

Key account
presentation



Products and services
for power plants
and consumers with HV connection





Power plants

Service from GA Magyarország Kft.

- **Design and planning**
Feasibility studies, permission, building design and planning
- **High-, medium and low voltage cable networks**
- **High-, medium and low voltage overheadline networks**
- **Communication lines**
- **High/medium voltage substations**
 - Primary and secondary planning, installation and commissioning
 - Civil work planning and building
- **High and medium voltage field extension in the Utility's substation**
- **Operation and maintenance**
- **Turn key projects**



Products and service Planning

- **Consulting to the client**
- **Leading of verifications by authorities and utility companies**
- **Feasibility studies**
- **Environmental effect study**
- **Water permission plan**
- **Primary substation-, cable-, and overheadline call documentation and building design and planning**
- **Secondary call documentation, building design and planning**
- **Supervision during the execution**



Products and service

High-, medium and low voltage cable networks

- Start-up assembly of cable networks up to 132kV
- Planning and route planning
- Calculation of entering power and roller distance
- Civil engineering, logistics, documentation
- Cable laying, assembly





Products and service

High-, medium- and low voltage overheadlines

- All kind of survey and route planning
- All kind of calculations
- All kind of foundation works and assembly
- Laying of light-wave conductor cable as protection
- Conductor (OPGW) respectively separate cable
- Repair work, maintenance, updating





Products and service

High-, medium voltage substations

- Substations and high voltage switching equipments up to 145 kV, moreover transformer-stations at each voltage and accomplishment
- Planning, design, project organisation, transport, assembly, start-up and all maintenance and repair work of primary-, secondary- and power control technology of all kind of establishments





Products and service Operation and maintenance

- **Orderly verifications**
Touch protection-, lighting protection- and regulation verifications
- **Orderly maintenance**
- **Planned switching (HV/MV/LV)**
- **Prevention of the malfunctions**
- **Remote supervision**
- **Diagnostics**
- **Inspection of fire- and asset protection devices and system**
- **Inspection of safety devices**
- **Other services**
Cleaning, lawn mowing, etc...



References

Levél WPP HV substation and connection to E.ON

- Customer:** Ecowind Handels- und
Wartungsgesellschaft mbH
- Subject:** Levél windfarm connection to HV
network of E.ON including a HV
substation
- Installation:** January 2007. – November 2007.
- Value:** 1.898.608-EUR net
- Details:**
- Execution plan for civil and electrical work
 - Civil work – switching building, foundations
 - HV extension in E.ON substation
 - HV coupling cable fom E.ON substation to windfarm substation
 - Turn key windfarm HV substation
 - Protection, monitoring and controlling system
 - Installation of devices and equipments
 - Primary installation
 - Secondary installation
 - As built documentation
 - Commissioning





References

Levél WPP HV substation and connection to E.ON

Project description:

Primary works:

- 120 kV extension in E.ON substation
- 120 kV coupling cable building from the new field in E.ON substation to the windfarm substation
- Civil engineering, structural architecture – foundations, internal road, fence, switch-building
- 20 kV switchgear
- 20 kV internal cable laying
- Delivery of power transformer
- Delivery, installation and commissioning of all devices

Secondary works:

- Protection and controlling system building
- Remote monitoring system building
- Auxiliary- and alarm system building
- Delivery, installation and commissioning of all devices

Documentation:

- Execution plan
- Commissioning plan and documentation
- As-built documentation delivery





References

Levél WPP HV substation - MV internal cable network

- Customer:** Ecowind Handels- und
Wartungsgesellschaft mbH till 4/2008
BS Energia Kft. from 5/2008
- Subject:** Operation and maintenance of
HV substation and MV internal cable
network
- Installation:** 12/2007 –
- Value:** ca. 38,2 TEUR / year
- Details:** Operation, maintenance of HV substation and
cable HV cable connection with 24 hours
operation services (planned and prevention of
malfunctions), checking and diagnostics.





