

Federation Engineering

Job Title	<i>Senior Process Engineer</i>
Location	<i>Calgary or Sherwood Park, AB (Hybrid Work)</i>
Type	<i>Full-Time</i>

Job Purpose

Join our dynamic team as a Senior Process Engineer, where you'll play a key role in diverse projects across refinery, natural gas, conventional oil, SAGD, oil sands, energy generation, fertilizer, and other energy sectors.

In this role, you will be responsible for executing FEED studies, process simulations, hydraulic analysis, equipment sizing and process engineering documentation development. You will deliver high-quality engineering work within project timelines and collaborate with multidisciplinary teams to optimize project outcomes. Reporting to the Process Engineering Manager, you will contribute across all project phases - from conceptual studies through detailed engineering. This is an excellent opportunity to apply your technical expertise while helping shape energy projects.

Key Duties and Responsibilities

Process Design:

- Process development and solution evaluation for client applications
- Technical and commercial proposal development
- Complete FEEDs on project opportunities
- Ensure process engineering deliverables comply with the project design and operation philosophies established in the design basis and/or performance specifications
- Ensure that the interfaces between process systems and other systems are fully defined and implemented in accordance with project requirements
- Equipment sizing and hydraulic calculations
- Prepare design calculations and design briefs for equipment
- Heat and material balance preparation
- Prepare equipment specifications and datasheets
- Carry out technical evaluations and vendor documentation review
- Communicate with vendors and contractors as required
- Prepare process flow diagrams and piping & instrumentation diagrams
- Participate in process safety engineering (overpressure risk assessment, relief load estimation, relief system design, and relief valve sizing and selection)
- Participate in HAZOPs and close out action items
- Write detailed engineering reports, studies, and briefs
- Coordinate with other disciplines to ensure a timely and accurate flow of design information, while ensuring departmental and client standards are maintained
- Develop and recommend improvements in design standards to lower costs, improve work quality and facilitate plant maintenance

Build and Cultivate Client Relationships:

- Engage current and potential clients in the Calgary marketplace
- Cross sell engineering and/or construction services to clients
- Provide exceptional client service – dependable, responsive, sensible

Project Management:

- May be required to act as single point of contact for client in process only projects
- Provide input into estimates for prospective client projects

Office Leadership:

- Contribute to a dynamic workplace culture in Calgary
- Help mentor and develop junior team members

Other duties and responsibilities as required.

Qualifications

Skills and Experience:

- Degree in Chemical Engineering with 10+ years of experience
- Registered as a P.Eng. with APEGA
- Experience in O&G/Chemical/Petrochemical industries is an asset
- Competency running and analysing outputs of process simulation software (HYSYS, Symmetry, Unisim, PROII, FlareNet etc.) is an asset
- Experience in leading Pre-FEED, FEED and Detailed Design phases of a project, preferably on the same project
- Proficient in generating and reviewing process engineering calculations e.g. heat and material balances, hydraulic evaluations, equipment sizing and ratings, relief calculations, etc.
- Experience with process system control design and development of control philosophies
- Knowledge of process safety methodologies (such as HAZOP) is an asset
- Working knowledge of Microsoft Office software (Word, Excel, Outlook)
- Self-starter with the ability to work independently when required
- Strong experience in interdisciplinary coordination
- Field or shop experience is an asset
- Valid drivers licence required

Personal Characteristics:

- Technically broad-minded, generalist, not afraid of delving into technical issues across the engineering spectrum
- Self-starter, independent worker, dedicated, and dependable
- Decisive, willing to make well reasoned decisions and accountable for decisions
- Excellent written and verbal communication skills
- Leadership skills desired: high emotional intelligence, high integrity and lack of ego
- Believes in making long term business relationships with team members and clients
- Interested in investing in a long-term career with a growing company

Work Environment

At Federation, we support flexible working arrangements for our team. Our hybrid work model includes three days in the office (Tuesday to Thursday) and two days of your choice, whether from home or the office (Monday and Friday). We also offer half-day Fridays to promote work-life balance.

From time to time, travel to client sites or other Federation offices may be required (up to 10%).

How to Apply

Please send your resume and cover letter to hello@federationengineering.com. Indicate the position title in the subject line of your email.

We thank you for your interest, however, only those applicants selected for an interview will be contacted.