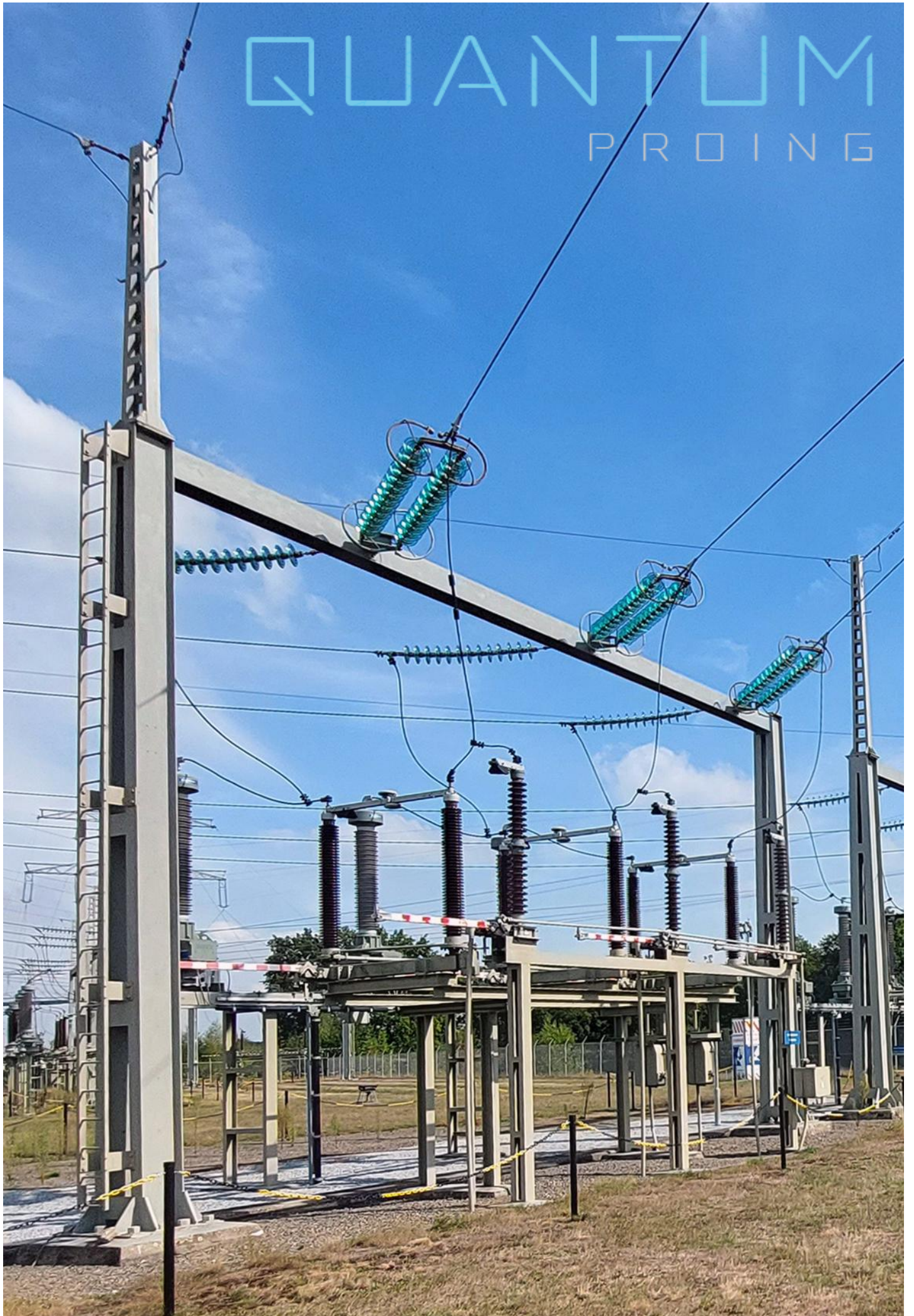


QUANTUM PROING



CONTENT

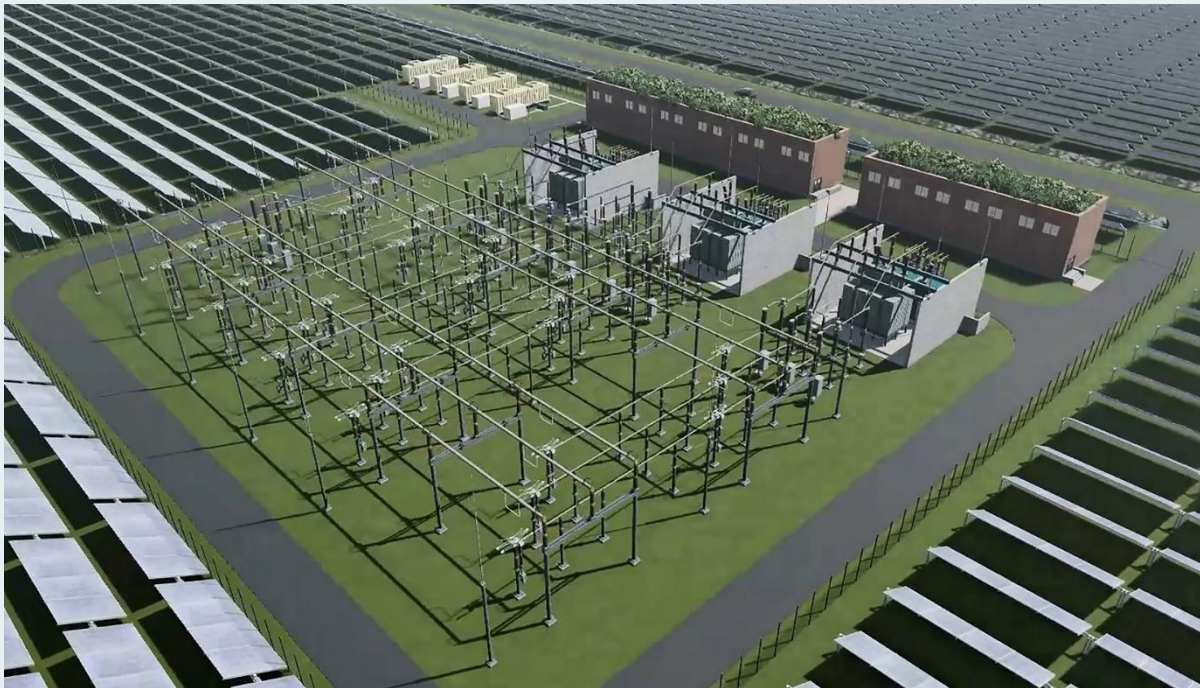
WHO WE ARE.....	2
Introduction	2
Our work methodology	2
Quality assurance.....	3
Data Management.....	3
ORGANIZATION	4
SERVICES	5
Primary	5
Secondary.....	5
Tertiary design	5
Automation (under development).....	5
PARTNER & CLIENTS	6
Strategic partner - Emmett Green Engineering (The Netherlands)	6
Clients	6
HIGHLIGHTED PROJECTS.....	7
Breda 150kV	7
Goes de Poel 150kV	7
Robbenplaat 220kV & Weiwerd 220kV	7
EBoiler 24kV, 160MVA.....	8
Twence 110kV	8
Delesto 220kV	8
Geertruidenberg 150kV.....	9
Geertruidenberg E-Boiler 150/20kV	9
CONTACT	10

WHO WE ARE

Introduction

Founded in 2020 in Belgrade, Serbia, Quantum Proing is engineering company made of highly motivated and reliable engineers. Our focus is design of AC electrical systems (up to 500kV) and accompanying mechanical structures for use in transmission, distribution and heavy industry.

