



MEDIA KIT

Driven by Energy...

Enertia Engineering Ltd. is powered by a team of engineering experts who are passionate about technology and the energy that powers it.

Who We Are

The people at Enertia Engineering Ltd. are diverse, both in experience and background. This diversity has created a truly adaptable, flexible team that can effectively solve new and challenging issues with innovation. We all take pride in our work and are committed to further advancing the engineering field as it relates to energy.

The work of our engineering experts combined with the support of valued staff members in project management, field engineering, document control, administrative, and accounting drives the success of all client projects.

Our top priority is to help the Oil & Gas, Utility Generation, Mining and Heavy Industries benefit from enhanced efficiencies and effective resource utilization. To achieve this, we work with our clients to guide them with our expertise and maintain strict confidentiality throughout the process. The solutions we provide add cost-saving value, and are customized to meet our clients' needs.

What We Do

At Enertia Engineering Ltd., our clients gain access to expert engineering consulting services and high quality product manufacturing for all of their electrical and power needs. The engineering services that we offer include:

- Project Management
- Procurement
- Electrical Engineering
- Instrumentation Engineering
- Process Engineering
- Mining Engineering
- Industrial Engineering
- Engineering Studies:
 - Conceptual Design
 - System Modeling
 - System Analysis
 - Detailed Design
 - Turnkey Construction Drawings
 - Comprehensive Reports
- Specialty Services:
 - Arc Flash Analysis & Mitigation
 - Real Time System Integration

The in-house manufacturing division at Enertia Engineering Ltd. produces diverse electrical surface equipment required for client projects. All production is overseen by technical specialists, procurement specialists, warehouse inventory management, as well as in-house packaging crews. This results in efficient, high-performing engineering products including:

- EnerPulsar Distributed Generation
 - Anti-Islanding Systems
- Engineered Electrical Products:
 - E-Houses & Motor Control Centers
 - EnerDrive Variable Frequency Drives
 - Downhole Completion & Data Monitoring Systems
 - OEM Electronic Control Products
 - General Oilfield Supplies and Power Products
 - Skidded Power Packages
- Alternative Power Solutions:
 - Grid Integration Inverter Systems
 - High Efficiency Solar Panel Arrays
 - Wind Turbine Systems
 - Battery Storage Systems

Where We Came From

In 2005, multiple independent companies joined forces to establish the AC Group. This new, fully-integrated company operated 3 divisions; AC Oilfield Supply, AC Technologies and Field Services, and AC Environmental Services. In 2009, AC Environmental continued to operate as a separate division, while AC Oilfield Supply and AC Technologies and Field Services were combined to become Enertia Engineering Ltd. This restructuring allowed the two divisions to combine resources, manpower, and experience to provide a complete package of engineering services and manufacture of products to valued clients.

How Engineers Make a Difference

The following news articles communicate the importance of engineering and its impact on our world

EXPANDING ENGINEERING'S HORIZONS

The Globe and Mail, Engineers Canada, Saturday, May 24, 2008, EC1

How far-reaching is the impact of Canadian engineering? How great are the employment opportunities?

Consider the theme of the 2009 engineering summit "Leading a Canadian Future: The New Engineer in Society." This landmark event, which will take place in Montreal, will bring stakeholders together from an array of sectors to gather input to allow for future development and implementation of engineering innovation, which is critical to Canada's future.

"As engineers, we want to try to achieve, through this summit, a better understanding of Canada's society and its trends, and how we can respond to them so our contribution can be more significant in the future," says Chantal Guay, Eng., M.Env., chief executive officer of Engineers Canada.

The summit's organizing committee is a who's who of Canada's leading engineering organizations – Engineers Canada, Engineering Institute of Canada, Canadian Academy of Engineering, Association of Canadian Engineering Companies, National Association of Deans of Engineering and Applied Science, and the Canadian Federation of Engineering Students.

Each group has a role to play, spearheading the summit's diverse and socially pervasive topics that are both current and that will impact our society in the future: health, quality of life, competitiveness in a global economy, safety and security, and finally, the environment.

