



40

**YEARS OF
SUSTAINABLE
DEVELOPMENT**



Annual Report 2011

ROMELECTRO

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Company Profile

With over 40 years of experience on the domestic and international markets, Romelectro is currently one of Romania's most important EPC contractors, covering the entire energy chain: from generation to transmission, distribution and supply.

OUR BUSINESS AREAS

Thermal Power



Environmental Protection



Cogeneration



Hydro Power



Power Transmission & Distribution



OUR ROLE ON THE MARKET

- EPC Contractor
- Project Developer & Local Strategic Partner
- Investor
- Electricity trader

Referring to our Group's competencies, our references speak on their own: elaborate design and engineering for over 15,000 MW in conventional and nuclear power plants, representing 90% of Romania's total installed capacity, complex rehabilitation programs for over 3,000 MW, design and engineering for more than 150 high voltage substations and approximately 22,000 km of OHTLs designed or executed.

While in the past years most projects covered the Romanian market, our international experience is also considerable. Romelectro is known on all continents as EPC contractor and equipment supplier. Vafregan and Saveh dams in Iran, Ksob and El Fakia dams in Algeria, 10,000 km of OHTLs in Iran, Iraq, Philippines, Jordan, Syria, Algeria, Morocco and Nigeria, are just some of the most important projects in our portfolio.

Today, Romelectro group of companies counts over 1,200 employees, out of which 800 are specialized exclusively in design and engineering. Being supported by the most elaborate engineering

structure in Romania, our competencies have extended continuously. Over the past years, Romelectro has become Romania's key EPC Contractor in environmental projects, successfully developing ash and slag removal and storage in dense slurry systems, low NO_x burner projects, and lately, promoting flue gas desulphurization projects for coal power plants.

Renewable energy is another business line of great importance to our group of companies. Specialized teams of engineers cover virtually all market-available technologies.

The Group's references and competencies make Romelectro the most preferred local strategic partner on the Romanian market. Moreover, our strategic partnerships and agreements with the world's most important equipment, technology and know-how suppliers offer the necessary advantages for consolidating the export activity on very competitive grounds.

OUR OFFER

- Studies, research and development
- Technical and commercial consultancy
- Basic and Detailed Engineering
- Equipment, parts and know-how supplier
- Erection services for equipments and installations
- Civil works
- Site supervision and management
- Commissioning
- Operation monitoring during guarantee period

Chairman's Statement



“The state of the world of tomorrow will be defined by emerging solutions regarding the energy and environment dyad.

Romelectro has the instruments for addressing these challenges and provides answers to current and future needs in line with the energy and environment related strategies and the economic priorities required by our clients and by our partners.”

Dear Shareholders, Partners and Colleagues,

It is an honor to address to you today, when Romelectro celebrates 40 years of sustainable and remarkable development. Our creative and dedicated team of experts, constant investment in new technologies and our steady commitment to environmental protection issues were the key vectors defining the company's profile of today. With activity in more than 20 countries and covering the entire energy chain, from power generation to power transmission and distribution, Romelectro became in the past years the most preferred local partner on the local and regional market, able to deliver sustainable and market oriented solutions in the energy field. I would like to thank you all for your active efforts based on self improvement and innovation oriented attitude.

The competitiveness and overall success of an economy is linked to its capacity to address energy challenges and actively use opportunities.

Companies, technologies and policies come together to create a mix of conditions for an energy efficient, financially sound, and environmentally and socially responsible future. Finding the right and efficient direction toward a sustainable and fair economic and social development was a central concern for Romelectro and for its group of companies.

In particular, Romelectro is one of the leaders of the market for implementing the environmental protection related goals set by the EU Energy 2020, as well as those set by the EU Energy 2050 Roadmap. As our projects are focused on promoting the most advanced technologies, Romelectro's solutions related to environmental protection became a benchmark on the domestic and on the regional energy market. Moreover, as we look into the future, we see the company continuing to develop the technological dimension of our company, being always ready for new economic and environmental challenges.

We have promoted best solutions in low NO_x burners for gas fired

boilers. We were first to develop sustainable technologies for ash and slag removal that were adopted and multiplied on the local market. In 2011, we started our first flue gas desulphurization project. Also, works related to the traditional core business, such as transport and distribution of electricity, were continuously expanded while new areas, such as connection to the grid of wind farms, were developed. But our efforts will not stop here. In order to face the current and the future environmental requirements, our efforts are focused on finding the most efficient and reliable solutions in carbon capture and storage technologies. Also, cogeneration, waste to energy, and energy efficiency remain our core interests.

Romelectro has developed a portfolio of partners that allows us to answer our clients' most complex and diverse needs, technologically and project wise. Romelectro is not only designed to serve a multitude of customers in the energy sector but has evolved to be adaptive to their

changing needs. All in all, we are proud of the services we provide constantly in Romania and abroad to satisfied customers. The satisfaction of our customers and partners is justified by a multitude of company specific qualities. We deliver in time, we are flexible and we cover a wide spectrum of demands in the field. Also at play is our ability to provide an honest and competitive price quality ratio. Our objective must be the continuous growth of the company through insuring the quality of services, shortening the timeline for project execution and finding the best solutions for our clients.

Over the last 40 years, by putting competence, quality, reliability and honesty in the center of its activities, Romelectro has become the preferred local strategic partner in its area of expertise. While strengthening existing relationships, we are actively working on expanding this network of partnerships. This is part of our constant effort to maintain and further develop our ability to address our clients' needs. Being technologically and business wise on the cutting edge as an EPC contractor is a defining trait for Romelectro.

All this would be impossible without our team of dedicated, competent and committed employees. More and more we are a technology company and thus the skills, knowledge and expertise of our team is part of the Romelectro business model. We invest in people via training, a competitive package and an inspiring work environment. We are a company that is learning all the time at all levels. Be it at engineering, planning, customer service or management level, we invest to improve. This is why and how we stay competitive.

Mr. Viorel Gafița
Chairman of Romelectro

Certificates

Quality Management

The first step in proving the professional manner of acting on the internal and external energy markets was the Quality Management certification. Romelectro, as **“General Contractor, Import-Export Services and Power Supplier”** was certified for **Quality Management System** in the year 2000, by SRAC*; and re-certified in 2003, by SRAC and IQNet, on the basis of ISO 9001:2000 standard.



Quality and Environmental Management

Having in view the complexity of the activities performed by Romelectro and the relevant implications within the projects, a second step was performed, respectively the certification for **Quality and Environmental Management**, which stands for the commitment of our company in developing complex and eco-friendly energy projects.

The certifying process for this double integrated management system was completed in 2006, on the basis of ISO 9001:2000 and ISO 14001:2004 standards, issued by SRAC and IQNet.



Quality, Environmental, Occupational Health and Safety Management

In 2008, Romelectro took a third step with the implementation of a triple integrated management system – **Quality, Environmental and Occupational Health and Safety Management** – completed by SRAC and IQNet, on the basis of ISO 9001:2000, ISO 14001:2004 and OHSAS 18001:2007 standards.

During 2009, the third re-certification for the triple integrated management system was finalized, on the basis of ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 standards.



* Quality, Environmental, Occupational Health and Safety
** Romanian Company for Quality Assurance

40 YEARS OF SUSTAINABLE DEVELOPMENT

We are now celebrating 40 years of remarkable activity in our company. Experienced and dedicated people, creativity, focus on new technologies, efficiency, sustainable development concern and environmental commitment were the most important drives to build on competencies and strengthening our core business.

Registered on the 1st of February 1971 under the name of *Romenergo*, the company started its operations as a foreign trade firm, under the Ministry of Electricity. It was the period of accelerated development of the Romanian power grid and the original preoccupation was mainly oriented towards the import of equipment, technologies, materials and spare parts required for the power industry.

The first major activities consisted in:

- Contracting bulb groups for the P.D.F. II Hydro Power Plant between 1972-1973;
- Organizing the 32 tenders for the execution of the Râul Mare–Retezat Hydro Power Plant;
- Organizing the 33 tenders for documentations, equipment and materials required for Turceni Thermal Power Plant.

Alongside, the firm takes part for the first time in international tenders in the field of hydro-technical works (in Algeria) and overhead transmission lines and transformer stations (in Iran). The first works contracts abroad were concluded in 1972 (for the heightening of the Ksob Dam in Algeria), and in 1975 respectively, for the execution of 132 and 230 kV overhead transmission lines works in Iran.

The execution of the El-Fakia Dam in Algeria is contracted simultaneously.

The experience and references gained allow the contracting of new important OHTL works in Iran (230 kV Teheran – Shahrud and 630 km of 63 kV OHTL in the Azerbadjan area), which leads to the registration of the local Romelectro Representation Office in Iran.