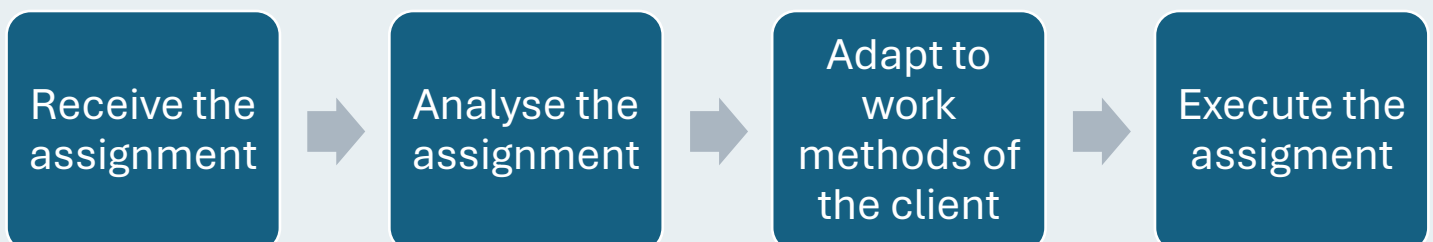
Our mission is to support our clients through all phases of each project (from initial design to energization) and proving ourselves as reliable and long-term partners.



Our work methodology

The work of our engineers is based on the following:

- Familiarization with and full implementation of the client's internal standards, document management system and philosophy of work.
- Familiarization and adaptation to the technical standards of the country in which project is based.
- Familiarization with the project requirements, available documentation and pointing out solutions that optimize the work of the client's system, increase the robustness of the system, shorten the time of preparation of technical documentation or reduce the cost of preparation of documentation.



