

**Tom Cyr, PE**  
**Senior Mechanical Engineer**



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## **EDUCATION**

B.S. Mechanical Engineering, 1988 University of Maine, Orono

## **LICENSES AND CERTIFICATIONS**

Licensed Professional Engineer: CO, KY, MD, ME, WA and WI

## **SYNOPSIS**

Mr. Cyr is a results-oriented consultant and design engineer with over 30 years of experience in plant engineering, plant maintenance, capital improvements, design engineering, project management and technical staff management. His current roles include design engineering, project management and staff augmentation for industrial, power and municipal Clients. Mr. Cyr continually strives to find technically sound and cost-effective solutions to meet the complex needs of Clients in an increasingly competitive global environment. As an Owner of Triple Point Engineering, he provides each Client with the highest level of attention and the commitment to delivering successful project outcomes.

## **PROJECT EXPERIENCE**

### **CNG Decompression Projects, xNG - *Multiple Sites***

Project manager for three CNG decompression systems designed to reduce the pressure of tractor trailer CNG from 4,250 psig to 50 psig. Gas flow rate for the sites ranged from 25MM Scfh to 110MM Scfh. Project deliverables included PIDs for the new process and interconnection, foundation drawings, site improvement drawings, piping isometrics with bill of materials, electrical interconnection drawings and hazard area classification drawings.

**Trimble County Generating Station Package Boiler Gas Piping** – Bedford, KY  
Lead Mechanical Engineer for package boiler fuel piping installation. Provided safety relief sizing, vent sizing, backpressure and pressure loss calculations per ASME code requirements for an 84,000 SCFH boiler system.

**SAPPI NA, Flash Recovery Project** – Skowhegan, ME  
Lead Mechanical Engineer for flash steam recovery project for three paper machine dryer systems. Modeling of existing systems in PipeFlo to determine new pump sizing requirements and existing piping bottlenecks.

**SAPPI NA, Package Boiler Support Systems** – Westbrook, ME  
Lead Mechanical Engineer for installation of instrument air capacity to support the installation of two process and heating boilers with total capacity of 100,000 PPH. Provided detail design to integrate two new compressor systems including drying, filtering and cooling and selected optimum locations to tie into the existing mill compressed air system.

**Synagro, Waste Heat Boiler Installation** – Waterbury, CT  
Provided technical consulting services and heat balance calculations for installation of a 10,000 PPH waste heat boiler at a municipal waste-to-energy plant. Scope of services included lined duct material selection, code review, heat and mass balance, equipment selection review and startup services.

**Campus Energy Projects, Dartmouth College** – Hanover, NH  
Provided process steam PipeFlo modeling of campus-wide steam distribution piping to determine bottleneck locations and tie-in points for future campus steam distribution expansion projects. Provided detail design for steam-to-hot water heat exchanger installation

and hot water heating loop distribution for multiple buildings on campus. Provided detail engineering for central chiller plant pump upgrades and tie in configuration at central chiller plant.

**CHP Preliminary Engineering, Louis Dreyfus Agricultural Industries - Claypool, IN**

Project Manager and Lead Mechanical Engineer for the preliminary engineering design of a 7MW gas turbine CHP project. The project included a Solar Taurus 70 CTG prime mover and a Rentech HRSG.

**Landfill Gas to Energy Projects, DCO Energy - Providence, RI and Olinda, CA**

Lead Mechanical Engineer for the design of two 30 MW landfill gas to energy projects. Each power island consisted of four Solar Taurus gas turbines, four Rentech HRSG's and one Dresser-Rand steam turbine. All ancillary systems including steam, condensate, feed water, circulating water chemical feed, make-up water and plant drains were designed for the two greenfield sites.

**SCR Project Dominion Power, Mt. Storm - West Virginia**

Project Manager and Lead Mechanical Engineer for the balance of plant design and management of BOP engineering for the installation of anhydrous ammonia SCR's on coal fired units 1 and 2.

**Arc Light Capital Services No. 2 Fuel Oil Pipeline Replacement, Bayonne Energy Center - Bayonne, NJ**

Project Manager and Lead Mechanical Engineer for the replacement of buried fuel oil piping, providing distillate fuel oil to eight Rolls Royce Trent 60 gas turbines.

**Anaerobic Digester - Western Massachusetts**

Construction engineering services for a 1MW anaerobic digester at a dairy farm that processes livestock waste and plans to utilize food waste. Excess electrical power is exported to the grid and thermal energy is used to support anaerobic digestion process and on-site heat demands.

**Babcock Power Dry Scrubber Project, Mt. Tom Power Station - Mt. Tom, MA**

Lead ME responsible for equipment installation, including carbon activated mercury capture, powdered lime injection, ash handling and water make-up for 150MW coal-fired boiler.

**Alstom Flue Gas Desulfurization Project, East Kentucky Power Co-op - Maysville, KY**

Lead Mechanical Engineer responsible for all aspects of the mechanical BOP design for FGD installation on two 500 MW boilers. The project required extensive work with fiberglass piping systems at temperatures near maximum design conditions.

**Power Plant Improvements, Duke Energy - Multiple Locations, FL**

Projects included feed water heater drain pump design, sizing and installation, oil/water separator design and installation, and turbine lube oil purification system installation for Location A units 1 and 2. Additionally, Location A unit 5 required lab sample table and chiller replacement. Updates to the Location B included circulating water system improvements, circulating water pump analysis, heat exchanger ball cleaning, vacuum priming system replacement and sea water cooling pump design.

**Pipe Stress Analysis MIT Nano Project, Mechanical Control Systems - Cambridge, MA**

Project manager for two phases of piping stress analysis for steam and hot water piping to support the MIT Nano expansion project. Deliverables included stamped piping code stress reports for 30+ piping systems, piping support design information and location plans for pipe supports. The projects used Caepipe for developing the stress analysis reports.

**Cleaning Force Ratio (CFR) Engineering Support, Bluewater Industrial Cleaning - Multiple Sites**

Project manager for over twenty steam and air blow projects at new and existing power plants in the US. Scope for each project included pipe modeling of permanent and temporary plant piping in PipeFlo Compressible and PipeFlo Advantage, and the determination of Cleaning Force Ratios (CFR's) to support adequate steam and air blow cleaning. A comprehensive report of findings was provided for each project. Reports were used to validate pipe cleaning flows of plant piping for critical power equipment including steam turbines and boiler steam and gas systems.

**Champion Paper – Bucksport, ME**

Design Engineer for new condensate collection system for solid fuel conveyor enclosures. Multiple enclosed conveyor systems were steam heated and condensate was collected and returned to the boiler room deaerator.

**Ponderosa Fibers – Augusta, GA and Oshkosh, WI**

Plant Engineer responsible for all engineering activities at a 100 TPD deinked market pulp manufacturer.