After completing negotiations with AECL Canada for the construction of the Cernavodă Nuclear Power Plant, the specialized team separates from the firm, also taking over the initial name of *Romenergo*. Thus, as of September 1979, the company activates under the current name, *Romelectro*. The activities of Romelectro extend to Egypt (where rural electrifying works and the most important Nile overcrossings are carried out), as well as Jordan (rural electrifying works and 33 kV and 132 kV lines) with registration in Aman of a permanent representation office. The area of works extends to Lebanon and Iraq (where the execution of over 900 km of 33, 132 and 400 kV OHTL is contracted and the execution of 3 transformer stations in the Al Quaim and Sinjar cement factories) and Malaysia.

Alongside with the sustained T&D activity, Romelectro develops new activities in the field of electricity generation and in 1982, contracts the execution of Vafregan Dam in Iran, in consortium with local company Molavi. The turnkey works activity abroad becomes the company's main activity. Therefore, on 1st June 1984, Romelectro becomes general contractor for the execution of works abroad in the field of transmission lines, substations and dams.

Following the reorganizations occurred after December 1989, Romelectro is registered in 1991 as

an independent company with state capital, with the object of activity "import and export in the power field", and in 1994, it goes through a privatization process by which it becomes a Romanian entity with fully private capital.

The Persian Gulf War of 1990 offered the company new opportunities, but it also became seriously vulnerable due to major companies present on the markets of the Gulf countries. Thus, alongside with the new contracts in Iran and Algeria, contracts are signed for 138 kV and 230 kV lines in the Philippines in the CEBU zone as well as a contract for maybe the most spectacular work, a 500 kV line, double circuit with 4 leads per phase in the island of Luzon. 230 kV OHTL works are contracted in Thailand, in the Phuket area.

Moreover, Romelectro accompanied the military firemen, being the only Romanian company accepted to participate actively in the reconstruction of Kuwait. With a group of over 500 specialists covering the whole Romanian power spectrum, Romelectro signed an assistance contract to remodel the Kuwaiti power grid.

The company's development strategy led to the need of providing integrated services for the contracted works. To such purpose, between 1996-1998, Romelectro becomes shareholder of Electromontaj Carpați Sibiu, Celpi and ISPE, laying the bases for the setting up of the Romelectro Group, set up de facto beginning with 2005, when Romelectro becomes majority shareholder in the other 3 companies. Alongside, consequent to its partnership policy, Romelectro, in a consortium with Hidroconstrucția and ISPE, signs with Hidroelectrica the turnkey execution contract for the hydropower development of the Jiu River. The complexity of the

work is emphasized by the restrictions imposed by transforming the area into a National Park, which set drastic environmental limits, both upon the configuration of the design and in the organization of the works. To such purpose, as a new approach, we wish to underline the solution to discharge the power into the power grid by means of an immersed cable installed in the feed pipe.

A new partnership is set up, with the Norwegian company Jacobsen Elektro, for the rooted refurbishment of 400/220 kV Roșiori transformer station. Acting as general contractor, Romelectro signs with Transelectrica the contracts for the refurbishment of the 220/110/20 kV Turnu Măgurele and 220/110/20/6 kV FAI, respectively, substations.

Alongside, execution contracts were signed for the 110 kV Dumbrava and Borsec stations, the modernization of the 220/110 kV Vetiș, 110 kV Lotru, 110/10 kV Cluj centru, 110 kV Govora, 3 220/110/20 kV Baia Mare, 20/6 kV Filești transformer stations. Moreover, the modernization of the protection systems in 8 substations belonging to Transelectrica was also carried out.

An important milestone in the company's evolution was recorded by putting into practice the experience gained in environmental protection. Over the past years, Romelectro became maybe the most renowned EPC Contractor in Romania for power and environment projects, successfully developing low NO_x, dense slurry ash and slag discharge and lately promoting flue gas desulphurization projects for power plants operating on coal.

In the first stage, this experience materialized in contracts for implementing low NO_x firing systems in thermal and heating power plants with mixed gas-fuel oil firing.

The experience gained and confirmed in the projects related to →



Electrocentrale București led to further contracts with Galați CHPP and Iernut Thermal Power Plant. With the setting up of the environmental division within ISPE, the Romelectro Group made public its orientation of implementing modern environment protection solutions.

Based on the experience gained with the pilot project erected in Colterm Timișoara, in 2008, the first dense slurry ash and slag discharge contract is signed. The contracts were signed by setting up a partnership with EGI of Hungary for the specialized equipment and with SAEM Energomontaj for the execution of the mechanical and electrical erection works. The first 3 plants are commissioned in Rovinari Power Plant, Ișalnița TPP and Craiova II CHPP, a fourth project being in execution in Turceni Power Plant.

Following the development of its own competencies regarding electricity generation, in strict observance of the principles regarding the protection of the environment, Romelectro, in partnership with Babcock-Noell, was awarded the tender organized by Craiova Power Plant for the desulphurization plants related to Ișalnița Thermal Power Plant. Within the Romelectro Group, a special attention is given to the technologies that shall mark our future. Thus, together with Alstom, Schlumberger and Gecomar, the project for the CO₂ collecting and storage plant was initiated in unit 6 within Turceni Power Plant,

a demonstrative project which is in direct competition for obtaining European financing with 21 other European projects.

Moreover, for over 2 years, a specialized team works on adapting to the local conditions of the technology for using waste for the ecological generation of electricity and heat. Implementation of "waste-to-energy" plants, according to the European programs, on country level, currently constitutes one of the Group's priorities. The experience was confirmed through the company, being awarded the contract for drawing up the Master-Plan for the management of domestic waste of Ilfov County and the cities of Bucharest and Brașov. Romelectro Group's firm orientation towards clean energy, highly efficient cogeneration and green energy also results from the Group's own investments.

Thus, in 2006, Romelectro becomes electricity producer by the procurement and capital refurbishment of 3 micro hydropower plants on the Mânăileasa River, in Voineasa area.

Following a competition organized by the City Hall of Buzău Municipality, in 2010, the highly efficient cogeneration power plant was commissioned. The plant was developed by the Romelectro Group, acting as investor, together with Eximprod Grup and the City Hall of Buzău Municipality.

Electricity generation projects are in progress, using photovoltaic technologies and cogeneration projects based on biomass and biogas. In parallel, Romelectro carries out activities in its conventional areas, such as line and substation projects (110 kV Movileni OHTL, 400 kV Brazi OHTL, 230/110 kV Brașov transformer station, as well as the transformer station for connecting wind farms to the grid).

Today, the Romelectro Group counts over 1,200 employees, of which 800 are specialized exclusively in engineering and design. Having the advantage of the support of the most complex engineering structure in Romania, our abilities have been permanently expanding.

OPEN HERE →

Romelectro is currently one of the most important EPC contractors in Romania, covering the whole energy chain via its projects in electricity generation, transmission, distribution and supply.

Exceeding €100 million yet as of 2006, Romelectro Group's turnover followed a constantly increasing trend, reaching €130–140 million annually. The references and abilities of the group of companies made Romelectro the most favorite local partner on the Romanian market. With a continuously growing experience, a solid financial standing and benefiting of the partnerships and strategic agreements with the most important equipment, technology and know-how suppliers worldwide, the Romelectro Group is ready today to return on the traditional foreign markets with a considerably enlarged and improved offer. ●

40 Years At a Glance

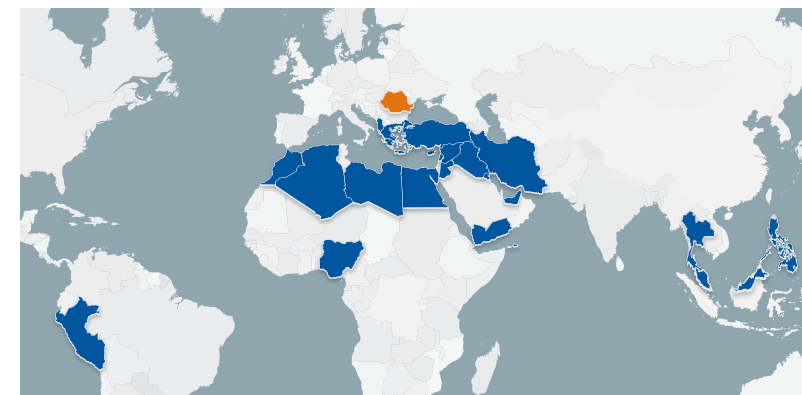
1980

New works in Egypt, Iraq, Jordan, Lebanon, Malaysia
Complex works for Nile overpass, rural electrification and more than 900 km of 33, 132 and 400 kV OHTLs contracted in Lebanon and Iraq



1982-1984

Execution of Vafregan Dam in Iran



1993

Romelectro is present in 19 countries, with strong references and local support
Romelectro is the only Romanian company invited to participate in the reconstruction of Kuwait, with 300 specialists covering the entire energy spectrum

1996-2005

Romelectro is structuring the group of companies, together with ISPE, Electromontaj Carpați Sibiu and Celpi