CFN Consultants' John Leggat, P.Eng., a 30-plus-year veteran engineer who is also president-elect of the Canadian Academy of Engineering, says engineers are at the forefront of technology development and implementation. "We're talking about everything from municipal projects, biomedical engineering and leading-edge communications techniques to oil and gas, transportation and space exploration."

Ken Putt, P.Eng., president of the Canadian Society for Senior Engineers and the Engineering Institute's representative on the engineering summit organizing committee, calls engineers "entrepreneurial integrators" – people who bring together pieces of the puzzle and various disciplines to make projects happen. "They are spread throughout most organizations, from the technical specialists, designers, software developers, project managers and up through organizational management and executive positions in industry, government, regulatory and nonprofit organizations."

Mr. Putt says the energy sector offers an example of how important engineers are to Canadian competitiveness. Here, Canadians are at the forefront of new technologies including nuclear, oil sands, heavy oil, carbon capture and sequestration, and alternatives such as fuel cells and solar energy. Even in areas such as wind energy, Mr. Putt says Canadians have been innovators. "While we weren't the major developers of wind technology, we have done the project management to integrate energy generated by wind power into the grid."

Our future will provide engineers with many opportunities to contribute to its development, but Canada may be facing a shortage to meet that challenge.

Ms. Guay says “From Consideration to Integration” – a project started six years ago – offers an example of the forward-thinking role engineers have played in Canada’s economic growth and global competitiveness. This initiative developed new processes and improved current processes by which international engineering graduates are able to obtain an engineering licence without compromising public safety or lowering professional standards, and to find meaningful engineering employment.

“Through From Consideration to Integration, we looked at how to facilitate the integration of internationally trained engineers into the workforce,” says Ms. Guay, adding that Engineers Canada has also signed a number of agreements with countries to recognize one another’s engineering credentials at the educational and professional levels.

Meanwhile, as Mr. Leggat puts it, Canada’s engineers will continue to engage in “the art of the possible,” bringing more understanding to others about technological advances and their implications for our future. But he underlines the important role the education system plays in that dialogue.

CSA PUBLISHES FIRST CANADIAN STANDARD ON WORKPLACE ELECTRICAL SAFETY

Accessed from the CSA Standards website at http://ohs.csa.ca/news/dsp_z462article.asp

Toronto, June 19, 2009 - More than 80 years ago, CSA created the first standard for installation practices of electricity. What’s been missing is a work practice standard for those who work on or near energized electrical equipment. The new CSA-Z462 Standard has been created to fill that void.

CSA-Z462 is Canada’s first standard for workplace electrical safety. Across Canada in 2007 there were 472 known injuries with electric current on the job and nine fatalities. The previous year there were 567 injuries and 20 fatalities.¹ CSA’s *Z462 Workplace Electrical Safety* standard is designed to help employers and workers prevent injuries and fatalities arising from the use of electricity on the job by specifying practical requirements for a safer workplace.

This new Canadian *Workplace Electrical Safety* standard is available in both French and English. It is designed to help employers and employees in assessing electrical hazards and in designing safer workspaces around electrical power systems and machinery. It not only addresses prevention of electrical shock, but includes protection against the possibility of arc flash events.² Standardized best practices such as those outlined in the Z462 standard, combined with proper training and awareness can help minimize the likelihood of injuries and fatalities on the job.

OHS professionals who have responsibilities related to electrical maintenance programs and management of service contractors will wish to reference the new Z462 Standard in their OHS management systems. The large Annex section of the Standard is full of guidance material, sample programs, and information resources useful for development of safety programs and training for maintenance personnel, supervisors, and electrically-powered machinery operators.

Until now, workplaces in Canada and the U.S. relied solely on a US standard. Stakeholders in Canada agreed that there was a need for a comprehensive Canadian standard that would better specify national requirements. The new Z462 Standard provides guidance on safety management systems (based on CSA-Z1000 – 06), safe work procedures, and selection of personal protective equipment and other safety devices for persons exposed to hazards associated with energized electrical equipment. It further stipulates procedures for identifying hazardous electrical equipment and for the development of safe work procedures around this equipment.

CSA’s Z462 Standard also sets out requirements for the recognition of “qualified” electrical workers. This recognition of personnel that are considered qualified to perform electrical work is fundamental to the safety precautions established in the standard. It includes an extensive annex that provides guidance material and examples to assist users in implementing an effective electrical safety management system.

