

Slobodan Marković

Senior Consulting Engineer

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Year of Birth: 1967
Place of Birth: Doboј, Bosnia & Herzegovina



SUMMARY OF QUALIFICATIONS

1995 Graduate Electrical Engineer – *dipl.ing.*
Faculty of Electrical Engineering, University of BELGRADE, SERBIA

MEMBERSHIP

- UCTE Sub Group Network Models and Forecast Tools
- SETSO Inter TSOs Compensation Sub Group (SETSO ITC SG)
- Member of the SETSO SG Balance Management (SETSO BM SG)

KEY QUALIFICATIONS

- ☞ The planning of high voltage transmission network
- ☞ Load flow analysis
- ☞ The short circuit analysis and calculations
- ☞ Steady state stability of electric power system
- ☞ Conducting technical analysis of energy sector projects and developments
- ☞ Contribution in the regional relationship and cooperation among power utilities in South East European countries
- ☞ Determination and checking the criteria for choice of high voltage equipment

SPECIAL SKILLS

- ☞ Languages
 - English (excellent)
 - German (good)
- ☞ Professional software
 - PTI PSS/E (load flow, fault analyses)

- Power System Analyzer (load flow, network transfer capacities evaluation)
- ☞ Microsoft Office Applications
- ☞ Management tools (Microsoft Project)
- ☞ Graphical design (AutoCAD, Adobe applications, CorelDraw, MapInfo and other)

PROFESSIONAL EXPERIENCE

2008 – TO PRESENT *Senior Consulting Engineer*
Electricity Coordinating Center Ltd.

2004 – 2008 *Research engineer*
Electricity Coordinating Center Ltd.

1998 – 2004 *Dispatcher in regional control center*
Electricity Coordinating Center Ltd.

SELECTED REFERENCES

2009 Study of the connection of TPP Tuzla G7 (450MW) to the EPS of Bosnia&Herzegovina

Project Leader

for: ESOTECH, Slovenia

Objective of the Study is connection of new generation block G7 in TPP Tuzla (estimated installed power 450 MW) to the transmission grid of Bosnia and Herzegovina taking into consideration transmission development plans of 400, 220 and 110 kV network until 2017.

As a result of the dynamic analyzes, range of suitable electromechanical and control parameters has been presented.

Tasks performed by author: project coordination, data collection, surplus/deficit analyses, load flow, economical and financial aspects.

Study of the connection of TPP Kakanj G8 (333MVA) to the EPS of Bosnia&Herzegovina

Project Leader

for: IBE, Slovenia

Objective of the Study is connection of new generation block G8 in TPP Kakanj (estimated installed power 300 MW) to the transmission grid of Bosnia and Herzegovina taking into consideration transmission development plans of 400, 220 and 110 kV network until 2018.

Electromechanical and control parameters of the planned block in whole were determined.

Tasks performed by author: project coordination, data collection, surplus/deficit analyses, load flow, electromechanical and control parameters determination, economical and financial aspects.

Prefeasibility Study of Connection of the TPP Kakanj G8 to the EPS of Bosnia&Herzegovina

Project Leader

for: IBE, Slovenia

The scope of the Study is connection of the new TPP Kakanj G8 (333MVA/300MW) to the transmission grid of Bosnia and Herzegovina taking into consideration transmission development plans of 400, 220 and 110 kV network until 2018.

The Study investigates several possible variants of connection and provided the best solution for it.

Preliminary design and future route for connecting line was also performed.

Tasks performed by author: project coordination, data collection, surplus/deficit analyses, load flow, economical and financial aspects.

IPF for Western Balkans – Energy Montenegro – Electricity Network Development Project

Team member

for: IPF Western Balkans, WYG

Load flow analyses (steady state, contingency...), Fault analyses, Transmission Development plans evaluation, Distribution Development plans evaluation, Transmission and Distribution reliability, Cost-benefit analyses, Financial aspects and project bankability - for increasing the number of projects in the region that can be put forward to financial institutions for funding, and therefore to implementation.

Tasks performed by author: data collection, load flow calculation, short circuit calculation, economical and financial aspects.

Generation surplus projections in Eastern Europe (EE) region and electricity market scenarios in the period 2008 – 2020, [Updated data and scenarios]

Team member

for: TERNA, Italy

The objective of the study is to analyze different scenarios of generation surplus in SEE/EE region and features of electricity market development, as well as to analyze the transmission network evolution in the period under analysis (2008-2020). This Study presents an Update of similar SEE Market Study performed in 2007, with extended time horizon (until 2020), scenarios (optimistic, besides pessimistic and realistic) and countries (Ukraine, Moldova, Hungary).

