PÖW MATION ENGINEERING

Tyler Bird, P.E.

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EXPERIENCE SUMMARY & CAREER PATH

Professional **Electrical Engineer** with 15 years of experience in electrical power engineering, industrial automation, and teaching related courses. Experience leading electrical/control projects from beginning to end. Technical expertise in power studies, industrial electrical design, relay / breaker coordination & arc flash studies, PLC/HMI programming, troubleshooting, and commissioning. Experience teaching, training, and leading others. I desire to focus the remainder of

my career on power systems, protection, teaching power courses applicable theory, and application of power system technology. Significant past work experience in the following industrial areas:

- ➤ Oil/Gas
- > Power Generation
- ➤ Water/Wastewater
- **➤** Mining
- Manufacturing

RELEVANT EXPERIENCE

EEAT / POWMATION ENGINEERING 2014 - PRESENT

Principal Engineer

- Provide professional electrical engineering studies, design and industrial controls expertise
- Short circuit, arc flash, protective device coordination studies
- Electrical design, power monitoring etc.
- PLC programming (Rockwell, GE, Emerson)
- Develop & teach electrical safety training and controls courses to industrial clients
- Worked for CH2M Hill / Jacobs both contract full time and part time direct for approximately 2 years at the IMFlash Semiconductor manufacturing facility in Lehi Utah. Worked on numerous projects involving power system distribution and design (138kV, 12.47kV, and 480V). Stamped IFC drawing packages.

UTAH VALLEY UNIVERSITY

2015-PRESENT

Associate Professor - Engineering Technology

- Teach electrical & automation courses as assigned in online and face-face environments.
- Served as department chair
- Developed the following courses from scratch:
 AET 1050, AET 1060, AET 2250, AET 2255, AET 2270, AET 2275

EDUCATION

Michigan Technological University-Graduate Certificate in Advanced Electric Power Engineering, 2022

University of Idaho – Master's degree, Electrical Engineering (power systems emphasis), 2016

Brigham Young University-Bachelor's Degree, Electrical Engineering, 2009

Utah Valley University-Associate of Applied Science, Electrical Automation Robotic Technology, 2006

TRAINING/CERTIFICATIONS

Professional Engineer-UT, GA, CO, & TX

YEARS OF EXPERIENCE

15+ Years

AREA OF EXPERTISE

Electrical Engineering

Controls Engineering

- Submitted the proposal, R401, and proposed curriculum for 2 new Engineering Technology BS degrees:
 - BS ENGT (Industrial Automation Emphasis)
 - BS ENGT (Power Emphasis)
- Starting course development for new BS power emphasis option for technologists

BOWEN COLLINS & ASSOCIATES

2013 - 2014

Electrical/Controls Engineer

Industrial Controls:

- PLC / HMI programming, VFD configuration, commissioning, troubleshooting
- Sample Clients / Projects:
 - Utah Lake Water user's Association (PLC / HMI programming and start-up)
 - Water Treatment Plant Church of Jesus Christ of Latter-Day Saints (Camp Zarahemla (PLC / SCADA)
 - Daggett County Dutch John Water Treatment Plant (Programming / Troubleshooting)
- Respond to callouts to resolve automation issues at various industrial / water plants.

Electrical Engineering and Design:

 Develop electrical drawings such as power one-line diagrams, electrical site plans, power and grounding plans, panel schedules, electrical details, control block diagrams, PLC I/O drawings, control panel and instrumentation drawings for a variety of clients and projects.

CHAMPION TECHNOLOGY SERVICES

2012 - 2013

Automation Engineer

Industrial Automation & Control Systems

- Responsible for PLC programming, instrumentation calibration, VFD programming and start-up of Ashley water injection facility in Uintah Basin. Facility included 6 remote I/O racks as well as various types of VFDs, instrumentation and communication protocols.
- Responsible for programming and start-up work for control system at Grady Water Injection Facility
- PLC programming and HMI interface work at a paper mill for a banding machine

SKM INC.

2011 - 2012

Controls Engineer/Field Technician

Automation & Controls

- Programming and commissioning work at Orem wastewater treatment plant. Project included changing out 8 Modicon PLCs with Allen Bradley Compact/Control Logix PLCs throughout the plant. It also included PLC programming and start-up of a new pump station, a thermophilic digester, aeration basin and blower building. I was the lead programmer on all new PLC program.
- Assisted with numerous other water/wastewater PLC programming and start-up projects

• Wire control panels & travel to commission and troubleshoot high speed turbo blowers across the country

BUREAU OF RECLAMATION - FLAMING GORGE FIELD DIVISION. 2010 - 2011

Electrical Engineer

Plant electrical engineer. Responsible for electrical projects and design work at the hydro plant

- Transformer and generator Doble testing
- Generator DC Ramp Testing
- Worked with electrical schematics and wiring diagrams
- Worked with the EEM on testing SEL Relays and Programmable Automation Controllers
- Digital excitation system troubleshooting
- Design work for automating plant emergency diesel generator
- Used Easy Power Software for design and analysis work

PACIFICORP - NAUGHTON POWER PLANT

2008 - 2010

Electrical Engineer

Plant electrical engineer. Responsible for overseeing and managing all electrical capital projects

- Thermal Plant Experience
- Compiled Work Scopes for a variety of electrical overhaul projects
- Responsible for plant arc flash and coordination study using SKM software
- Work with Salt Lake EE group on electrical mechanical to SEL microprocessor upgrades
- Transformer oil testing / maintenance
- Project management of plant wide electrical projects.
- Generator Rewinds, Exciter Replacement, Transformers replacement, Precipitators, Breaker Replacements, 4160V Motor Reconditioning, DCS & PLC system upgrades

OTHER ACCOMPLISHMENTS, BACKGROUND, & SERVICE

- Professional Engineer UT, GA, TX, CO
- IEEE Power & Energy Society Member
- Proficient in industrial logic programming languages (ladder, function block, structured text etc.)
- Proficient in SKM Power Tools Electrical Engineering Software
- Performed Numerous arc flash / coordination studies for industrial plants
- SEL Training: App 101, App 300G, App 710, PROT 401, PROT 409, Event Anaylis etc.
- Spanish Speaking Missionary Service Argentina, Rosario
- Avid fly fisherman