2007

Acquisition of Environmental Protection competencies
New installations with low NO_x burners and Burning Management Systems were contracted for 14 gas-fired boilers of different producers



2011

First project in FGD
Strengthening our capabilities in energy and environmental fields, Romelectro and Babcock-Noell are implementing the Flue Gas Desulphurization project in Ișalnița



1971

Romelectro is set up as the foreign trade company of the Ministry of Energy



1974-1978

OHTLs in Algeria and Iran
First important export works for dams and 132 & 230 kV OHTLs



1990

New works in the Philippines and Thailand



2004

Turnkey execution works for the Complex Hydro-development of Jiu valley, Bumbesti-Livezeni stretch
Complex work, due to the limitations imposed by the Natural Park in which the project is carried out, with heavy environmental protection measures



New works in the field of Power Transmission & Distribution
Rehabilitations and greenfield substations of Transelectrica in Turnu Măgurele, Fai, Dumbrava, Borsec, Vetiș, Lotru, Cluj centru, Govora, Baia Mare, Filești

2008

Signing the first contract for Dense Slurry Systems
Together with GEA-EGI and ISPE, Romelectro implemented in Romania complex installations for the conveyance of coal burning residues, methods that have now been accepted on a large scale by most power plants in Romania



Focus on Energy & Environment

Romelectro is the main promoter of environmental projects in the coal thermal power plants in the Oltenia basin.

Oltenia represents the area of Romania with the most consistent contribution in providing the energy required for any economic-social activity. Lignite is the most important fossil resource for the energy and heat generation in Romania; despite being economical and accessible, it is also a pollutant resource.

Over the past years, the issue regarding the drastic reduction of the negative impact that the technological processes in thermal power plants have on the environment, has been raised more and more seriously. The issue became the more serious as Romania, with its accession to the European Union, undertook to observe the European norms on environmental requirements, being bound by conformity terms.

Thus, it became vital for all thermal power plants to invest massively, alongside with promoting investments in new generation facilities, in the execution of certain works that would provide conformity of the existing facilities to the European environmental norms, with the risk of their generation activities otherwise being shut down.

Ever since the 90's, the companies within the Romelectro Group got involved with all determination in approaching and solving this issue, being the first to propose and implement solutions in line with energy and environmental legal requirements. Thus, the start of the environment investment programs found the Romelectro Group perfectly prepared to approach any type of work, in all stages, beginning

with concept-design, continuing with supply and erection of equipment, and ending with commissioning and providing assistance and interventions during the warranty period.

The solving of the issue on the thermal power plant ash and slag transport and storage using the dense slurry technology is almost completed, Romelectro being general contractor in all projects carried out in the important thermal power plants in Oltenia. In the Craiova II, Işalniţa and Rovinari Thermal Power Plants, the installations were commissioned in 2010, and in Turceni, the investment is in trial and running in commencement stage, the waste water treatment plant being already accepted and commissioned.

The commissioned installations confirmed all expectations

regarding the effects of implementing such technology, resulting the following geotechnical characteristics/advantages:

- **High density**
 - Increasing the storage capacity.
- **Low permeability**
 - Improving the impact on the environment
 - Hardening storage surface and thus much lower sensibility to wind blowing
 - High geotechnical characteristics
 - Providing the stability and safety of the storage
 - Possibility of heightening or usage of abandoned storages.
- **Low water and slurry quantities circulated**
 - Low investment and operating costs as opposed to the current

system

- Improving the impact on the environment
- Possibility to capitalize ash as construction material
- Low water quantity for discharge
- No need for important works for draining or waterproofing the storage basin
- No need for water recirculation.
- **Observance of the European environment norms**
 - Observes Directive EC 31/1999 on the storage of waste.

Romelectro Group is also involved in projects on reducing sulfur dioxide and nitrogen oxide emissions. Thus, Romelectro is part of the consortium executing the desulphurization plants for units 7 and 8 in Işalniţa Thermal Power Plant, the works being in full

progress, with commissioning deadline in 2014. Moreover, capitalizing a considerable experience in implementing nitrogen oxide reducing technologies in other power plants and collaborating with the worldwide renowned holders of such technologies, Romelectro is able to reduce, by modern means, the nitrogen oxide emissions as per European norm in the lignite boilers in Oltenia.

It is important to underline the fact that the technologies implemented by Romelectro allow cost-wise advantageous upgrading, keeping in pace with the progressive reducing process of admissible emissions according to European norms.

A field on which Romelectro focuses is carbon dioxide collecting and storing, ISPE being strongly involved in promoting the pilot project in Turceni.

FLUE GAS DESULPHURIZATION PLANTS FOR POWER UNITS NO. 7 AND NO. 8 IN S.E. IȘALNIȚA

Sucursala Electrocentrale Ișalnița (S.E. Ișalnița) is a component of SC Complexul Energetic Craiova SA. Power units no. 7 and no. 8 were executed in boiler-turbine block diagram, being provided with condensation turbines designed for electricity generation. The purpose of the contract is to improve the quality of the air in the area by reducing the sulphur dioxide (SO₂) emissions, discharged together with the flue gas resulting from power unit no. 7 in S.E. Ișalnița.

Starting year: 2011

Year of commissioning: 2014

Client: Sucursala Electrocentrale Ișalnița

Main technical characteristics

Presently, the flue gas is dusted by means of the electrostatic precipitators and discharged into the atmosphere through the existing smoke stack, executed from reinforced concrete, with the following dimensions: physical height $H = 200$ m and inside diameter at the top $\varnothing = 9.3$ m. The rated sulphur dioxide emissions, estimated in the current operating conditions of the steam boilers related to power unit no. 7, range between 3317 and 5543 mg/Nm³.

In order to observe the legislation in force, a wet desulphurization plant shall be erected, using limestone slurry, with over 96% desulphurization efficiency, which shall decrease the SO₂ emissions to 200 mg/Nm³ when using 100% lignite as fuel, respectively 185 mg/Nm³ in case of using 90% lignite + 10% natural gas as fuel. This type of desulphurization

plant is the most used in flue gas desulphurization resulting from high power thermal power plants operating on fossil fuel.

The scope of the investment is the design, delivery, construction, erection and commissioning, on the grounds of a turnkey contract, of two full, independent and operational flue gas desulphurization plants:

- Flue gas desulphurization plant for power unit no. 7 in S.E. Ișalnița.
- Flue gas desulphurization plant for power unit no. 8 in S.E. Ișalnița.

The desulphurization technology used shall be wet desulphurization, based on the use of crushed limestone as reagent, the final product (gypsum slurry) being discharged in the dense slurry ash and slag discharge plant. The two flue gas desulphurization plants will be executed identically, with the same type of equipment, delivered by the same suppliers.

In the flue gas discharged through the stack, the SO₂ concentration measured in the dry gas at 6% O₂ shall be 200 mg/Nm³ maximum, when the fuel used is 100% coal (lignite) and 185 mg/Nm³ maximum, when



FACTS AND FIGURES

S.E. IȘALNIȚA PLANT FLUE GAS DESULPHURIZATION PLANT

- 2 × 315 MW power units
- 3317 ÷ 5543 mg/Nm³ rated sulphur dioxide emission, estimated in the current operation
- 200 mg/Nm³ maximum SO₂ concentration after project implementation
- Wet desulphurization plant using limestone slurry
- 96% desulphurization efficiency

the fuel used consists of 90% coal (lignite) and 10% natural gas. The clean flue gas is discharged through a new smoke stack located on the absorber, 120 m high from ground level. The reagent of the desulphurization plant will be limestone slurry brought in by truck or rail cars and discharged pneumatically in the storage silo.

In order to provide the appropriate microclimate in the limestone dust handling area, the following are necessary and shall be provided:

- **Dusting installations** in the limestone discharge spots and the dust limestone silo;
- **Vacuum cleaning installations.**

The desulphurization plant shall be fully automatic, with its own control chamber, with monitoring devices for all the operating parameters (flows, temperatures, pressures of the flue gas, pre-treated water, limestone slurry, gypsum slurry, compressed air etc.) Moreover, the pollutant agent emissions in the flue gas discharged into the atmosphere through the new smoke stack, as well as their oxygen content, shall be monitored online according to the environment legislation in force.

The following parameters will be monitored online:

- **Clean dry and wet gas flow**, in m³/h, Nm³/h;
- **Clean gas temperature**, in °C;
- **Oxygen concentration** in the clean gas, in mg/Nm³, % vol, ppm;
- **Water vapour concentration** in the clean gas, in mg/Nm³, % vol, ppm;
- **SO₂, NO_x, dust, CO₂ concentrations**, in mg/Nm³, %vol, ppm, in the dry clean gas, corrected at 6% oxygen.