Tasks performed by author: data collection, surplus/deficit analyses, load flow.

Prefeasibility Study of Connection of the TPP Banovići to the EPS of Bosnia&Herzegovina

Project Leader

for: IBE, Slovenia

The scope of the Study is connection of the new TPP Banovići (350MVA/300MW) to the transmission grid of Bosnia and Herzegovina taking into consideration transmission development plans of 400, 220 and 110 kV network until 2020.

Taking into consideration maximum engagement of TPP Banovići, techno economical analyses, for several potential variants have been performed.

The following design studies have been provided: Load flow studies, auxiliary supply analyses and techno-economical aspects.

Tasks performed by author: project coordination, data collection, surplus/deficit analyses, load flow, economical and financial aspects.

Connection of the TPP Porto Romano to the EPS of Albania

Team member

for: RWE, Germany

Technical Parameters Calculation software for flow-based Coordinated Auctions in Central-East Europe: The aim of the study is to examine the possibility of constructing the TPP Porto Romano, which is to be connected to the 400 kV transmission network of Albania, considering the state of 400, 220 and 110 kV network in future period in year 2016 and to provide the best possible solution for its connection, as well as to check the transfer possibilities of electric power from TPP Porto Romano to neighboring EPSs (Montenegro, Serbia, Macedonia, Greece, Italy) for different scenarios.

Tasks performed by author: load flow analyses, transmission capacity assessment, analysis of UCTE accession process.

2008 Prefeasibility Study of Connection of the TPP Dragačevo to the EPS of Serbia

Project Leader

for: Mineral Investments, Serbia

The scope of the Study is connection of the new TPP Dragačevo (146MVA/132MW) to the transmission grid of Serbia taking into consideration transmission development plans of 400, 220 and 110 kV network until 2016.

The Study investigates all possible variants of connection and provides the best solution for it.

The following design studies have been provided: Load flow studies, auxiliary supply analyses and techno-economical aspects.

Tasks performed by author: project coordination, data collection, surplus/deficit analyses, load flow analyses, economical and financial aspects.

Feasibility study for new under sea HVDC interconnection between Italy and Montenegro Economical and financial aspects

Team Member

for: TERNA, Italy; EPCG, Montenegro

Study on review investment related costs and future development of transmission network in SEE, from economical point of view, and to evaluate economical costs and benefits of new under-sea HVDC interconnection between Italy and Montenegro.

Tasks performed by author: data collection, economical and financial aspects.

Feasibility study for new under sea HVDC interconnection between Italy and Montenegro Short Circuit and Voltage and Dynamic Stability analyses

Team Member

for: European Bank for Reconstruction and Development; EPCG, Montenegro

Study on review current and future development stages of transmission network in SEE, from short circuit levels and voltage and dynamic stability point of view, and to evaluate security of supply and feasibility of new under sea HVDC interconnection between Italy and Montenegro. The following design studies have been provided: data collection and analyses, fault level analyses, equipment adequacy analyses, voltage profile and stability analyses, dynamic stability analyses, harmonics impact analyses, economical aspects.

Tasks performed by author: data collection, short circuit calculation.

Feasibility study for new under sea HVDC interconnection between Italy and Montenegro Static security analyses

Team Member

for: TERNA, Italy

Study on collecting national inputs and the development plans for building of regional transmission model for 2016, and then to perform analyses of technical feasibility for new under sea HVDC interconnection between Italy and Montenegro. The following design studies have been provided: data collection and analyses, load flow analyses (steady state, contingency...), voltage profile and stability analyses, maximum exchange capabilities, development plan evaluation.

Tasks performed by author: data collection, load flow analyses

Connection of the TPP Stanari (420MVA) to the EPS of Bosnia&Herzegovina

Team Member

for: EFT Mine & TPP Stanari, Republic of Srpska, Bosnia&Herzegovina

Study on connection of the new production unit in TPP Stanari. The following design studies have been provided: Load flow studies, fault studies, transient stability studies, frequency response studies, auxiliary supply analyses, techno-economical aspects.

Tasks performed by author: data collection, load flow analyses, short circuit calculation, financial aspects.

2007 Connection of new (second) block in TPP Gacko to power system of Bosnia&Herzegovina

Team Member

for: CEZ, Cech Republic

Study on connection of the new production unit in TPP Gacko. The following design studies have been provided: Load flow studies, fault studies, transient stability studies, frequency response studies, auxiliary supply analyses, techno-economical aspects

Tasks performed by author: data collection, load flow analyses

In-depth analysis of transmission options to diversify energy supply

Team Member

for: USEA; USAID; Moldelectrica, Moldavia

Study to conduct analyses of potential new transmission tie-lines with neighboring countries, as well as internal lines, which will serve to diversify its energy supply. The following design studies have been provided: Data collection and analyses, demand forecasts, network development plan evaluation, load flow and voltage profile studies, maximum exchange capabilities.

