Career Information
Power Engineering

Overview

Career Title: 4th & 3rd Class Power Engineering

Industry/Field: Alberta Boilers Association

Power engineers are in charge of the safe and efficient operation and maintenance of industrial equipment that produces power. This includes boilers, steam and gas turbines, generators, gas and diesel internal combustion engines, pumps, condensers, compressors, pressure vessels, and related controls. In large industrial or building complexes, they may be responsible for heating, air-conditioning, ventilation, refrigeration, fire systems, and building control systems.

Date	**February 2025 Updated**
Required Education & Skills	**Hard Skills:** • An aptitude for math • Mechanical & Electrical Aptitude • Good vision, hearing and eye-hand coordination • Enjoy controlling and operating manual and automated systems • Analyzing information and troubleshooting **Soft Skills:** • Effective problem-solving skills to identify and resolve issues • Excellent communication skills in person and in writing • Strong attention to detail • Ability to read and interpret blueprints and other plant drawings • Ability to work independently with minimal supervision, demonstrating self motivation and initiative • The ability to work others in a team environment • Safety consciousness
Job Market & Outlook	**Current Demand:** The Power Engineering industry in Canada is poised for robust growth, with over 100,000 job openings anticipated between 2020 and 2025. The demand for power engineers is driven by replacement needs as senior engineers retire in large numbers. **Projected Growth:** Employment of Power Engineers is projected to grow 3.5 % from 2023 to 2025, much faster than the average for all occupation. **Salary Information:** These are average national salaries, experience, and geographical location will alter your salary. These figures can fluctuate based on factors such as industry demand, certifications, and regional economic conditions. Alberta's average salary tends to be higher, reflecting the provincial demands and economic conditions. **Entry-level 4th Class:** $55,000.00 per year **Mid-level 4th Class:** $66,000.00 per year **Experienced 4th Class:** $76,000.00+ per year **Entry-level 3rd Class:** $70,000.00 per year **Mid-level 3rd Class:** $80,000.00 per year **Experienced 3rd Class:** $90,000.00+ per year

Pros & Cons of this Career

Pros:

- Are able to operate both refrigeration and boiler plants, making them very versatile which leads to higher rates of employment
- Strong job demand across various industries, including energy, manufacturing, and utilities
- Competitive salary
- A structured progression system allows for advancement into higher classifications, leading to increased responsibilities and pay

Cons:

- Shift work is often required
- Many positions are based in remote locations, requiring camp work
- Exposure to work related hazards
- High levels of responsibility for the safe and efficient operation of equipment and process

This information has been compiled using publicly accessible provincial and federal data sources.