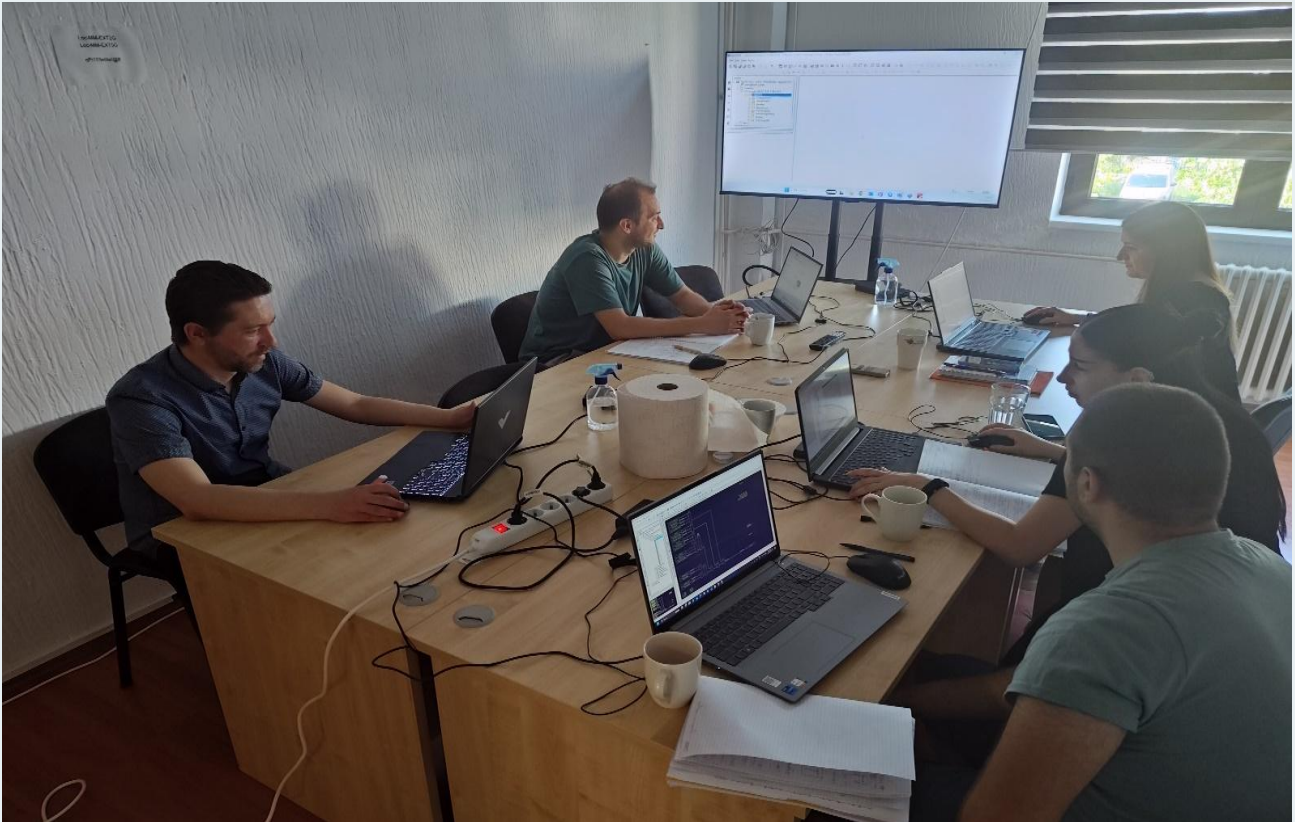
Quality assurance

Our engineers gained their experience by working on different projects around the world (UK, Belgium, Netherland, Serbia, Ethiopia, Middle East, Peru, Chile). This gives us the unique ability to quickly adapt to any standard or method of work.



We ensure continuous quality by:

- Staying up to date with the latest specialized software, technical innovations and international standards.
- Constant knowledge transfer among teammates.
- Reduction of our administration & management and directly connecting our engineers to client coordinators/lead engineers/design engineers. Due to this, the required time for the completion of the project is reduced significantly and quality is increased.
- Long term planning.
- Implementing IOS 9001 quality management system (certificate can be seen here: [ISO9001:2015](#))

