



Institute of Power Engineers

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Editor George Reid

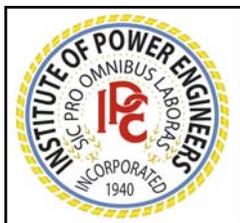
Spring 2010

National Newsletter



2009 National Convention

www.nipe.ca



Message From the President

Dear Power Engineer,

Welcome **all** Power Engineers to a new decade of changing faces, regulations, education, and technology in our profession. I want to invite all power engineers to become members of this Institute and to be proud of their membership in this wonderful organization which brings us together from coast to coast. The challenges we face in 2010 as Branches and power engineers are real and common to most of us, no matter where we are learning and working in this great country of Canada.

I hope that support of our members continues to advance our profession as the Institute has since its inception. I thank all of the members that serve as Institute staff, leaders, and volunteers to ensure that the National Institute of Power Engineers is truly the voice of power engineers in Canada.

I want to thank Past President Lorne Shewfelt for his service as National President of the Institute and leaving a tough pair of work boots to fill. We have a capable organization due in no small part to his effective leadership and organizational skills. We are fortunate to have our webpage as a medium in the new millennium to bring our community together.

Please attend your branch meetings and make this Institute your Institute. You will find others there, who know what the backshift is like on a busy night. The more the merrier, invite a new member. We have a job board page for members. We have tours in employer's facilities. We also enjoy getting together at Branch events and supporting students in our profession. Be active in your area, many hands make light work.

We work in the safety business and we are stewards of our environment. We must carry the torch and throw it forward. I hope everyone has a safe and prosperous 2010.

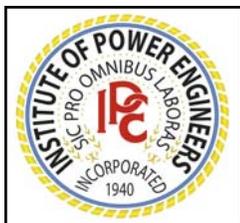
Power engineer is not a job, it's a position.

Sincerely,

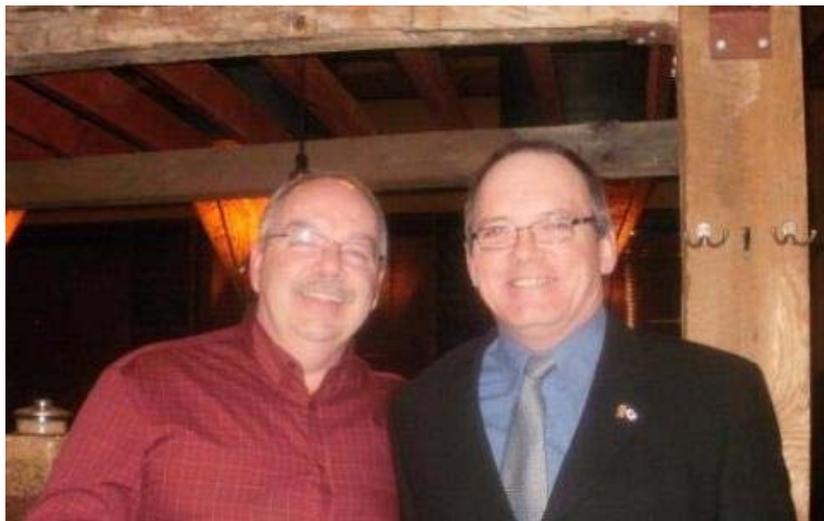
Jude Rankin PE

National President

Institute of Power Engineers

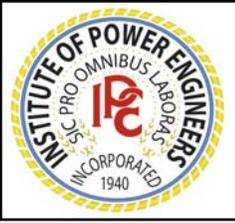


News Release



Jude Rankin PE, National President of the Institute of Power Engineers, congratulates Nova Scotia Branch President, Earl McMullin PE, during a recent swearing in ceremony held in Dartmouth, NS.

MABOU, NS, JANUARY 29, 2010: The Institute of Power Engineers National President, Jude Rankin PE, of Mabou, attended the swearing in of the 2010 Executive of the Nova Scotia Branch in Dartmouth, NS. The Institute of Power Engineers was founded in 1940, is a professional organization made up of Power Engineers and people working in related fields, and has branches across the country. Its National office is located in Burlington, ON. The Nova Scotia President, Earl McMullin PE is employed by the Halifax Regional School Board. Jude Rankin PE is employed by Nova Scotia Power at the Point Tupper Generating Station. More information on the Institute of Power Engineers can be found at www.nipe.ca



British Columbia

HOW DID “BOILER AND PRESSURE VESSEL SAFETY” COME TO BE AS IT IS TODAY??