PARTNERSHIP

Babcock Noell GmbH – Consortium Leader
Romelectro – Consortium Partner



DENSE SLURRY SYSTEM IN TURCENI

In 2010, Turceni TPP supplied more than 10% of the energy consumed in our country, being the largest coal fired producer. Following the EU energy and environment regulations, Turceni TPP was imposed to comply with the norms regarding the soil, water and air protection.

Scope of the project: Solutions for evacuation, transport and storage of waste resulting from coal fired boilers in Turceni TPP in dense slurry system

Starting year: 2009

Year of commissioning: 2012

The project involves upgrading the current system of slag and ash discharge produced by the combustion process in the boilers.

The new investment consists mainly of:

- Two dense slurry preparation stations
- Bagger pumps replacement
- Dry ash transport installation
- Air compressor station
- One wastewater treatment plant.

For all the objectives above, Romelectro will ensure the design, procurement, erection and commissioning of the installations.

Main technical characteristics

Two dense slurry stations

One for the entire ash discharge system from units 3 and 4, and another for the entire discharge system from units 5 and 6, including dense ash slurry mixers, bottom ash slurry thickeners and distance transport pumps.

New dry ash discharge system

The ash resulting from all the three fields of ESP, from the rotative air preheaters, economizer, and mechanical filters is taken over by a pneumatic system and conveyed to the ash silo, from where it is dozed in the mixer.

New Bagger pump station

Is achieved by replacing the current Bagger pumps with reduced size and parameter pumps, equipped with frequency converters and automatic control of their charge. The slag is conveyed to a thickener, to provide an optimum slag and water ratio, and then directed to a mixer, where the dense slurry is prepared.

New compressor station

A new compressor station will be built in order to provide the necessary air for dry ash transport installation. Also, instrumental air compressors will be procured to provide necessary air for all the pneumatic consumers inside the project limit.

Wastewater treatment plant

To treat wastewater from units no. 3, 4, 5 and 6, a wastewater treatment plant will be installed in the engine room in block no. 2.



FACTS AND FIGURES

TURCENI TPP DENSE SLURRY PLANT

- 4 × 330 MW units
- 4 × 155 t/h of dry solids
(30 t/h bottom ash + 105 t/h fly ash + 20 t/h FGD gypsum)
- 5 × 450 kW + 1 × 250 kW
Atlascopco compressors
- 8 sets of Metso Mineral centrifugal pump groups
- CIRCUMIX continuous mixing technology
- 4900 m transport distance
- 24 m geodetic level difference

PARTNERSHIP

Romelectro – EPC Contractor for procurement, construction and erection works

GEA EGI (Hungary) – equipment supply and basic engineering

SAEM Energomontaj – construction and erection works

ISPE – engineering and design.



LOW NO_x BURNERS FOR BOILERS NO. 4, 5, 6, 7 AND 8 IN SC ELECTROCENTRALE GALAȚI SA

This contract covers the retrofitting of 5 steam boilers of 420 t/h with low NO_x natural gas – fuel oil mixed firing installations, integrated in a new Burner Management System (BMS).



For each boiler, the new installation shall consist of:

- 6 low NO_x 53 MWt burners
- New BMS and DCS Systems
- New modern dual gas – fuel oil supply systems
- Emission monitoring system
- Methane leakage monitoring system, a.s.o.

The BMS system shall be integrated into the automated management system to be upgraded with a DCS OVATION and HIMA protection system.

Estimated performances

Reducing the level of noxious emissions to the following values:

- 150 mg NO_x/Nm³, 100 mg CO/Nm³, 5 mg dust/Nm³ for natural gas firing
- 350 mg NO_x/Nm³, 170 mg CO/Nm³, 50 mg dust/Nm³ for heavy fuel oil firing.

PARTNERSHIP

Romelectro – EPC Contractor
 Mehdau & Steinfath – equipment and subassembly supplier
 ICPET Steam Generators and ISPE – design and technical consultancy
 Nuclearmontaj and Termoserv Galați – construction and erection works.

The modernized burning installations shall meet the environmental requirements at national and international levels.

Starting year: 2008
Year of commissioning: 2012

MODERNIZATION OF THE FIRING INSTALLATIONS AT IERNUT TPP

The works consist in the modernization and retrofitting of the firing installations of four 320 t/h gas fired boilers at Iernut TPP, with low NO_x burners and automatic Burner Management System (BMS).

The modernized burning installations shall comply with the environmental requirements imposed by the legislation in force.

Starting year: 2009
Year of commissioning: 2011

For each boiler, the following main equipments shall be installed:

- 10 burners for low NO_x content
- A new BMS unit
- A new modern system for gas supply
- Emission monitoring system
- Methane leakage monitoring system, a.s.o.

The BMS shall be integrated with the existing automated management system (DCS), which shall be completed with the software and hardware necessary to assure the new operational conditions.

The existing boiler technological protections (ESD) will function further on using the same principles, while only certain modifications of the hardware and software shall be executed for the interconnection with the BMS and for introducing certain additional protections, which are deemed as necessary.



Estimated performances

Achieving the emissions limits for 3% O₂ at:

- 170 mg NO_x/Nm³
- 100 mg CO/Nm³
- 5 mg dust/Nm³.

PARTNERSHIP

Romelectro – EPC Contractor
 Mehdau & Steinfath – equipment and subassembly supplier
 ICPET Steam Generators and ISPE – design and technical consultancy.

COMPLEX HYDRO-DEVELOPMENT OF JIU VALLEY, BUMBEȘTI–LIVEZENI STRETCH

Romelectro, through its specialized Hydropower Project Division, offers consultancy, development and turnkey execution works for projects in hydrotechnical and hydropower fields.

Starting year: 2004

Commissioning year: 2013

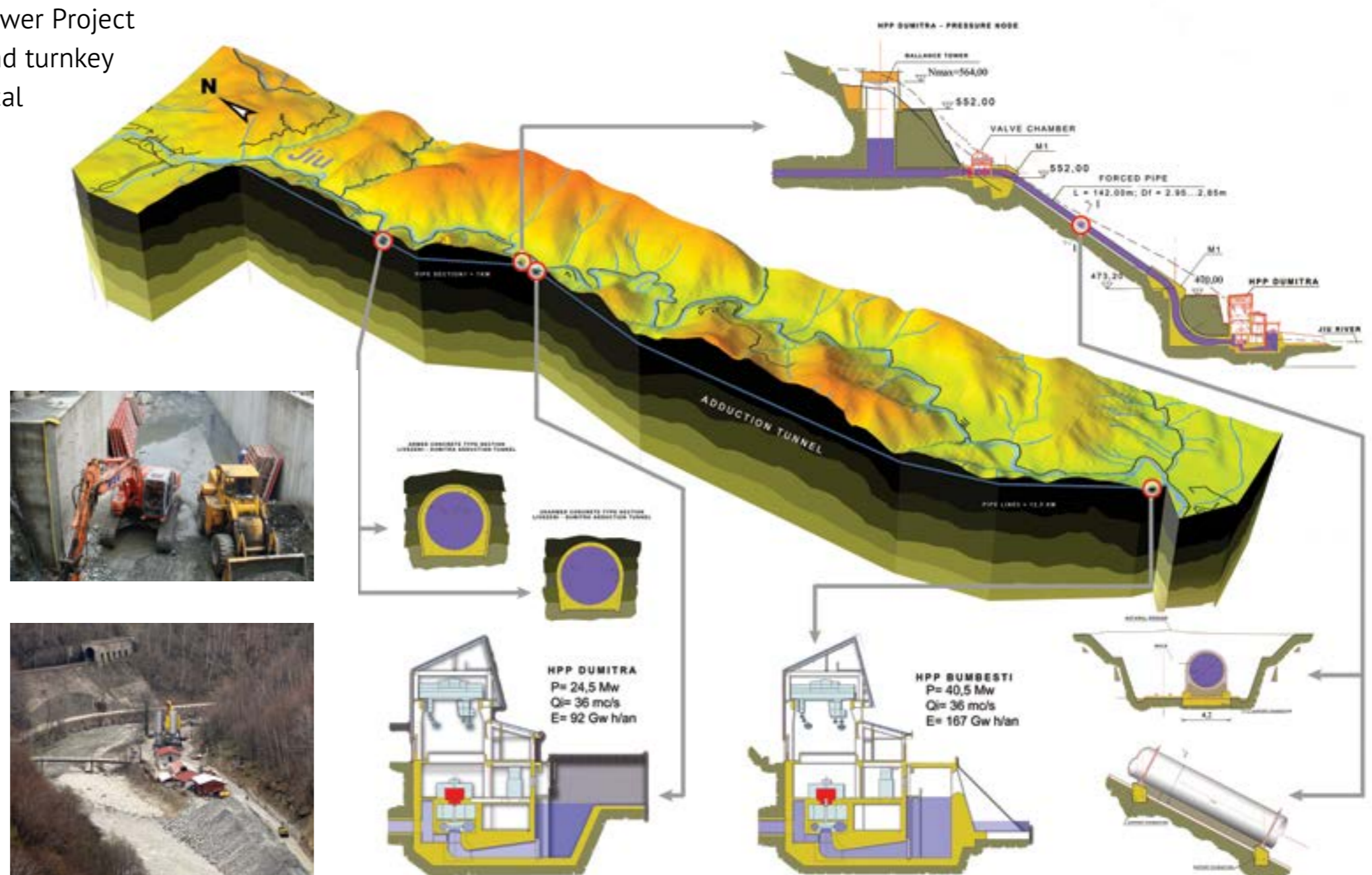
Acting as EPC Contractor, Romelectro is involved in performing the most important investment in Romania in hydropower field after 1990: the complex development of the Jiu River on Bumbești–Livezeni stretch and construction of three hydropower plants with an installed power of approximately 80 MW.