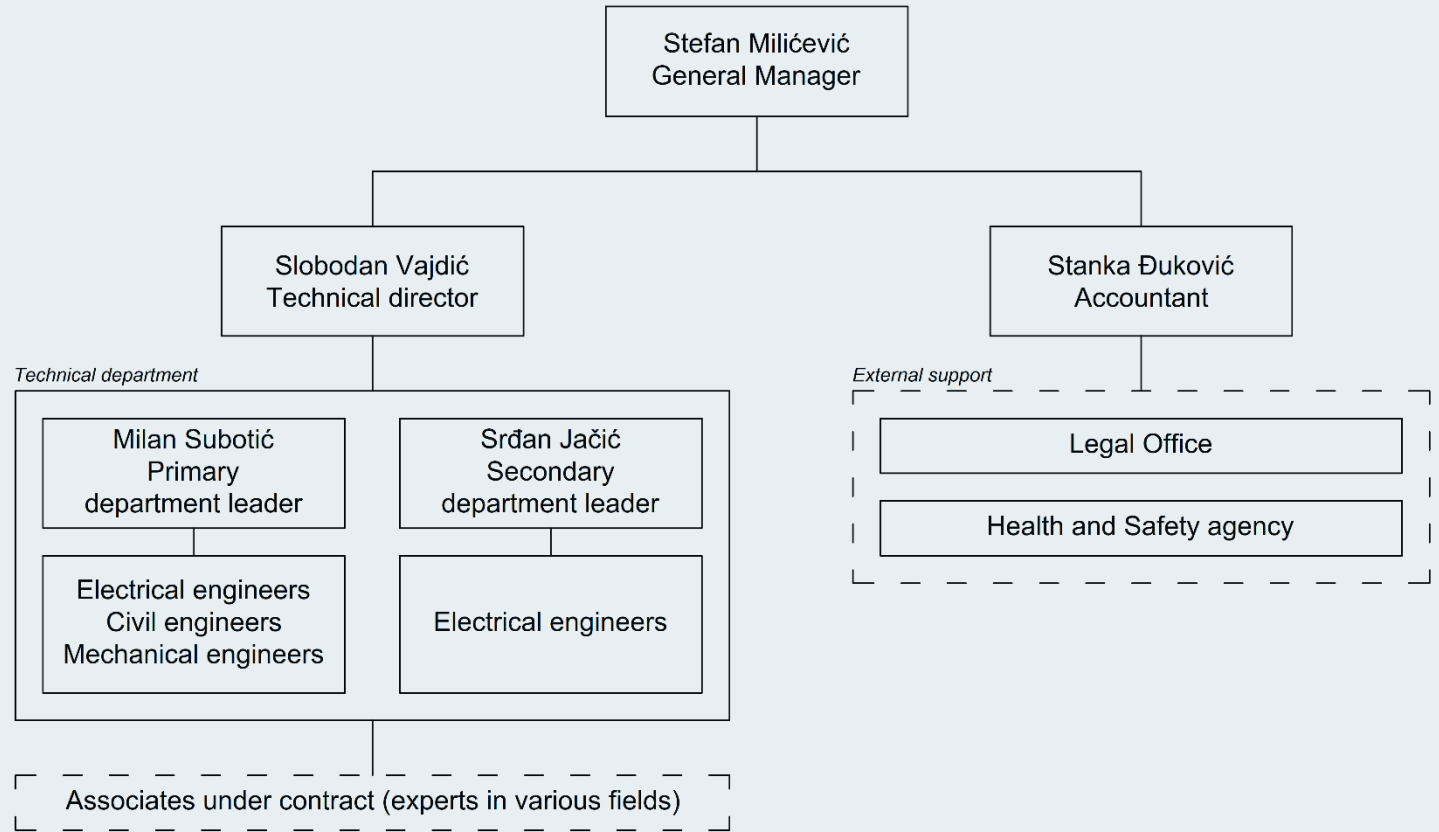


Data Management



Nowadays, data protection is an imperative in business. We decided to store all project documentation on CLOUD and for that we chose Microsoft SharePoint. Thanks to the technical solutions provided by Microsoft, we have increased the level of Cyber Security, we are provided with easy and simple access to data from any point on the planet and easy sharing documentation with the client. Although Microsoft provides a high level of Cyber Security, we decided to back up the entire documentation for each project ourselves. We do this once a week, and we store it locally on an external hard drive. We leave nothing to chance.

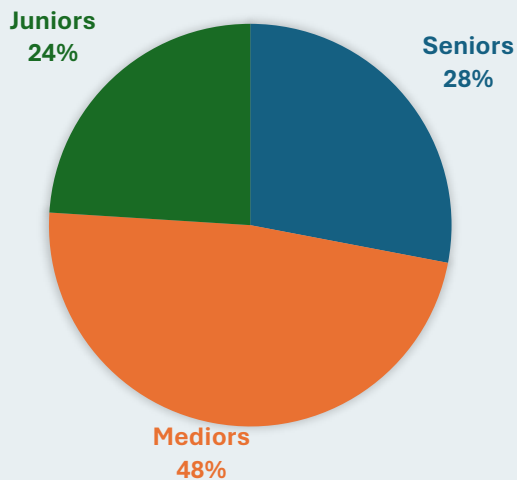
ORGANIZATION



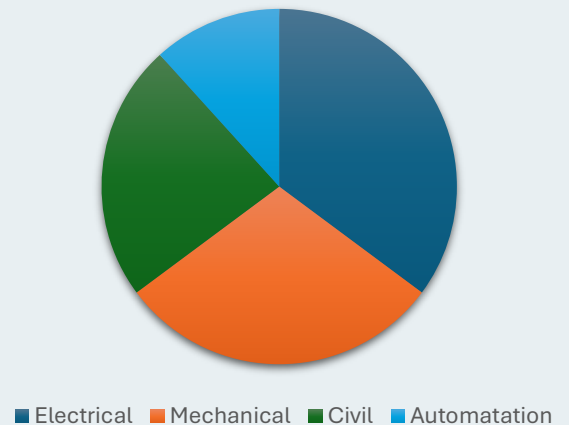
Quantum Proing employs electrical, civil and mechanical engineers, but also technicians and professional accountant. The company outsources services which are not a core business, such as legal office, IT and other maintenance services.

Quantum Proing also employs experts, specialists in different engineering fields, on a project basis, but most of them are engaged regularly, making them a long-term associates and friends of the company.

QUANTUM PROING STAFF



Associates under contract



SERVICES

Primary

- System studies (under development)
- Layout 2D/3D & Side Views
- CDM and Hazard drawings
- Point cloud conversion
- Steel supports design
- Span design
- Earthing & Lightning protection
- Cable rout layouts & sections
- Interfaces with civil
- Primary equipment selection
- 3D modeling
- Support to construction team
- Reverse engineering
- As built