A BIT OF HISTORY:

In the early days, in the 20th century all homes, schools, churches, office buildings, commercial establishments and industrial complexes used stoves or boilers. These units were often low pressure or high pressure vessels designed to produce hot water or steam. During this early period, hot water was used to heat buildings and steam was used for heating buildings and/or driving steam engines or turbines. A few years later, the steam engines came to be used in farm tractors and the train locomotives. These boilers converted the fossil fuels of the day into steam energy. As the years passed, steam energy was used daily everywhere and the number of explosions also increased. Steam engines are almost extinct today, while steam boilers and turbines remain extremely important for the use of generating electric power.

WHAT CAUSED MOST BOILER EXPLOSIONS?

In those days the people (stationary engineers) maintaining, repairing and operating these boilers did not have the education or the hands on experience to care for the boilers. The manufacturing of these mini or small boilers were also, to some degree, poorly constructed. As decades passed, the boiler horsepower, output, and boiler pressure increased in proportion to the demand for hot water and/or steam. These combined conditions were responsible for many boiler explosions, property damage, human injury, and deaths.

WHO WANTED TO IMPROVE THE SAFETY OF THE WORKING ENVIROMENT?

The public demanded and raised awareness about the frequency of boiler explosions and human injury. In response to this outpour of concern, the BC government of the day created the Act and Regulations which is known today as: **SAFETY STANDARDS ACT and the POWER ENGINEERS, BOILER, PRESSURE VESSEL AND REFRIGERATION SAFETY REGULATIONS.**

WHO ARE POWER ENGINEERS?

As decades passed, the demand for electricity created a profitable opportunity for many of the larger boiler steam plants to install electric generators and produce electric power. These thermal electric power generating plants require many Stationary Engineers which later became known as **Power Engineers**. When the horsepower of some plants increased the demand for a higher standard of education and hands on experience developed the need for various certification levels of competency. The Provincial Government Act and Regulations was designed to provide SAFETY; therefore the Fifth Class Engineer can be the Chief Engineer of a plant with a fifth class horse power rating. The Act/Regulations dictates each Plant Horse Power rating and the level of certification required for each Power Engineer to work there. Today, the Power Engineer certification of competency varies from the fifth to first class and new Power Engineering students must have a grade twelve education or better. I would estimate the time frame for the average person to complete the education and hands on experience that is required for the First Class Certificate of Competency would be between seven and twelve years.

WAS SAFETY IMPROVED WITH THE FIRST NEW ACT AND REGULATIONS?

The results and effects from these new laws are: The number of injuries, deaths, boiler incidents, and explosions decreased consistently over the generations to follow. Up to 1999/2000 the quality of safety standards reached its peak. Unfortunately, after this time, the government began to remove words from the safety act here and there, which in turn started to erode the standard of safety. Before this, it was a well known fact that the safety standards for Canadian buildings, equipment, power engineers and the Canadian public was one of the best on the North American Continent. The British Columbia Power Engineer's education and level of competency combined with the hands on training they received were recognized as one of the highest in North America.

WHO WANTED THE BRITISH COLUMBIA ACT / REGULATIONS CHANGED?

In the early days, if a boiler explosion occurred and a person was killed or injured, the general public immediately wanted some answers and laws were put into place. It is a concern to power engineers and public safety that these important safety standards have been ignored and placed at the bottom of the government's list of safety concerns. Take the BCIT boiler explosion as an example: The boiler exploded. The proper authorities were notified. The police taped off the area and no one was allowed to enter. The news release that evening was extremely short, only a few people were injured. The second day, the news release was even shorter. Those who tried to get information were given excuses such as, "you can't enter because the area has asbestos in it" or "it is unsafe", and for the next few months we were told the investigation is still incomplete and ongoing. Even two years later, we are told we can't talk about it as it is still before the courts. Consider another boiler explosion, the one that occurred in October 2009 in Ottawa. I sent an email after the explosion in late October and requested a few pictures of the damage to discuss my safety concerns with my colleagues. Because I strongly believe that safety should come first, I think it is important for power engineers to use these incidents to raise awareness and promote safety. I was not sent any pictures because they reported that the explosion investigation was still incomplete. I'm sure that years down the road you will get the same story; it is still before the courts. By now, the public seems to have forgotten that a man was killed and others are still suffering from the boiler explosion. Do power engineers and the public want the regulations changed? Does the government still maintain that safety is their **number one priority**?

WHY SHOULD YOU PAY ANY ATTENTION TO ME?

1. I was a Power Engineering Instructor at Vancouver Vocational Institute and at British Columbia Institute of Technology for more than twenty-two years.
2. **I earned** my first class Manitoba and British Columbia Certificates of competency by studying many years with SAIT and BCIT.
3. I was the Chief Engineer at a DND power plant, the Chief Engineer at the Port Alice Pulp Mill, the Chief Engineer at the Prince Rupert Pulp Mill, and the Chief Engineer at Eburne Saw Mills.