Initiated in July 2004, the work will be completed in 2013, with the commissioning of:

- **Dumitra Hydropower Plant**, located on the right bank of the Jiu River, equipped with 3 vertical Francis turbines, with an installed power of 24.5 MW
- **Bumbești Hydropower Plant**, located on the right bank of the Jiu River, equipped with 3 vertical Francis turbines, with an installed power of 54 MW
- **Livezeni Micro-hydro Power Plant**, located on the technological platform adjacent to the dam and the power intake, equipped with a helical tubular turbine, with an installed power of 260 kW.

PARTNERSHIP

Romelectro – joint venture leader, providing all mechanical and electrical equipments, erection and commissioning
Hidroconstrucția – joint ventures partner, contractor for civil works
ISPH – engineering works.



REFURBISHMENT OF 400/110 KV BRAȘOV SUBSTATION

Considering the particular importance of this electrical substation, the condition of its current installations and the legal requirements, the complete rehabilitation programme was imperative, in order to insure the security of supply and operational safety.

Starting year: 2010

Year of commissioning: 2013

The 400/110 kV electrical substation in Brașov has a particular importance the National Power System and for the local grid. Firstly, it represents a junction for power lines connecting Muntenia, South Transylvania and the poorly covered Moldavian area. Secondly, the importance for the local distribution grid must not be neglected. The substation supplies the consumption area (approx. 167 MW), being also the connection point for CET Brașov.

Project description

The purpose of this project is to complete a new 400 kV outdoor electrical substation, equipped with the modern high-performance conventional installations, as well as a new indoor 110 kV electrical substation, equipped with SF6 insulated installations (GIS cells).

During this project, all primary and secondary equipments will be replaced (command – control – safety devices, internal services DC/AC, backup generators, batteries, remote-controlled safety devices).

Benefits after project implementation

- Increased safety level of the National Energy System (NES)
- Ease in further upgrades by adding new cells for the 400 kV and 110 kV lines
- Possibility of remote access and control from all dispatching levels (regional, national)
- Important decrease in exploitation and maintenance cost
- Reduction of both the internal technological consumption and unscheduled interruptions.

PARTNERSHIP

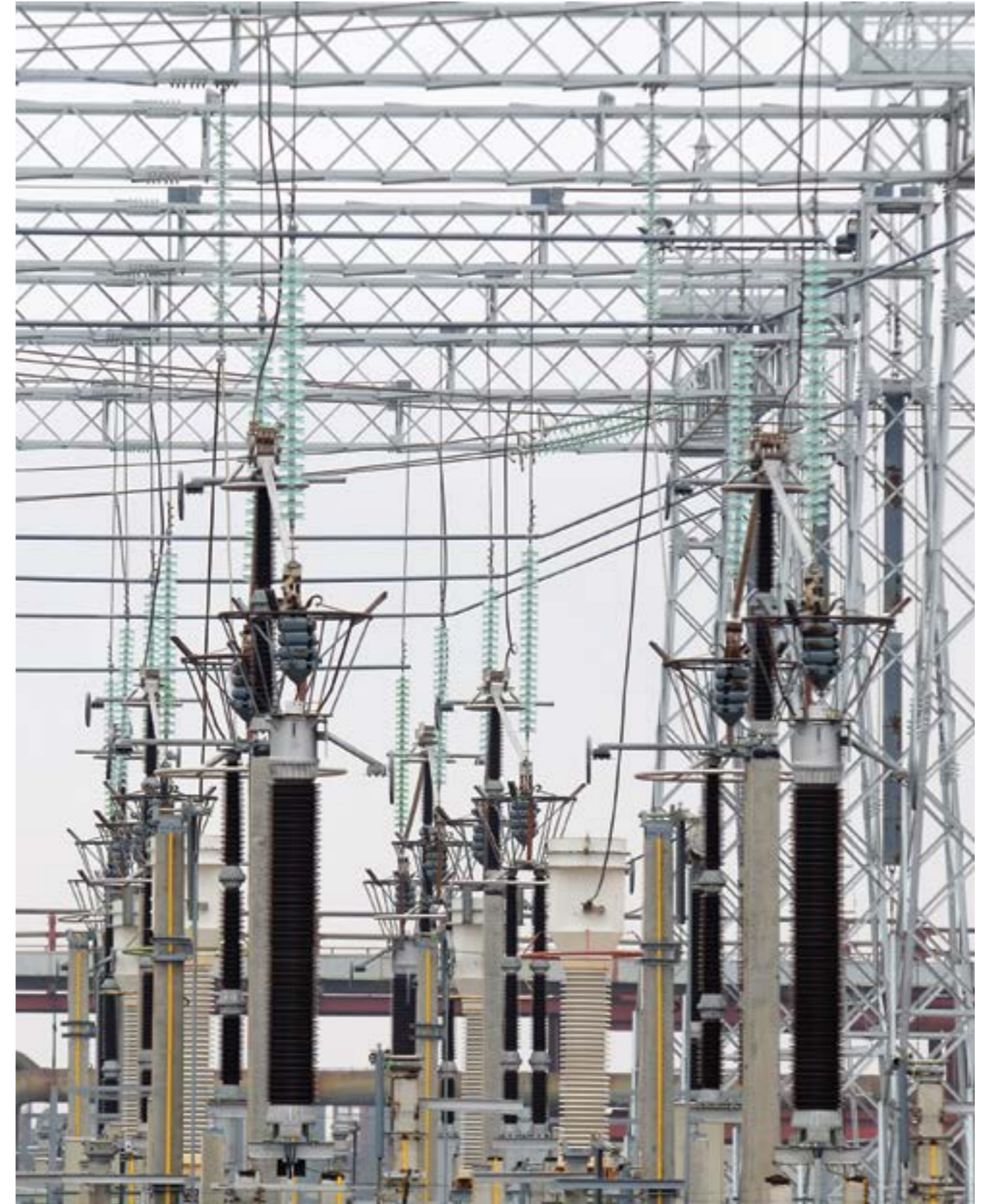
Romelectro – EPC Contractor, consortium leader

CG Holding Belgium – Consortium partner

ISPE – engineering and design

Emsens Prod – civil works

Electromontaj Carpați Sibiu – erection and commissioning works.



Recent Projects

THERMAL POWER PROJECTS

Solutions for the discharge, conveyance and storage of the waste resulting from the coal firing process in Turceni TPP (4 × 330 MW), using dense slurry technology	2009-2012	TPP Turceni
Delivery and erection of low NO _x burners at the boilers type PK 47-2 from TPP Iernut	2009-2011	Electrocentrale București
Delivery and erection of the low NO _x emission burners at boilers no. 4, 5, 6, 7 and 8 in SC Electrocentrale Galați SA	2008-2012	Electrocentrale Galați
Green field combined heat and power plant of 6 MWe and 80 Gcal in Buzău	2008-2010	ECOGEN Buzău (IPP)
Increasing the stability of the ash and slag storage on the right and left banks of Jiu River in SE Ișalnița (2 × 315 MW) using the dense slurry technology	2008-2010	TPP Craiova
Refurbishment and upgrade of electrical and automation installation for 330 MW unit no. 6 at TPP Rovinari	2008-2010	TPP Rovinari
New Gârla ash and slag deposit and installation for collecting, preparation, discharge and storage of dense slurry in CTE Rovinari TPP (2 × 330 MW)	2008-2009	TPP Rovinari
Increasing the stability of the Valea Mănăstirii slag and ash deposit by executing the installations for ash and slag dense fluid and development of the storage for the first heightening in SE Craiova II (2 × 150 MW)	2007-2010	TPP Craiova-Branch Craiova II
Rehabilitation of the 420 t/h CR 1737 type boilers in order to increase the safety in operation, especially on heavy fuel oil and for dual operation, including low NO _x burners — CET Progresu, boiler 2	2007	ELCEN București
Rehabilitation of the 420 t/h CR 1737-type boilers in order to increase the safety in operation, especially on heavy fuel oil and for dual operation, including low NO _x burners — CET Progresu, boilers 3 & 4	2006-2007	ELCEN București
Rehabilitation and modernizing of 315 MW unit no. 7 in Ișalnița TPP	2005-2006	TPP Ișalnița
Rehabilitation of the firing installations for 525 t/h steam boiler no. 2 in București Vest CHPP and no. 5 and 6 in București Sud CHPP, by replacing with modern low NO _x burners	2004-2006	ELCEN București
Capital refurbishment of 330 MW units no. 4 & 5 in Turceni TPP (Programme A3)	1995-2003	TPP Turceni
Expedite refurbishment of 330 MW units no. 3 & 7 in Turceni TPP and no. 5 & 6 in Rovinari TPP (Programme A2)	1994-1998	TPP Turceni TPP Rovinari
Expedite refurbishment of 330 MW units no. 2 & 6 in Turceni TPP and no. 3 & 4 in Rovinari TPP (Programme A1)	1991-1994	TPP Turceni TPP Rovinari