References

Ostffyasszonyfa wind-turbine's connection

- Customer:** Windpower Hungária Kft.
- Subject:** Ostffyasszonyfa wind-turbine network connection to E.ON distribution network
- Installation:** July 2006. – August 2006.
- Value:** 100.160 - EUR net
- Details:**
- Prefabricated compact secondary substation delivery, installation and connection
 - 1,6 km 20 kV cable line delivery, laying and connection
 - Pole-mounted disconnector delivery and installation
 - Low voltage cable connection from wind-turbine





References

Tiszaújváros co-generation plant

- Customer:** Siemens Rt.
- Subject:** Tiszújváros heating plant – 0,4 kV electrical distribution system building for co-generation power plant
- Installation:** April 2002. – January 2003.
- Value:** 104.000-EUR net
- Details:**
- Low voltage bus duct
 - Motor control panel installation
 - Connection boxes for motors
 - Compensation bank installation
 - Protection box installation
 - Gas indicator installation
 - Cable tray, ladders
 - 6,3 kV cable delivery, installation, connection
 - 400 V power and controlling cables delivery, laying, installation
 - Measuring



References

Kazincbarcika co-generation plant

- Customer:** Siemens Rt.
- Subject:** Kazincbarcika heating plant – 0,4 kV electrical distribution system building for co-generation power plant
- Installation:** April 2002. – January 2003.
- Value:** 157.200-EUR net
- Details:**
- Low voltage bus duct
 - Motor control panel installation
 - Connection boxes for motors
 - Compensation bank installation
 - Protection box installation
 - Gas indicator installation
 - Cable tray, ladders
 - 6,3 kV cable delivery, installation, connection
 - 400 V power and controlling cables delivery, laying, installation
 - Measuring



References

Budaközép-Kaszásdülő HV cable laying

- Client** Budapesti Elektromos Művek NyRt.
- Subject** HV cable network laying
- Installation** 01. 09. 2006. – 20. 11. 2006.
- Value** 2.420.372,- EUR net
- Consists** **Installation works:**
Disassembly of covers and performances of the trace
New HV cable laying
Recovering of the cover
Installation of HV cable accessories





References

Csarnok square - 132 kV cable reconstruction

- Client** Budapesti Elektromos Művek NyRt.
- Subject** HV cable line reconstruction
- Installation** 01. 09. 2005. – 15. 12. 2006.
- Value** 1.862.780,-EUR net
- Consists** **Installation work:**
Parallel work on three reconstruction-sections
Disassembly of the cover and existing oil insulated HV cable
New HV cable laying
Recovering of the cover
Installation of HV cable accessories





References

Mezőkövesd overheadline reconstruction

Client	Észak-Magyarországi Áramszolgáltató NyRt.
Subject	Mezőkövesd 120 kV 15 km long overheadline reconstruction
Installation	09. 10. 2006. – 30. 11. 2006.
Value	520.047,-EUR net
Consists	Installation work: Disassembly of existing conductors Pulling in and setting of new conductors Replacing of the connectors Replacing of vibration dampers, accessories Replacing of 230 peaces anchoring and suspension insulators Two times crossing of rail-way Two times crossing of 20 kV live overheadline





References

Herzebrock mast-assembling

Client	GA LBS GmbH
Subject	Mast-assembling for HV overheadline network
Installation	01. 10. 2005. – 30. 10. 2006.
Value	48.848,-EUR
Consists	Installation work: Assembling of iron construction for four-system 380/110 kV overheadline networks 12,0 hours/ton average efficiency Installation of 162,8 ton





References

Pestlőrinc substation

- Client** Budapesti Elektromos Művek NyRt.
- Subject** Reconstruction of primary and secondary devices
- Installation** 27. 11. 2004. – 15. 12. 2005.
- Value** 1.043.248,-EUR net
- Consists** **Primary works:**
- New 120 kV overheadline and transformer feeders
 - Installation of HV devices, conductor, accessories, insulators
 - MV cable laying
 - Installation of MV cubicles
- Secondary works:**
- Installation and commissioning of secondary system
 - Reconstruction of aux. power supply system
 - Delivery, installation and commissioning of remote control and protection system
 - Secondary wiring
 - Fibre optic cable laying
 - Reconstruction of the existing controlling system





References

Gyöngyös substation

- Client** Észak-Magyarországi Áramszolgáltató NyRt.
- Subject** Reconstruction of I. transformer feeder in Gyöngyös substation
Delivery and installation of protection workstation
- Installation** 24. 04. 2006. – 10. 12. 2006.
- Value** 339.452,-EUR net
- Consists** **Primary works:**
Replacing of HV devices, conductors, insulators, accessories
Tube/busbar, busbar-sectionalizer disconnectors, 20 kV cable laying
- Secondary works:**
Reconstructions of nr. 1 transformer feeder, outdoor relay-boxes, secondary wiring, protection workstation, relay racks of overheadline feeders, remote controlling, commissioning





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