Tasks performed by author: data collection, load flow analyses

REBIS - Generation Investment Study-update: Transmission network adequacy evaluation

Team Member

for: PWC, WB

Study on connection of the new production units in South East European region till 2020. The following design studies have been provided: Load flow studies, fault studies, techno-economical aspects.

Tasks performed by author: data collection, load flow analyses

2005 REBIS - Generation Investment Study-update: Transmission network checking

Team Member

for: PWC, WB

Study on connection of the new production units in South East European region till 2015. The following design studies have been provided: Load flow studies, fault studies, techno-economical aspects.

Tasks performed by author: data collection, load flow analyses

2004 Technical and economical aspects of connection electric power systems between Serbia and Macedonia with new transmission line 400 kV Niš-(Leskovac-Vranje)-Skopje

Network Analyst, Power system analysis and modeling

for: EPS – Electric company of Serbia

Feasibility study for construction of new 400 kV line Niš(SRB)-Skopje(MKD), and two new 400/110 kV substa-tions Leskovac and Vranje. The following tasks have been provided: load flow analyses, transfer capacities evaluation, steady state stability, fault analyses, OHL line routing, techno-economical aspects, telecommunica-tion systems...

Tasks performed by author: data collection, load flow analyses

Effects of implementation of the ETSO CBT mechanism in process of accounting and evaluation of ex-penses in international electric energy exchanges

Main Author

for: EPS – Electric company of Serbia

Study analyze for Serbian participation in SETSO (ETSO) ITC mechanism and financial results of such participation. Estimation and calculations were performed with two presumptions: EPS is in ITC process and EPS is not in ITC process.

Tasks performed by author: project coordination, data collection, , economical and financial aspects.

2003 Study of electric power and energy losses in transmission network of power utility of Montenegro (EPCG) with measurements for their reduction

Team member

for: EPCG

Study of electric power and energy losses in transmission network of power utility of Montenegro (EPCG) with measurements for their reduction, The following tasks have been provided: load forecast, transmission losses, load flow analyses, influence of electricity transfer.

Tasks performed by author: data collection, load flow analyses.

Review of Electricity Supply and Demand in South Eastern Europe (2002 - 2012),

Team member

for: World Bank

Review of Electricity Supply, Demand, GDP, new transmission network elements in South East Europe till 2012 with recognized all bottlenecks in transmission networks in SEE region.

Tasks performed by author: surplus/deficit analyses, load flow analyses, economical and financial aspects.

2002 Project SECI, project group on development of interconnection of electric power systems of SECI coun-tries for better integration to the European system,

- **Regional Transmission Planning Project,**
- **Regional model construction 2005**

Team member

for: SECI

Study on interconnection of countries in South East Europe (Romania, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Albania, Greece, Bulgaria and Turkey), Regional Transmission Planning Pro-ject, Regional model construction 2005. The following tasks have been provided: load flow analises, transfer ca-pacities evaluation, steady state security, and short circuit.

Tasks performed by author: data collection, load flow analyses, short circuit calculation.

Feasibility study for installation of the new Hydro Power Stations Buk Bijela and Srbinje (Foca) in the power system

Team Member

for: Electric company of Republic of Srpska

Study on connection of the new Hydro Power Stations Buk Bijela and Srbinje (Foca). The following design studies have been provided: Load flow studies, fault studies, transient stability studies, frequency response studies, auxiliary supply analyses, techno-economical aspects.

Tasks performed by author: data collection, load flow analyses, economical and financial aspects.

PUBLICATIONS

Selected journal and conference papers:

- 2009** **New under sea HVDC interconnection between Italy and Montenegro: Economical and financial aspects**
Marković, Vuković, Mijailović, Vujasinović, Kovačević
CG CIGRE; 2009
- 2006** **Reconnection of UCTE: New conditions for the exploitation**
S.Mijailović, Z.Vujasinović, I. Cvijetić, S. Marković
YUKO CIGRE; 2006
- 2004** **Influence of transmission network voltage level on final positions of SEE CBT parties, according to ETSO CBT methodology**
S.Markovic, D.Pupovac
MAKO CIGRE; 2004
- Characteristics of Temporary Virtual CBT mechanism in the South Eastern Europe and problems noticed during its implementation**
Z. Nesovanovic, S.MarkovicD.Pupovac
YUKO CIGRE, May 2004
- 1998** **New UCTE recommendations and rules for primary and secondary control**
M. Ivkovic, S. Markovic
YUKO CIGRE, May 1998