Chile, Peru, Mexico, South Africa, Dubai, Jordan, Spain, etc.

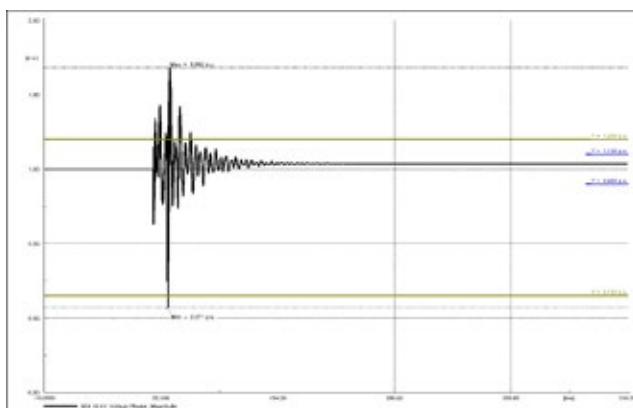
Arteche is able to perform the complete package of studies required in Spain by the new Technical Supervision Standard (NTS). Performing these simulations and studies are an indispensable requirement for obtaining the Final Operational Notification (FON) and the Electricity Generation Module Certificate (MGE Certificate) according to EU Regulation 2016/631.



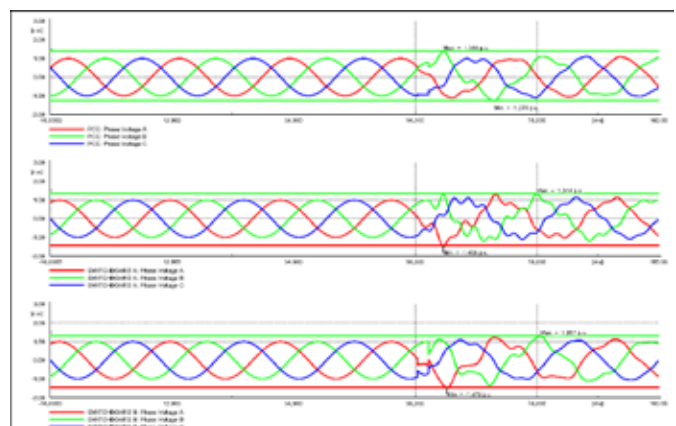
Validation of circuit-breaker values (TRV study)



Simulation of busbar surges



Surge simulation



Simulation of busbar transients

Services offered

Arteche offers you support in:

- › System modeling & simulation: Wind and solar farms, heavy Industry, energy storage systems (BESS)
- › Electric studies, analyses and diagnostics in Medium & High Voltage
- › On-site data acquisition for correct power quality analysis:
 - › Power quality: Harmonics, flicker and voltage unbalance
 - › Power flow (Steady-state): Reactive power compensation and power factor correction
 - › Power flow (Dynamic), Voltage dips, LVRT, HVRT, P-f regulation, Q-V Regulation
 - › Electric losses and voltage drops in installations
 - › Rapid voltage changes (RVC)
 - › Dynamic transients (Switching on and off [TRV])
 - › Short-Circuit/Short-Circuit Impedance
 - › Grid code compliance verification and report (final measurements).
- › Power grid state/ Grid code compliance reports
- › Operation and Maintenance Training

Benefits

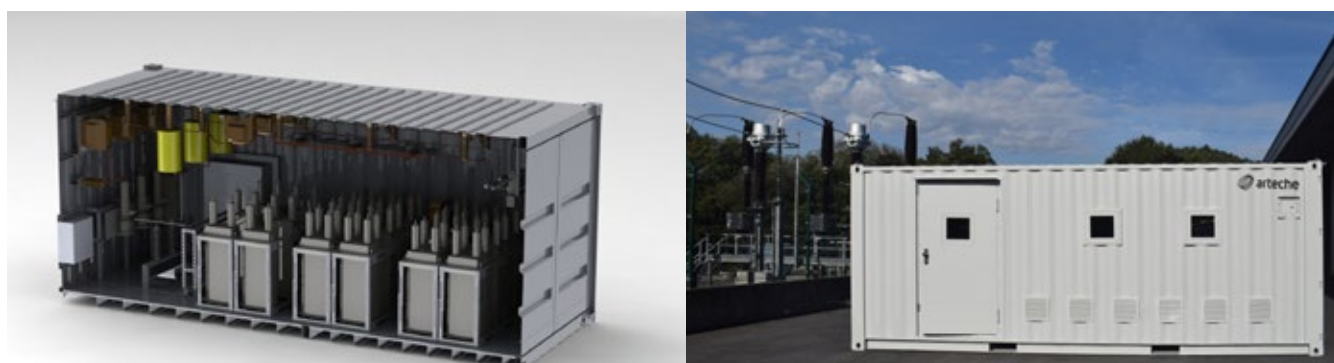
A correct analysis, diagnosis and study of your system will allow you to:

- › Comply with grid connection requirements, avoiding possible penalties by implementing the proposed solutions.
- › Optimize the installation investment
- › Stabilize loads and increase network reliability
- › Increase the equipment's useful life
- › Reduce energy consumption

Furthermore, by providing a global solution for measurements, studies, systems and equipment, we will guarantee the correct operation and optimization of all the milestones of the network connection project.

Conclusion

Arteche has a vast experience in projects for renewable energy generation as well as in electrical substations and heavy industry. An engineering team dedicated to elaborating studies in medium and high voltage installations, together with a team of professionals in the field to carry out the necessary measurements provide high added-value answers adapted to the requirements of each project.



Capacitor Bank and Harmonic Filter in a Containerized Solution