OVERHEAD TRANSMISSION LINES

400 kV OHTL Oradea–Nadab–Békéscsaba, new interconnection line with Hungary	2006-2008	Transelectrica
Capital rehabilitation of 400 kV București Sud–Gura Ialomiței OHTL	2006-2007	Transelectrica
Execution of 220 kV and 400 kV connections in Iernut Electrical Substation	2005-2006	Transelectrica
Capital rehabilitation of 220 kV Brazi Vest–Târgoviște OHTL	2004-2005	Transelectrica
Improving the dispatcher transmission system by executing the interconnection of the data transmission system between the national dispatching centers of Romania and Bulgaria	2003-2004	Transelectrica
Capital rehabilitation of 220 kV Borzești–Gutinaș OHTL	2003	Transelectrica

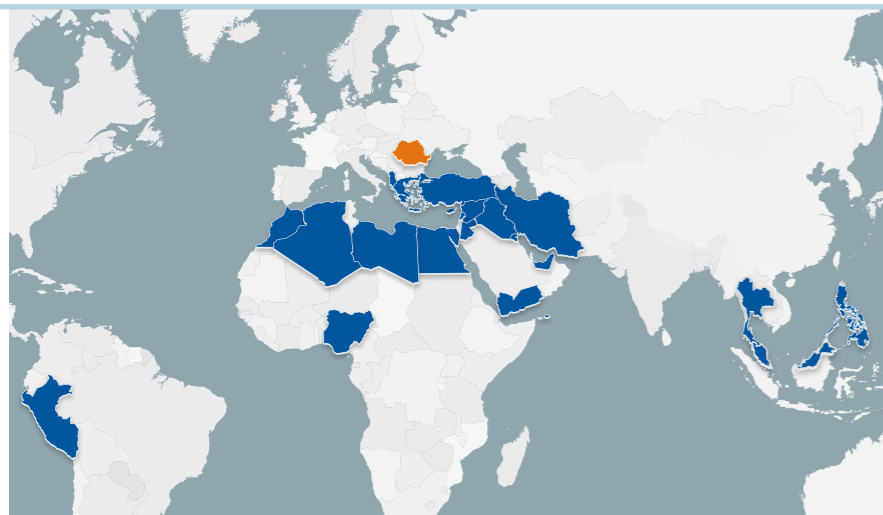
ELECTRICAL SUBSTATIONS

Refurbishment of 400/110 kV Brașov substation	2010-2013	Transelectrica
Capital refurbishment and modernization of 110 kV and 220 kV bays in Fai substation	2007-2011	Transelectrica – Bacău branch
Extension and modernization to increase the safety in operation of 110/20 kV Dumbrava Sibiu substation	2007-2009	Electrica Transilvania Sud
Primary equipment upgrade in 110/20 kV Petrila substation	2007-2007	Transelectrica
Modernizing the protection systems of 250 MVA transformer and 110 kV PDB in 400/110 kV Brașov, Dârste, Domnești, Medgidia Sud, Pelicanu, Tulcea Vest, Smârdan, Drăgănești Olt substations	2006-2009	Transelectrica
Upgrade of the 110 kV bays in HPP Ciunget substation	2006-2008	Hidroelectrica – Vâlcea branch
Modernization of 110 kV Râmnicu Vâlcea HPP substation	2006-2007	Hidroelectrica – Vâlcea branch
Modernization of 110 kV HPP Govora substation	2006-2007	Hidroelectrica – Vâlcea branch
Turnkey refurbishment of the 110/10 (20) kV București Centru substation	2005-2007	Electrica Muntenia Sud
220/110/20 kV Baia Mare substation — major refurbishment at the 110 kV bay	2005-2005	Transelectrica
Refurbishment of 440/220 kV Roșiori substation	2004-2006	Transelectrica – Cluj branch
Modernizing works at 220/110 kV Vetiș substation	2004-2006	Transelectrica – Cluj branch
Turnkey 110/20 kV Borsec substation	2003-2005	Electrica Transilvania Sud
Turnkey modernization of 110/10 kV Cluj Center substation	2003-2004	Electrica Transilvania Nord
Turnkey refurbishment at 6 (20) kV Filești–Galați connection substation	2002-2003	Electrica Muntenia Nord
Capital refurbishment of the 220/110/20 kV Turnu Măgurele		Transelectrica

HYDROPOWER

Hydropower development of the Jiu River on the Livezeni–Bumbești stretch, with the execution of hydropower plants with an installed power of 80 MW	2004-2013
Feasibility studies for the Ramdane, Djamel and Zaouia Dams. Technical design for the Bougous and Bouhalufa Dams. Detailed technical design (Avant Projet Détaillé) for the Bougous Dam	2001-2002
Turnkey execution of the Vafreghan Dam (Iran), El-Fakia (Algeria) and heightening of the Ksob Dam (Algeria)	1992/1985/1976

Major Export Projects



Abbreviations

DE	Designing & Erection
DS	Designing & Supply
DT	Designing & Testing
DTS	Designing, Testing & Supply
S	Supply
TK	Turn Key Project
GLST	Galvanized Lattice Steel Towers
DGMPR	Directorate General Of Minor Projects & Rural Electrification

#	Client	Country	Proj. type	Scope of supply	Consulting engineer	Starting year
1	NMTC	Kuwait	TK	Lattice steel antenna towers – 70 m high	NMTC	2000
2	NMTC	Kuwait	S	Hot dip galvanized tubular steel towers for antennae – 40, 75, 100 m high	MTCO	2000
3	National Power Corporation (NAPOCOR)	Phillipines	TK	GLST, assembling elements – 500 kV OHTL	Edwin Ladingnon	2000
4	JEPSCO	Jordan	TK	GLST – 132 kV OHTL T/L	NEPA	2000
5	Intracom SA Greece, Intracom SA Romania	Romania	S	Hot dip galvanised tubular steel antenna towers – 30, 50 m high	Intrarom SA	2000
6	Hayat	Kuwait	S	Lattice steel antenna towers – 64 m high	NMTC	2000
7	NMTC	Kuwait	S	Hot dip galvanized tubular steel towers for antennae – 25, 30, 40, 75 m high	MTCO	1999
8	Ministry of Energy and Mines (MEM)	Peru	DTS	GLST – 220 kV OHTL	MEM	1999
9	ONUR CIVATA	Turkey	S	Fittings	...	1998
10	MEM	Peru	DTS	GLST – 138 kV OHTL	MEM	1998
11	JEPSCO	Jordan	TK	GLST, assembling elements – 132 kV OHTL	NEPA	1998
12	JEPSCO	Jordan	SE	GLST – 132 kV OHTL	NEPCO	1998
13	Consorcio GyM Cosapi	Peru	S	GLST – 220 kV OHTL	MEM	1998
14	Consorcio Cosapi-Balarezo	Peru	S	GLST – 138 kV OHTL	MEM	1998

