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## **Ken Macfarlane, P.Eng., CFEI**

B.Sc. Mechanical Engineering, University of New Brunswick  
Fredericton, NB

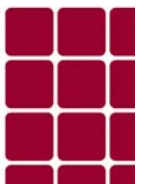
### **Areas of Practice**

- Client Service
- Mechanical Engineering
- Forensic Investigative Engineering
- Computer Fire Modeling
- Heat Transfer Calculations
- Fire Investigation
- Fire Protection Engineering
  - Fire Systems Design
  - Fire Separations Analysis
  - Hydraulic Analysis
- Industrial Fire Protection
- Power Generation Fire Protection
- Water Supply and Hydraulic Network Analysis

### **Professional Experience**

RJ Bartlett Engineering Ltd, Fredericton, NB, 2001 to present

- Design of Fire Safety systems
- Project Management
- Performance-Based Solutions
- Hydraulic Analysis
- Fire Code Review
- Industrial Fire Protection
- Shop Drawing Review
- Building Code Review
- Fire Investigation
- Fire Modeling using Computational Fluid Dynamics Software
- Process Hazard Assessments
- Fire Hazard Assessments
- Explosion Prevention
- Explosion Venting Design
- Flammable and Combustible Liquids Handling Review
- Paint Spray Operations Review
- Propane Handling Facilities
- Fire protection of all aspects of generating stations including conventional and nuclear
- Development of Process Flow Sheets
- Design of CSA B31.1 piping systems undergoing pressure boundary registration requiring CRN's, pipe wall thickness calculations, test pressures, etc.
- Classification of Electrical Hazard Zones
- Ventilation design for flammable gases and vapours.



## Power Generating Station

- Member of maintenance team.
- Concrete growth measurement.
- Turbine unit alignment.
- Turbine thrust bearing modification.
- Pipe fitting.
- General mechanical system maintenance.

## Education

- Bachelor of Science in Mechanical Engineering, 2003, University of New Brunswick, Fredericton, NB.
- National Association of Fire Investigators, Certified Fire and Explosion Investigator training, 2011.

## Additional Experience:

- Farm Operation and Management, 12 years
- Heavy Equipment Operation, Maintenance, and Repair
- Steel Fabrication (welding, cutting, machining)
- Septic System Design and Installation
- Plumbing System Design and Installation
- Small Engine Repair
- Reciprocating Air Compressor Repair
- Sawmill Operation
- Manual Tree Felling and Harvesting (chain saw and cable skidding)

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