

# PAUL WILSON *Electrical Engineering Project Mngr.*

## PROFILE

Paul Wilson is an electrical engineering project manager at ENERGYneering Solutions, Inc. (ESI). As project manager, Paul is involved in managing a team of electrical engineers and SCADA programmers to see a project through from start to finish. Paul has been a part of the electrical design and construction of several LFGTE facilities, as well as numerous flare station design and upgrade projects. Paul has also been part of the design and installation of Remote Telemetry Unit (RTU) and SCADA systems at locations throughout the US.

## EDUCATION

MSE, Electrical Engineering, University of Idaho, Moscow, ID, 2012

## AFFILIATIONS

International Electrical and Electronic Engineers

## PROFESSIONAL EXPERIENCE

### PROJECT DEVELOPMENT EXPERIENCE

#### *Professional Service Capabilities*

- Preliminary Design
- Detailed Design
- Installation Management
- Startup Assistance
- Operations Assistance

### PLC HARDWARE EXPERIENCE

- Allen Bradley MicroLogix Family
- Allen Bradley CompactLogix Family
- Allen Bradley ControlLogix Family
- Automation Direct Koyo Family
- Automation Direct Productivity 3000
- GE Fanuc 90-30 Family
- GE RX3i Family

### NETWORKING EXPERIENCE

- Installing Ethernet hardware
  - Ethernet Switches
  - Cat-5e cabling
  - Wireless Access Points
  - Firewall installation
- Programming IP addresses
- Troubleshooting network communication problems

### TECHNICAL EXPERTISE

- PLC programming and SCADA development
  - PLC Ladder Logic Programming
    - RSLogix 500
    - RSLogix 5000
    - Proficy Machine Edition
    - DirectSoft 5
    - Productivity 3000
  - PLC OPC Communications
  - Modbus Communications Protocol
    - Modbus RTU
    - Modbus TCP
  - Ethernet Setup and Support
    - TCP/IP addressing
    - VPN connections
  - Analog and Digital Signals
  - Inductive Automation Ignition SCADA development
- Engine Controls
  - Woodward Controllers
    - EasyGen 3000
    - DSLC
    - DSLC II
    - 2301D, 2301E
    - E3 Full Authority Fuel Controller
  - ComAp Controllers
  - CAT Electronic Technician Software



#### GENERATOR EXPERIENCE

- CAT 3520
- CAT 3516
- Cooper Superior 16SGTA

#### FLARE CONTROL EXPERIENCE

- Programming Flare Control PLCs
- Automating Flare operation for both enclosed and candlestick flares
- Improving existing flare system performance
- Developing flare/LFGTE cooperative control schemes

### SAMPLE PROJECTS

#### RTU DEVELOPMENT PROJECTS

- Coffin Butte Landfill, Corvallis, OR:  
*Designed and oversaw installation of a 3 cell landfill leachate collection RTU system including development of SCADA system, PLC programming, and radio programming and installation.*

#### LFGTE FACILITY PROJECTS

- Lorain County Landfill, Elyria, OH:  
*Assisted with the commissioning of the 16 MW LFGTE facility including engine, switchgear, and blower skid controls and setup. Installed equipment for communication with Republic Services flare station.*
- Otay LFGTE Facility, Chula Vista, CA:  
*Assisted with the commissioning of facility 3 MW facility expansion including engine controls wiring, engine control tuning, switchgear operation, protective relay setup, and facility PLC.*
- Energy 2001 LFGTE Facility, Lincoln, CA:  
*Assisted with the commissioning of 2.46 MW facility expansion including engine wiring, startup, commissioning, and tuning, switchgear commissioning and communications interface setup, protective relay setup, and facility PLC system integration.*
- Prince William County Landfill, Manassas, VA:  
*Assisted with the commissioning of 4.8 MW facility including engine, switchgear, and blower skid controls and setup.*

#### FLARE PROGRAMMING/UPGRADE PROJECTS

- Lorain County Landfill, Elyria, OH:  
*Managed expansion of existing flare facility control and RTU system with the addition of a new flare. Expanded RTU capability by modifying the existing PLC program, re-configuring the existing HMI, and creating a new communications link with related LFGTE facility.*



- Carbon Limestone Sanitary Landfill, Lowellville, OH:  
*Managed expansion of existing flare facility control and RTU system with the addition of a new flare. Expanded RTU capability by modifying the existing PLC program, expanding operator control capability, and re-configuring the existing HMI.*
- Sauk Trail Hills Landfill, Canton, MI:  
*Updated PLC programming to support improved flare control and introduce communications with new CNG facility.*

#### PLC PROGRAMMING PROJECTS

- Otay LFGTE Facility, Chula Vista, CA:  
*Installed and programmed PLCs for data display on SCADA and for genset control. Supervised network infrastructure upgrade.*
- Three Mile Canyon Farms, Boardman, OR:  
*Designed, oversaw construction, and programmed PLC for plant monitoring and control in 3 engine biogas to energy facility.*
- Sand Valley LFGTE Facility, Collinsville, AL:  
*Developed balance of plant PLC programming. Worked with switchgear PLC programmer to integrate it with switchgear PLC program. Worked with GE to interface with and commission VFD systems. Developed HMI screens for balance of plant control on switchgear HMI panel.*
- Prince William County Landfill, Manassas, VA:  
*Designed and installed PLC system upgrade on existing 1.8 MW facility for improved SCADA interface.*

#### SCADA DEVELOPMENT PROJECTS

- Coffin Butte Landfill, Corvallis, OR:  
*Designed and oversaw installation of a 3 cell landfill leachate collection RTU system including development of SCADA system, PLC programming, and radio programming and installation.*
- LRI Landfill, Graham, WA:  
*Assisted with network setup, SCADA programming, and SCADA maintenance.*