#	Client	Country	Proj. type	Scope of supply	Consulting engineer	Starting year
15	Consorcio Cosapi-Abengoa	Peru	S	GLST – 220 kV OHTL	MEM	1998
16	TREC	Iran	DTS	GLST, assembling elements – 230 kV OHTL	Moshanir	1997
17	National Mobile Telecommunication Co. (NMTC)	Kuwait	S	Steel lattice towers for antennae – 70 m high	MTCO	1997
18	NAPOCOR	Phillipines	TK	GLST – 138, 230 kV OHTL	Sweed Power & EEDD-NPC	1997
19	Mobifon	Romania	S	Hot dip galvanized lattice steel towers for telecommunications - 40 m high	MOBIFON	1997
20	MEM	Peru	DTS	GLST, assembling elements – 60, 138 kV OHTL	MEM	1997
21	EGAT	Thailand	DTS	GLST, assembling elements – 115, 230 kV OHTL	EGAT	1997
22	EEA	Egypt	S	Fittings	EEA	1997
23	Public Establishment for Distribution and Exploitation of Electric Energy	Syria	S	Gantry towers for transformer station, clamps & fittings – 66/20 kV OHTL	PEDEEE	1996
24	National Electric Power Authority	Nigeria	S	GLST, lighting poles, gantry towers for 132/33 kV OHTL substation	NEPA	1996
25	Avangan	Iran	DT	GLST – 230 kV OHTL	Moshanir	1996
26	MEM	Peru	S	GLST – 60 kV OHTL	MEM	1996, 1995
27	Tavanir	Iran	DT	GLST – 63 kV OHTL	MATN	1995
28	Power Generation and Transmission Co. – Ramin	Iran	DTS	GLST, assembling elements – 230 kV OHTL	Ghods Niroo	1995
29	NAPOCOR	Phillipines	TK	GLST, clamps, fittings, composite insulator strings, power conductors, OHGW, OPGW – 132, 230 kV OHTL	Sweed Power	1995
30	Moshanir P.E. Co.	Iran	DT	GLST – 230 kV OHTL	Moshanir	1995
31	K.E.SH. – Tirana	Albania	S	Clamps & fittings – 132 kV OHTL	K.E.SH.	1995
32	JEA	Jordan	DSE	GLST – 132 kV OHTL	JEA	1994, 1992
33	West Regional Electric Co. (WREC)	Iran	DTS	Clamps & fittings – 63, 132 kV OHTL	Gharb Niroo	1993
34	TREC	Iran	DTS	GLST, assembling elements – 230 kV OHTL	Moshanir	1993
35	TREC	Iran	DTS	GLST – 400 kV OHTL	Moshanir	1993
36	National Iranian Copper Industry Co. – Sirjan	Iran	DTS	GLST, clamps, OHGW – 230 kV OHTL	Moshanir	1993
37	Ministry of Energy and Water	Kuwait	S	Steelworks, assembling elements	MEW	1993

#	Client	Country	Proj. type	Scope of supply	Consulting engineer	Starting year
38	KWPA	Iran	S	AAAC conductor	Moshanir	1993
39	JEA	Jordan	TK	GLST – 132 kV OHTL	JEA	1993
40	Bakhtaran Regional Electric Co. (BREC)	Iran	DTS	GLST, clamps, assembling elements – 230 kV OHTL	Moshanir	1993
41	BREC	Iran	DTS	GLST, assembly elements – 400 kV OHTL	Moshanir	1993
42	BREC	Iran	DTS	Clamps – 230 kV OHTL	Moshanir	1993
43	AREC	Iran	DTS	Clamps & fittings – 154, 132, 230 kV OHTL	Moshanir	1993
44	WREP	Iran	DTS	GLST, assembling elements – 63 kV OHTL	Moshanir	1992
45	WREP	Iran	DTS	GLST – 132 kV OHTL	Gharb Niroo	1992
46	Telecommunications Co. of Iran	Iran	S	Assembling elements	...	1992
47	Tehran Regional Electric Co. (TREC)	Iran	DTS	GLST, assembling elements – 400 kV OHTL	Moshanir	1992
48	KWPA	Iran	DTS	GLST, clamps & fittings, assembling elements, insulators – 400 kV OHTL	Ghods Niroo	1992
49	Guilan Regional Electric Co. (GREC)	Iran	DTS	GLST, assembling elements – 230 kV OHTL	Moshanir	1992
50	EAC	Cyprus	S	GLST – 132 kV OHTL, tower cross arms	EAC	1992
51	Avangan Co.	Iran	S	Galvanized bolts & nuts	...	1992
52	Azerbaijan Regional Electric Co. (AREC)	Iran	DTS	GLST, assembling elements – 230, 400 kV OHTL	Mona Co.	1992
53	Electrification of a railway station – Salonic Idomeni	Greece	S	Lattice horizontal galvanized girders	Odon Odostromaton	1991
54	EAC	Cyprus	S	Galvanized steel cross arms	EAC	1991
55	AREC	Iran	S	GLST, clamps and fittings insulators and earth system – 63,132, 230 kV OHTL	Moshanir	1991
56	AREC	Iran	DTS	GLST, assembly elements, clamps – 132/154 kV OHTL interconnection	Moshanir	1991
57	AREC	Iran	DTS	GLST, assembling elements, clamps & fittings, insulators – 230 kV OHTL	Moshanir	1991
58	EEA	Egypt	DS	GLST and assembling elements – 220 kV OHTL	EEA	1990
59	EAC	Cyprus	S	GLST – 132 kV OHTL	EAC	1990
60	Boyer Tirana	Albania	S	Clamps & fittings, insulators	Boyer	1990
61	AREC	Iran	S	GLST – 400 kV OHTL	Moshanir	1990
62	WREP	Iran	TK	GLST – 63, 132 kV OHTL	Mahab Ghodss	1989
63	EAC	Cyprus	DS	GLST – 132 kV OHTL	EAC	1989
64	DGMPRE	Iraq	DST	Conductors – 400 kV OHTL	DGMPRE	1988
65	JEA	Jordan	TK	GLST -132 kV OHTL	JEA	1987

#	Client	Country	Proj. type	Scope of supply	Consulting engineer	Starting year
66	Electricity Authority of Cyprus (EAC)	Cyprus	DS	GLST – 132 kV OHTL	EAC	1987
67	EEA	Egypt	TK	GLST – 220 kV OHTL	EEA	1986
68	EEA	Egypt	DS	Clamps & fittings, insulators – 220 kV OHTL	EEA	1986
69	DGMPRE	Iraq	TK	GLST – 132 kV OHTL	DGMPRE	1986
70	DGMPRE	Iraq	DS	Materials – 132 kV OHTL	DGMPRE	1986
71	DGMPRE	Iraq	TK	GLST – 400 kV OHTL	DGMPRE	1985
72	Public Corporation for Electric Power	South Yemen	DE	Wooden poles – 11, 33 kV OHTL	Ewbank	1984
73	JEPCO	Jordan	TK	Spun concrete poles – 11, 33 kV OHTL	JEA and JEPCO	1984
74	Egyptian Electricity Authority (EEA)	Egypt	TK	GLST – 220 kV OHTL	EEA	1984
75	West Regional Electric Power (WREP)	Iran	TK	GLST – 63 kV OHTL	Mahab Ghodss	1983
76	WREP	Iran	TK	GLST – 132 kV OHTL	Mahab Ghodss	1983
77	Jordan Valley Authority	Jordan	TK	GLST – 33 kV OHTL	Stanley Consultants Inc. + Harza Eng. (USA)	1983
78	Electricity Board of the States of Malaya	Malaysia	TK	GLST – 132 kV OHTL	Crown Agency	1983
79	DGMPRE	Iraq	TK	GLST – 63 kV OHTL	DGMPRE	1983
80	Yarmouk University	Jordan	TK	GLST – 33 kV OHTL	Preece, Cardew & Rider	1982
81	KWPA	Iran	DS	GLST – 132, 230 kV OHTL	Motor Columbus	1982
82	DGMPRE	Iraq	TK	GLST – 33 kV OHTL	DGMPRE	1981
83	JEPCO	Jordan	TK	GLST – 132 kV OHTL	Ewbank (GB)	1981
84	Jordan Electricity Authority (JEPCO)	Jordan	TK	GLST – 132 kV OHTL	Preece, Cardew	1979
85	Azerbaijan Regional Electric Co. (AREC)	Iran	TK	GLST – 63 kV OHTL	Mahab Ghodss	1978
86	TAVANIR	Iran	TK	GLST – 230 kV OHTL	Motor Columbus (Switzerland)	1977
87	KWPA	Iran	TK	GLST – 230 kV OHTL	Development & Resources	1975
88	Khuzestan Water and Power Authority (KWPA)	Iran	TK	GLST – 132 kV OHTL	Development & Resources (USA)	1975
89	Electricité du Liban	Lebanon	TK	GLST – 150 kV OHTL	Surveillance de Geneve (Switzerland)	1975
90	Electricité du Liban	Lebanon	TK	GLST – 66 kV OHTL	Lebanon Electricity	1972

Independent Auditors' Report

To the shareholders of Romelectro SA,

Report on the Financial Statements

We have audited the accompanying financial statements of Romelectro S.A ("the Company"), which comprise the balance sheet as at 31 December 2011, and the income statement, statement of changes in equity and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory notes presenting the following:

TOTAL EQUITY AND RESERVES:
Lei 109,420,815

PROFIT FOR THE YEAR:
Lei 46,541,408

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the Order of the Minister of Public Finance no. 3055/2009 and related amendments and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with the

Standards on Auditing as adopted by the Romanian Chamber of Financial Auditors. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion the financial statements as at and for the year ended 31 December 2011 have been prepared,

in all material respects, in accordance with the Order of the Minister of Public Finance no. 3055/2009 and related amendments and related amendments and accounting policies described in the notes to financial statements.

