Electrical Engineer, Battery Systems

Mid-level · 5 to 7 years of experience · OIQ member

LOCATION	TYPE	REPORTS TO
Montréal, QC, with travel to client and test sites	Full-time, permanent	CEO

Build the Future of Energy Storage

Positive Energy is a Montréal-based cleantech startup redefining energy storage through the circular economy. We give end-of-life electric vehicle batteries a second life as Battery Energy Storage Systems (BESS), integrated into intelligent microgrids with renewable generation and advanced energy management systems (EMS).

Our products have been validated in the lab and are now moving to TRL 8 field testing, with our first municipal clients in Québec. If you want to help take a battery product from prototype to certified, field-proven system, this is where it happens.

The Role

We are hiring a mid-level Electrical Engineer (5 to 7 years of experience) to drive the electrical side of our battery products through development, prototyping, testing, validation and certification. You will own hands-on work on second-life battery packs and BESS, from bench prototypes to field units.

Battery experience is a strong plus, but we will also consider engineers with a genuine interest in batteries and a track record of learning fast. This role offers clear growth toward technical leadership as the team scales.

What You'll Do

Product development

- Design and develop electrical systems for second-life battery modules, packs and BESS (LV DC and AC)
- Specify and integrate key components: BMS, inverters and converters, contactors, fusing, protection, cabling and sensors
- Produce schematics, single-line diagrams, wiring diagrams and BOMs
- Contribute to BMS and EMS integration with the software team

Prototyping and testing

- Build, instrument and test prototypes in the lab and in the field
- Write test plans and procedures, run tests and report results
- Characterize second-life cells and modules (capacity, internal resistance, state of health, thermal behaviour)
- Troubleshoot hardware issues during prototyping and TRL 8 field deployments

Validation and certification

- Plan and execute design validation (DVT), factory acceptance testing (FAT) and commissioning
- Lead the electrical side of our certification roadmap: UL 1973, UL 1974, UL 9540 / 9540A, CSA SPE-1000 and applicable IEC and IEEE standards
- Prepare technical files and work with testing labs and certification bodies
- Ensure designs meet the Canadian Electrical Code and functional safety best practices

Collaboration

- Work closely with mechanical, software and external engineering partners
- Support early industrialization and design for manufacturing
- Sign and seal electrical deliverables as an OIQ engineer

What You Bring

- **Mandatory:** active member in good standing of the Ordre des ingénieurs du Québec (OIQ), with the title ing.
- Bachelor's or Master's degree in Electrical Engineering
- 5 to 7 years of relevant experience in product development, power electronics, power systems or industrial electrical design
- Hands-on experience with lithium-ion batteries, BMS or energy storage, or a demonstrated interest and self-driven learning in the field
- Solid understanding of AC/DC systems, protection, grounding and controls
- Proficiency with **SolidWorks Electrical** (schematics, wiring and harness design) and **ETAP** (load flow, short circuit, protection coordination and arc flash studies)
- Experience taking hardware through prototyping, testing and validation
- Familiarity with product certification (UL, CSA, IEC) and working with testing labs
- Hands-on mindset, ownership attitude and strong problem-solving skills in a fast-moving startup

Assets

Experience

- BESS, EV battery packs, renewable energy or microgrids
- Battery testing equipment (cyclers, battery analyzers, thermal chambers, DAQ)
- UL 9540A thermal runaway testing or battery safety analysis (FMEA, hazard analysis)
- Commissioning or field validation
- CAN bus, Modbus and BMS communication
- Bilingual (French and English)

Software

- Electrical CAD: AutoCAD Electrical or EPLAN
- Power system studies: SKM PowerTools or EasyPower
- Simulation: MATLAB/Simulink (Simscape Electrical), PLECS or PSIM
- Microgrid and BESS sizing: HOMER Pro, PVsyst or SAM
- PCB design: Altium Designer or KiCad
- Test automation and data analysis: Python, LabVIEW or NI DIAdem
- Mechanical integration: SolidWorks 3D for enclosure and pack layouts

Why Join Us

- Take a product from TRL 8 field testing to certification and first commercial deployments
- Work on first-of-their-kind projects in Québec: second-life batteries and municipal microgrids
- High visibility and direct impact on product and engineering direction
- Equity participation aligned with company growth
- A small, agile team where decisions move fast and your work matters immediately

How to Apply

Apply through the careers page on our website by uploading your CV. Please include a short note on your battery experience or interest, along with your OIQ member number.

Positive Energy is an equal opportunity employer and welcomes applications from all qualified candidates.