And I have worked many years with many qualified boiler inspectors. I really mean qualified. I spent hours with inspectors, inside boilers, steam drums, mud drums, inside large combustion chambers on rope ladders, inside digesters, etc. During the many hours I spent with these inspectors the practical contact, education, and knowledge that was exchanged with respect for these so called 'bombs' contributed greatly to plant and public safety. This was why the Act/Regulations required power engineers to inspect boilers, pressure vessels and refrigeration systems. Now, the safety authorities are indicating it is no longer required to have qualified engineers inspect boilers.

Compare this to: A street intersection, such as Portage and Main, where they had 15 fatalities before the government installed stop and go signal lights. Imagine now, that ten years have passed with no fatalities and the safety authority is proposing to remove those stop and go lights. Consider another example: Imagine a bush pilot has been given a certificate to fly small planes. Large 737 passenger planes require highly qualified pilots. Imagine that the safety authority proposes changes that allow the bush pilot to inspect the 737 plane with all its new modern devices and automatic controls.

The proposed, changes for the qualifications for a boiler inspector are ludicrous.

Will the results for safety in years to come, be better or worse?

Will the blind be leading the blind?

Will boiler explosions be out of control?

Who are the stakeholders that want *less* Safety controls? **Will they accept and be responsible for *all* liabilities?**

Do the stakeholders know that a pressure cooker and/or hot water tank can be a mini bomb? The small boiler that exploded at BCIT was just a small bomb, the boiler that killed a few people at the Woodfibre Pulp mill was a big bomb. Does it not appear strange that some will spend millions on security, but very little on the operation, maintenance, and inspection of the 'bomb' that could potentially explode within the building? Do the stakeholders want the Safety Authority to employ new graduates, who are not mature enough, who do not understand, as he/she will not have the experience to foresee a time bomb waiting to explode? Do the stakeholders remember the horrible situation at the Fraser Valley Ammonia Refrigeration Plant? What if the largest new ammonia refrigeration plant in Whistler had a serious incident in the making? Why is it that every military in the world requires specially trained men and women to care for **Bombs**? In the future, will your children and grand children be safe in **elementary schools**, churches, shopping malls, high rise buildings, or in a commercial or industrial complex?

I invite everyone, no matter which province you live in, to take time to read my thoughts and realize that it took decades of dedicated time to draw up ACTS and REGULATIONS for the safety of buildings, equipment and the public.

**Is Safety the number one priority in inspecting boilers and pressure vessels?
Or is there another priority?**

IS “SAFETY FIRST”, THE FIRST CHOICE WHEN CHANGING THE ACT / REGULATIONS?

With reference to the document “The B.C. Safety Authority has recommended to the Province of British Columbia that Section 65 of the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation be repealed”:

“Notice to Stakeholders, Information on the Proposed Changes within the Boiler Safety System” The need to modernize the regulatory framework and make changes to certain components of the Power Engineers, Boiler, Pressure Vessel and refrigeration safety regulation has been raised by various stakeholders in the boiler safety system. The following three specific areas are presently pursued:

1. Introduction of safety Management plans into the Safety Standards Act:
2. Elimination of prescribed staffing requirements for low pressure thermal fluid plants that are equipped with modern safety systems and devices; and
3. Elimination of prescribed requirements for BC Safety Authority boiler safety officers.

I want to speak directly to #3, the last proposed item, as this is the area that I am most familiar with.

First, you should know following: Plumbers are plumbing inspectors and inspect plumbing.

Electricians are electrical inspectors and inspect electrical.

Carpenters are building inspectors and inspect houses.

Gas fitters are gas inspectors and inspect gas installations.

Item #3 states, “**Elimination of prescribed requirements for BC Safety Authority boiler safety officers**”.

If the Boiler Safety Authorities across Canada are interested in safety, safety of buildings, equipment, Power Engineers and **the public**, this is what I recommend the prescribed requirements be:

- Every Safety Officer must have 10 years experience plus the ability to satisfy NBIC / ASME qualifications.
- For all regulated boilers, pressure vessels and refrigerated plant and equipment requiring less than a Third Class Power Engineer’s certificate to supervise the plant, the Boiler Safety Officer Must possess a third class Power Engineer’s certificate of competency.
- All other regulated boilers, pressure vessels and refrigerated plant and equipment, the Safety Officer Must possess a first class Power Engineer’s certificate of competency with 10 years experience in high pressure boilers.

November 23, 2009

Sincerely,

Arthur Smith, PE

Past Area Director

Alternate Area Director

For: The British Columbia Institute of Power Engineers



THE QUESTION

Is a Power Engineer a Professional or a Tradesperson?