Other Matters

This independent auditors' report is made solely to the Company's shareholders, as a body. Our audit work has been undertaken so that we might state to the Company's shareholders those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's shareholders as a body, for our audit work, for the report on financial statements and the report on conformity, or for the opinion we have formed.

The accompanying financial statements are not intended to present the financial position, results of operations and a complete set of notes to the financial statements of the Company in accordance with accounting principles and practices generally accepted in countries and jurisdictions other than Romania. Accordingly, the accompanying financial statements are not designed for those who are not informed about Romanian legal and statutory requirements including the Order of the Minister of Public Finance no. 3055/2009 and related amendments.



Report on conformity of the Administrators' Report with the Financial Statements

In accordance with the Order of the Minister of Public Finance no. 3055/2009, article no. 318 point 2 of accounting regulations in accordance with the 4th Directive of CEE we have read the Administrators' Report. The Administrators' Report is not a part of the financial statements. In the Administrators' Report we have not identified any financial information

which is not in accordance, in all material respects, with the information presented in the accompanying financial statements.

For and on behalf of KPMG Audit SRL:

John Lane
registered with the Chamber of Financial Auditors of Romania under no. 1507/2003

KPMG AUDIT SRL

registered with the Chamber of Financial Auditors of Romania under no. 9/2001

Bucharest, 10 April 2012

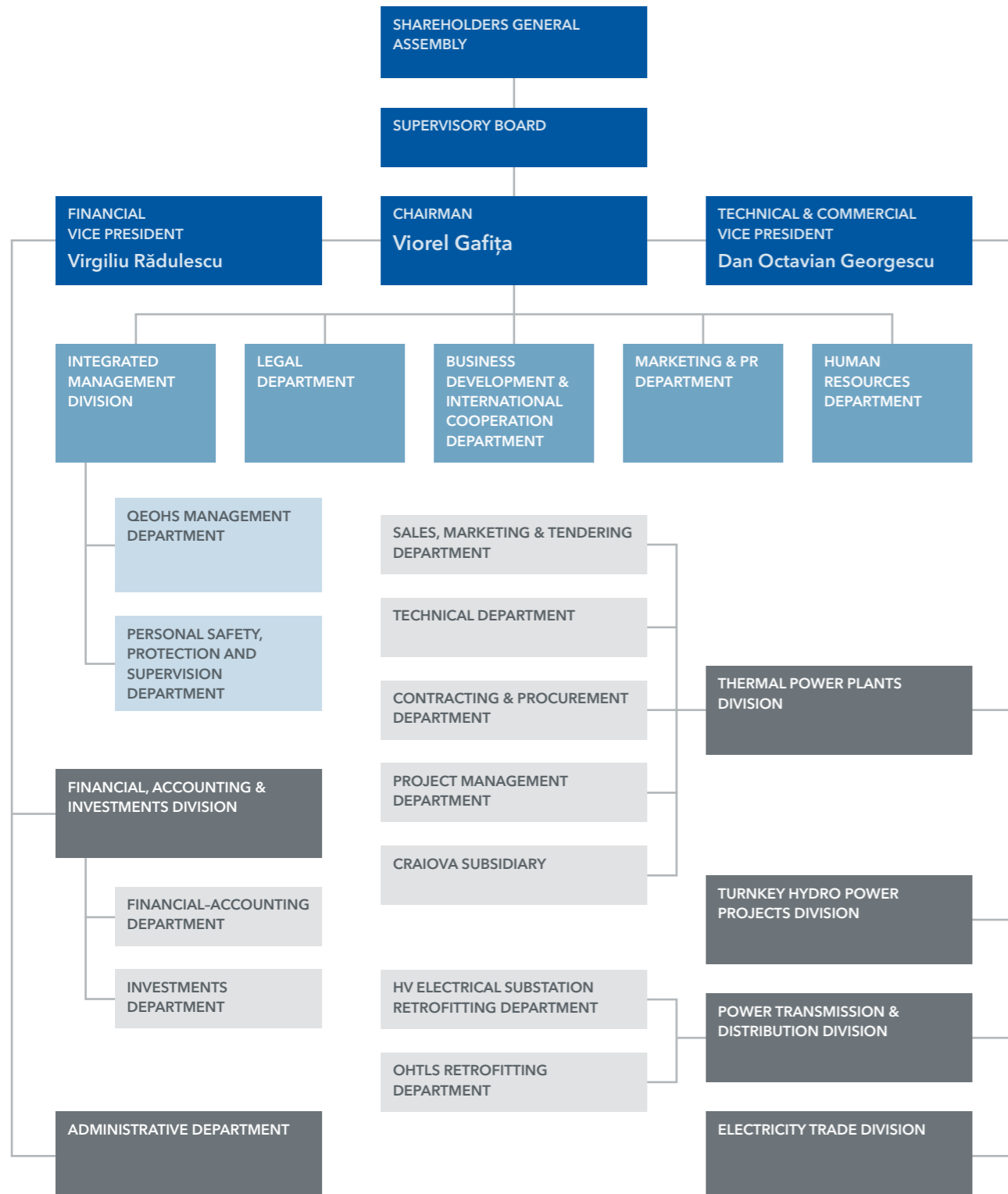
Financial Highlights

BALANCE SHEET

	2010	2011
RON to EUR exchange rate on 31-Dec	4.2848	4.3197
RON to EUR average exchange rate	4.2099	4.2379
Key figures		
Employees, average number	96	96
Turnover (RON)	465,807,819	351,350,620
Nominal capital (RON)	15,650,640	15,650,640
Gross profit (RON)	62,398,275	54,488,533
Net profit (RON)	51,694,562	46,541,408
Consolidated profit and loss account		
	RON	RON
Operating income	465,807,826	351,514,138
Financial income	3,245,166	6,241,468
Operating expenses	402,639,642	299,086,057
Financial expenses	4,015,075	4,181,016
Total expenses	406,654,717	303,267,073
Consolidated balance sheet		
	RON	RON
Noncurrent assets	47,388,807	41,997,313
› Intangible assets	316,843	193,898
› Tangible assets	19,224,272	21,406,787
› Financial assets	27,847,692	20,396,628
Current assets	189,950,063	188,752,072
Regularisation & similar account	687,000	1,205,068
Assets Total	238,025,870	231,954,453
Own capital	108,321,691	109,420,815
Debts	106,630,686	102,128,725
Liabilities Total	238,025,870	231,954,453

	2010	2011
Key figures		
Employees, average number	96	96
Turnover (EUR)	110,645,816	82,906,775
Nominal capital (EUR)	3,652,595	3,623,085
Gross profit (EUR)	14,821,795	12,857,437
Net profit (EUR)	12,279,285	10,982,186
Consolidated profit and loss account		
	EUR	EUR
Operating income	110,645,817	82,945,359
Financial income	770,842	1,472,774
Operating expenses	95,641,142	70,574,119
Financial expenses	953,722	986,577
Total expenses	96,594,864	71,560,696
Consolidated balance sheet		
	EUR	EUR
Noncurrent assets	11,059,748	9,722,275
› Intangible assets	73,946	44,887
› Tangible assets	4,486,621	4,955,619
› Financial assets	6,499,181	4,721,770
Current assets	44,331,139	43,695,644
Regularisation & similar account	160,334	278,970
Assets Total	55,551,221	53,696,889
Own capital	25,280,454	25,330,651
Debts	24,885,802	23,642,550
Liabilities Total	55,551,221	53,696,889

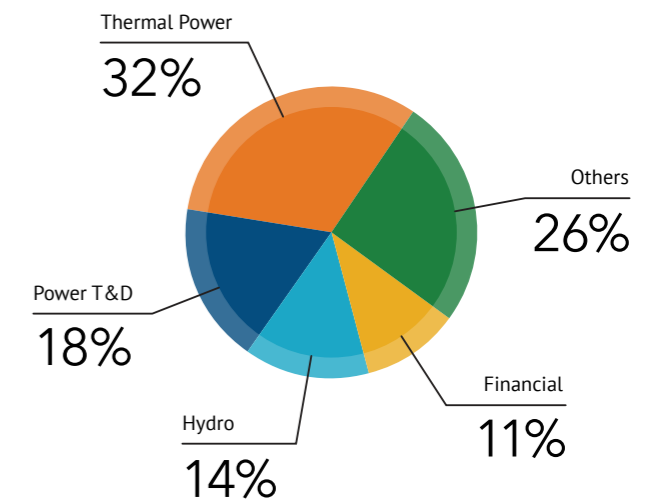
Organizational Chart



Human Resources

From its beginnings, Romelectro has relied on its employees' professionalism, experience and dedication. We are proud to have Romania's most famous engineers within our company, people for whom power means not just megawatts but their whole career.

That is why we consider the performances achieved by our company as being both an individual and a team effort. That is the reason for which we are continuously developing each employee's professional abilities and skills. To us, human capital is the most important resource.





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