The new *Canadian Workplace Electrical Safety* standard is based on NFPA 70E, Standard for Electrical Safety for the Workplace. It is intended for use with Parts I, II, III of the *Canadian Electrical Code*; and, has been harmonized

with CAN/CSA-Z460, *Control of hazardous energy — Lockout and other methods*; and CAN/CSA-M421, *Use of electricity in mines*. Electronic or hardcopies can be obtained at: <http://www.shopcsa.ca>

To assist industry and contractors understand and apply the Z462 Standard, CSA is offering training programs and seminars. Information on CSA training is available at <https://learningcentre.csa.ca/>

1 Association of Workers' Compensation Board of Canada, National Work Injury Statistics Program, 2008.

2 "Arc flash" is the release of energy through air caused by electric arc. Such events can cause severe burn injuries to worker in the immediate vicinity.

Why was CSA-Z462 developed?

CSA's Z460 Technical Committee on Control of Hazardous Energy – Lockout determined that there was a need for a national Canadian standard that would address protection of workers from electric shock and arc flash while performing the tasks of testing and troubleshooting on exposed energized electrical equipment. They recommended the development of a "Canadianized version" of NFPA 70E.

Who developed CSA-Z462?

The Z462 Technical Committee is comprised of more than 50 volunteers from stakeholder groups across Canada – trade associations, labour organizations, electrical contractors, electrical power suppliers, electrical equipment manufacturers, safety organizations, OHS regulatory authorities, and electrical system regulators. The names of the individual members and their affiliations can be found listed in the front of the Standard.

What is the Effective Date of CSA-Z462?

As with most CSA standards, CSA-Z462 is a voluntary standard. Compliance is not mandated by law. As such, the "effective date" is the day it was published: December 28, 2008. The French version of CSA-Z462 was published in May, 2009.

What is the Basis for CSA-Z462?

The Standard is based primarily on NFPA 70E, but it is also based on the Canadian Electrical Code, Part I; CSA-Z1000, OHS Management Systems; CSA-Z460, *Control of Hazardous Energy – Lockout and Other Methods*; and CSA-M421, *Use of Electricity in Mines*.

To whom does CSA-Z462 apply?

The Standard is intended to be used by any organization (of any size) with operations or business anywhere in Canada. It can be referenced by electrical contractors, equipment suppliers, power suppliers, building operators, and providers of service to industrial, mining, agricultural, institutional, civil, educational, and research facilities located in any province or territory.

How does CSA-Z462 compare with NFPA 70E?

CSA-Z462 has been developed in parallel with the 2009 edition of NFPA 70E in cooperation with the NFPA 70E committee. It has been designed to be technically harmonized with NFPA 70E with the exception that it references the Canadian Electrical Code and Canadian (CSA) standards.

How can comments or questions on CSA-Z462 be submitted?

As with all CSA standards, comments, questions, and proposals for change or interpretations should be submitted to the Project Manager. In the case of interpretations, the Project Manager will forward these for a response by the Technical Committee. For CSA-Z462 the Project Manager is Dave Shanahan. A written submission form is located in the back of the Standard. Submissions may also be made by e-mail to: dave.shanahan@csa.ca. Please identify the Standard and particular clause, table, or figure about which you are commenting.

How can I learn more about CSA-Z462?

By getting your copy of the Standard and by attending one of the conferences or workshops provided by CSA's Education & Training Department. Please note: a Z462 Handbook is under development and will be released in the near future.

Media Contact

Incite Solutions

Angela Smith
Account Executive

Phone: 780-423-5552, ext. 310

Email: angela@surfincite.com



Unit #105, 117 Pembina Road
Sherwood Park, AB, Canada
T8H 0J4

Phone: 780-467-0303
Fax: 780-401-3519

7 Cedar Street, Suite 203
Sudbury, ON, Canada
P3B 4H5

Phone: 705-693-4829
Toll Free: 1-877-693-482

627A Aljunied Road
#04-01 BizTech Centre
Singapore 389842

Phone: (65) 64814106

www.enertiaengineering.com