David Gray

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8296 160th Ave NE #108, Redmond, WA 98052
Electrical/Power System Engineer

Education

University of Arkansas
Fayetteville, AR
Bachelor of Science in Electrical Engineering, December 2007
GPA: 3.54

Programming Languages

Proficient in C#, C++, .NET, Java, Python, SQL, Perl, C, MATLAB

Power System Software

Proficient with Siemens PSS/E, MUST , and GE market and EMS software.

Previously NERC Reliability Coordinator Certified

Publications

"Impact of MW dependent constraint violation penalties on market results at Southwest Power Pool", Transmission and Distribution Conference and Exposition (T&D), 2012 IEEE PES.

Hobbies

road racing
drag racing
autocross
trading equity & index options

Professional Experience

Alstom Grid/GE Grid Solutions   *Redmond, WA*
Senior Power Systems Engineer   *June 2014 – December 2016*

- Lead market clearing engine developer for the SPP project. Involving formalizing requirements for maintenance and enhancements to the market. Ensuring all additions continue to fit within the tariff that SPP is bound by and improving the performance of the application overall.
- Lead market clearing engine developer for the Next-Gen Market clearing solution for GE written in C++ to be fast, efficient, and scalable.
- Worked directly on the current market clearing solutions for SPP, MISO, PJM, ISONE, and Transpower (New Zealand).
- Developed custom applications to make legacy systems easier to operate in, debug, and provide clarity to those working within them.

Southwest Power Pool, Inc.   *Little Rock, AR*
Senior Engineer   *June 2013 – May 2014*
Engineer II   *January 2011 – June 2013*
Engineer I   *January 2008 – January 2011*

Promoted to senior engineer to continue leading the design, verification, and implementation of the market clearing engine for SPP's Integrated Marketplace(IM)

- Lead functional testing effort to ensure the market clearing engine conformed with the IM protocols.
- Helped to ensure the smooth transition and operation of the IM through go live and went on to save SPP's members ~$200M in the first year.
- Developed applications that helped engineers verify, study, and visualize market results from any historical day and give hints as to potential errors in the data.
- Developed automated market reports to give executive level summaries of the market for varying time periods.
- Worked with market participants to explain the operation for any market inquiry or dispute.
- Helped with design specs that drove the requirements for the IM.
- Ensured all pricing for the EIS market in SPP was set correctly and made ex-post changes when errors in the software or data was present.
- Helped design a tool to modify, test, and rerun arbitrary time periods of the market to shorten dramatically the time spent calculating the ex-post prices and to properly test new designs for the market.
- Worked closely with all 24/7 operators when errors occurred on call.
- Studied and approved transmission outage requests for SPP's transmission network
- Reported on how well the SPP RSG responded to DCS events.
- Coordinated the SPP region's Black Start Plan.