

International Energy Solutions s.a.r.l

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Asser A. Zobian

SUMMARY

Mr. Zobian is the President and CEO of International Energy Solutions, S.A.R.L, a software and hardware company with a mission to develop reliable renewable small and utility scale energy sources. He is also the Vice president of Cambridge Energy Solutions, LLC, a software company with a mission to develop software for the deregulated electric power industry. He is an electrical engineer with over fifteen years of experience in the operation of the U.S. electric power markets, MS applications development, Web Technology (including J2EE), MS-SQL, relational database systems and software development including experience in object-oriented language.

Mr. Zobian has developed many MS and Java applications that download and parse data for North American energy markets systems. He helped to develop Dayzer, Day-Ahead Locational Market Clearing Prices Analyzer (a model for each RTO), and is responsible for integrating, updating and maintaining the system database and daily market data. Mr. Zobian also provides Dayzer users with any additional features and/or software tools to enhance market modeling.

Prior to joining CES, Mr. Zobian held the position of a research analyst at Tabors Caramanis & Associates. Through his work at TCA, he gained an appreciable amount of experience in policy development, business planning, technical analysis, and project implementation in the energy and utility sectors in the United States and abroad. He also developed expertise in areas surrounding the restructuring of today's electric and gas markets, as well as the implementation of and market response to electricity spot prices. He has worked on projects covering a wide range of applications, such as electric and gas transmission tariff structure, market assets valuation, contract valuation, and forward analysis of locational prices in both the gas and electric markets. He also analyzed a large electric power transmission service database for potential gaming by transmission owners.

Mr. Zobian earned an M.S. in Engineering Management at Northeastern University. He combined his experience in the U.S. energy market with the optimization tools and theories offered at Northeastern to optimize the unit commitment process based on market economics.

Mr. Zobian's undergraduate thesis was on the topic of automating the design of neural networks using genetic algorithms, where he defined neural networks for logic functions. He also implemented most of the logic gates, flip-flops, multiplexers, demultiplexers and counters by using neural networks. The thesis included designing neural networks for pattern recognition as well as an

error detection and correction mechanism. He implemented a “Neuro-Cyclic Redundancy Check (NCRC)” that eliminates many of the drawbacks of ordinary Cyclic Redundancy Check (CRC) digital circuits, such as the use of a clock to synchronize circuit components, the need for feedback circuitry, the low processing speed, and circuit design dependency. He used the property of parallel processing in Neural Networks in order to avoid these drawbacks.

EDUCATION

- **M.S. in Engineering Management**, Northeastern University, December 2004.
- **Bachelor of Engineering in Computer Engineering**, Beirut Arab University, July 2000.

EXPERIENCE HIGHLIGHTS

International Energy Solutions, AL CHOUEIFAT, LEBANON

President and CEO, November 2011 – present

Cambridge Energy Solutions, Cambridge, MA

Vice President, November 2003 – present

- Worked on collecting data from various sources on the Internet.
- Updated, designed, and administrated Access and SQL Server databases.
- Wrote Visual Basic code to manipulate Excel worksheets.
- Automated the downloading, parsing and appending process of data from Internet to database.
- Worked on a market simulation model (Dayzer) to forecast locational market clearing prices in the electric power markets in the U.S.
- Acted as SQL server manager.

Tabors, Caramanis & Associates, Cambridge, MA

Research Analyst, October 2001 – October 2002

- Developed software tools to forecast fuel and energy prices at specific U.S. trading hubs.
- Analyzed a large electric power transmission service database for potential gaming by transmission owners.
- Evaluated the gas pricing arbitration standard of a long-term natural gas contract under the standard market design rules implemented in New England.
- Worked on a transmission congestion management project in El-Salvador.
- Helped to develop and design a software algorithm for the operation of the Italian electric power market.

Allied Computer Services (ALCS), Beirut, Lebanon

Software Engineer, summer 1999

- Acted as software engineer for Windows NT & 9x.
- Acted as software administrator for Sco Unix.
- Provided maintenance and support for software and hardware problems.

FIELDS OF EXPERTISE

- Electric power systems modeling
- Market power and transmission gaming analysis
- Data warehousing
- Generation and transmission assets valuation
- Web-based application architecture and development
- Database Systems/Tools: Oracle, SQL-Server, Access, ODBC, JDBC
- Operating Systems: Windows95, Windows98, WindowsNT, Windows2000, WindowsXP, Windows7, SCO UNIX
- Programming languages: Object-Oriented Design & Development, Java, AWT/Swing, Active Server Pages (ASP),ASP.net, LUA, SOAP,HTML, XML, Javascript, Assembly, Pascal, C, C Sharp and Visual Basic

PAPERS AND PUBLICATIONS

Report

RTO West Benefit/Cost Analysis

Final Report Presented to RTO West Filing Utilities

March 11, 2002

LANGUAGES

Fluent in Arabic and English