Secondary

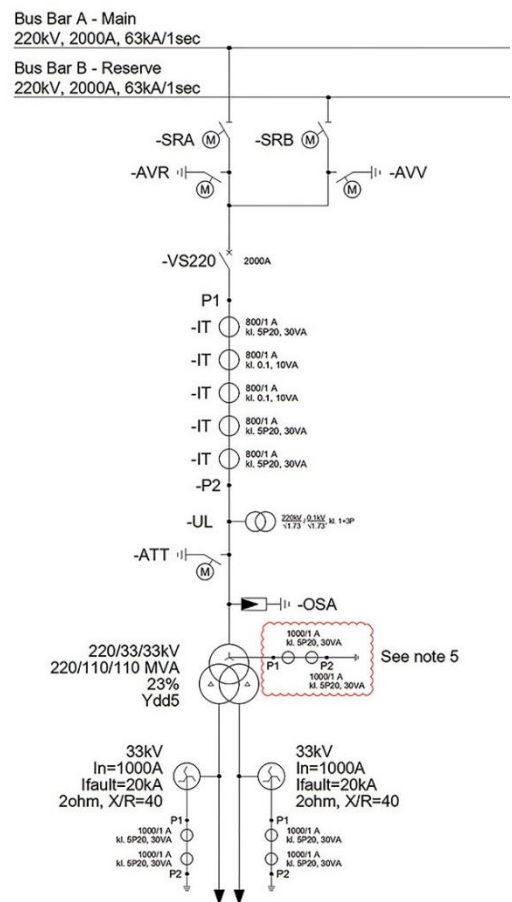
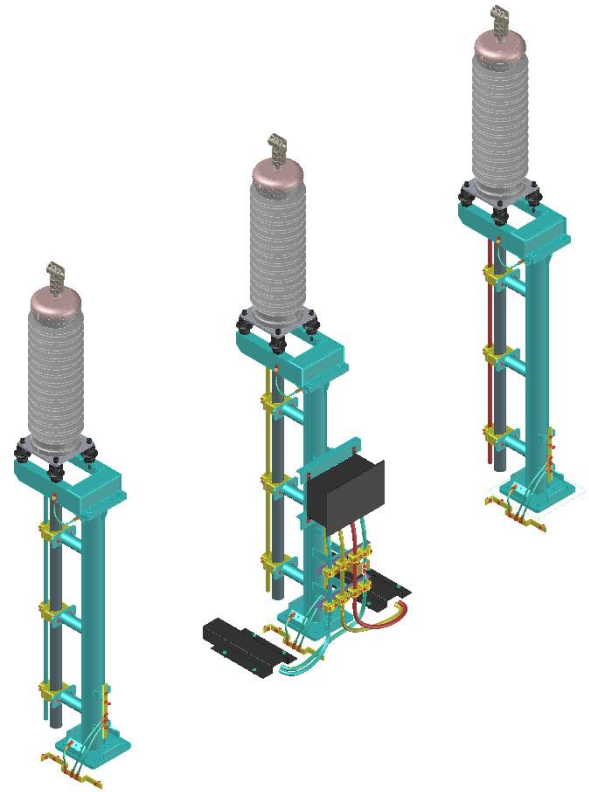
- SLD & Protection line diagrams
- Logical/Functional diagrams
- Circuit, Terminal and Wiring diagrams
- Cable Lists & Cable Core Sheets
- Secondary panel layouts
- Equipment selection
- Protection coordination studies (under development)
- Protection relay parameterization (under development)
- Reverse engineering
- As Built

Tertiary design

- LV AC & DC distribution systems
- Voltage Drop & LV Cable sizing calc.
- Battery capacity calculations
- Control building layout
- Tertiary panels design
- Reverse engineering
- As Built

Automation (under development)

- PLC Programming
- SCADA Programming
- Substation LAN Architecture Design
- Substation Cyber Security



PARTNER & CLIENTS

Strategic partner - Emmett Green Engineering (The Netherlands)

Emmett Green Engineering (EGE) makes high-quality, electrical designs for energy generation, transport, distribution & storage.



EGE designs according to the principles of systems engineering with the aim of making smart designs. A smart design can be realized efficiently and leads to an application that is easy and safe to maintain and that works effectively and efficiently throughout its entire life cycle.

Our method starts with determining the requirements that the installation must meet in order to function properly throughout its entire life cycle. We do this together with the client or end customer. Based on this, our professionals design a suitable and feasible solution. In doing so, we always look at the integral operation and interfaces with other installations or disciplines.

The engineering team consists of highly skilled engineers with many years of knowledge and experience in the field of design and realization of different projects.

Clients



HIGHLIGHTED PROJECTS

Breda 150kV

Client: EGE/TenneT
(2022-2025)

Scope of work: Basic & Detail design

Basic design scope:

- Preparation of preliminary SLD in stages for substation renovation,
- Preparation of 2D Layouts in stages for substation renovation,
- Load forces calculations for new and existing equipment (existing, temporary and final situation).

Detail design scope:

- Preparation of SLD in stages,
- Preparation of layout 2D/3D in stages,
- Design of new earthing grid in stages,
- Design of a new lightning protection system in stages,
- Design of control & protection systems for mobile GIS units for temporary stage,
- Design of control & protection systems for AIS system in final situation,
- Design of tertiary systems (telecom, AC, DC, Batteries) for temp and final stage,
- LV cable calculation for temp and final stage,
- HV, LV and control cables routing in stages.

Goes de Poel 150kV

Client: EGE/TenneT
(2024-2025)

Scope of work: Detail design, Transformer bay and transformer box design

Description:

- Preparation of layout in 2D for transformer bay,
- Design of transformer box and accompanying equipment,
- Design of primary equipment's steel support structures,
- Load forces calculations for new equipment.

Robbenplaat 220kV & Weiwerd 220kV

Client: EGE/TenneT
(2023-2024)

Scope of work: Revers engineering/As Built

Description:

Substations Robbenplaat & Weiwerd do not poses complete documentation. The scope of work is recording the existing situation on site, collecting all available documentation and recreating documentation based on available information.

EBoiler 24kV, 160MVA

Client: EGE/Vattenfall

(2022-2024)

Scope of work: Detail design, adding new 24kV system for supply of three new EBoilers (150MVA)

Description:

- SLD update,
- Preparation of 2D and 3D layouts, structural analysis and workshop drawings of steel structures for carrying IPB and CBD,
- Update of existing earthing grid for new transformer to be placed,
- Design of transformer's lightning protection,
- Design of control, protection, interface and synchronization panels for insulation transformer,
- MV Cables calculations and selection,
- Protection coordination study,
- Preparation of technical specifications for equipment ordering (MV Switchgear, Power Transformer, Protection relays).

Twence 110kV

Client: EGE/Twence

(2022-2023)

Scope of work: Detail design, separation of ownership between grid owner and private company

Scope:

- Complete drawing package for building new control/protection panels for two 110/10kV transformers,
- Complete package for disassembling existing transformer control/protection panels,
- Complete package for the implementation of new control protection panels in existing system.

Delesto 220kV

Client: EGE/Nobian/TenneT

(2024-ongoing)

Scope of work: Detail design, separation of ownership between grid owner and private company

Scope:

- Preparation of technical documentation for replacement of existing secondary control & protection panels with new panels which are going to allow independent control for the owners of HV and MV part.

Geertruidenberg 150kV

Client: EGE/TenneT

(2025-ongoing)

Scope of work: Detail design for extending the existing substation with 6 new line bays

Description:

- SLD
- Layouts and sections
- Extension of existing earth grid
- Design of new primary equipment steel supports (3D models, SC forces calculations, structural study, overview and workshop drawings, clamps summary)
- Design of new gantry
- Design of complete control & protection systems for new bays
- Design of complete tertiary systems (telecom, AC, DC, Batteries)
- Incorporation of new bays in existing BBP system and interlocking scheme
- Cable routing
- Block diagrams

Geertruidenberg E-Boiler 150/20kV

Client: EGE/ENN

(2025-ongoing)

Scope of work: Detail design for extending the existing substation with 6 new line bays

Description:

- SLD/KLD
- Layouts and sections
- Design of new primary equipment steel supports (3D models, SC forces calculations, structural study, overview and workshop drawings, clamps summary)
- Design of earth grid and lightning protection
- Design of complete control & protection systems for new TR bay
- Design of complete tertiary systems (AC, DC, Batteries)
- Design of control, protection and interface panels on remote ends
- Cable routing
- Block diagrams

CONTACT



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