This question has been debated for years and Associations that represent both have claimed that we do not belong with them.

THE ANSWER; The simple answer is neither, the hard part is to explain to those who are not Power Engineers what we are. We are not Professional Engineers as Professional Engineers take extensive training and education in their field and then specialize in that field, such as Mechanical Engineers specializing in designing, modifying, and developing test and inspection methods for mechanical systems.

Professional Engineers from all the disciplines design the plants and systems that we operate.

By the same token we are not a Trade. The Trades are also separated into different disciplines, the Trades take the plans and designs drawn and written by Professional Engineers to build the plants and install the equipment that we operate.

So what is a Power Engineer? We are the connection or the link between the Professional Engineers and the Tradespersons. When we are in school studying for our Certificates of Qualification, one of the first things that we learn is "Power Engineers are responsible for the Safe and Efficient Operation of the Plant".

This is the first clue as to what a Power Engineer is. We are Operators. But this is too simple an answer, because not all Power Engineers operate equipment, systems and plants. Some do indeed operate, some do maintenance, and still others manage plants. All three of these different areas can be done by three different Power Engineers or the same Power Engineer. The Class of Certificate doesn't guarantee the type of work that a Power Engineer will do. Generally speaking, if there are Power Engineers of different classes in the same plant the more Senior Power Engineers have the more senior positions in the organization.

Most First Class Power Engineers are Chief Engineers or Managers. This is not to say that all Chief Engineers are First Class Power Engineers, or that if you have a First Class Certificate you will be a Chief, as there are First Class Shift Engineers in some larger plants.

A better definition might be that a Power Engineer is the Manager of energy and its distribution system within the Plant where they are employed. This brings us back to Power Engineers being the connection or the link between the Professional Engineers and the Trades. As a result Power Engineers must understand the roles and responsibilities of both Professional Engineers and Tradespersons. As the Managers and Operators we assist the Professional Engineers by providing them with the information they need to design new systems, to retrofit our current systems, to ensure they operate more efficiently. We must also understand what the Tradespersons do so we can give them the information that they need to also help make the systems that we manage operate more efficiently.

So did this article answer the question, “What is a Power Engineer?”

- A Professional? Maybe partially.
- A Tradesperson? Maybe partially.
- The best answer is neither; we are the link between the two which brings us back to the Managers of Energy and their Distribution Systems.

What this also points out is Power Engineers cannot do our jobs without working alongside Professional Engineers and Tradespersons. Remember the first thing we learn is that we are to ensure the “Safe and Efficient Operation of the Plant”.

So let’s stop the debate as to whether we are a Profession or a Trade. We are neither. At the same time let’s agree that we all need each other, Professional Engineers, Tradespersons and Power Engineers to not only meet legislative requirements but also our common goal of providing society with safe, efficient, reliable sources of energy.

Just my thoughts.

Bruce King

3rd Class Power Engineer

National 1st Vice-President of the IPE



Report on the 2009 National Institute of Power Engineers Convention and Annual AGM

Well hello everyone and welcome to the new improved National IPE Newsletter. There has been a lot of effort by some dedicated individuals to get this newsletter off the ground and running again. Great job guys.

From September 30th to October 3rd the Winnipeg Branch of the Institute of Power Engineers hosted the 69th Annual IPE Convention, with events including trade shows, luncheons, tours, comedian events and more; the weekend was a huge success! On Thursday the trade show drew a good crowd. The trade show exhibitors showcased some exciting new technologies including controls, water treatment, education and safety to name a few. One feature of the Trade show was the separate and adjoining presentation room which was well attended throughout the day. We closed the trade show down for a special luncheon and we had the privilege of hosting the Manitoba Minister of Labour and Immigration, the Honourable Nancy Allan, who also officially opened the show. Her speech was a strong reinforcement and acknowledgement of the contribution of power engineers across our great province and country. During the trade show the companion events included a visit to the Urban Oasis Spa and shopping .

After the tradeshow, we hosted an event that is local to Winnipeg called a, "Bud, Spud and Steak". This is an informal dinner that included as the name says, a Budweiser, Spud and Steak. After dinner we were entertained to the comedic stylings of 2 local comedians. They really got the crowd going and somehow were able to entice our local president along with 2 other willing participants in an "interpretive dance off ". I will have to leave the details of this event out of this publication but please feel free to contact these individuals for details. I would like to report that our Local President, Toby Brook, won the event but he along with our National President , Lorne Shewfelt, had to concede defeat to none other than Linda Rankin from Nova Scotia.

Friday saw the delegates touring the newly constructed energy efficient, environmentally friendly, Manitoba Hydro Building. With ground source heat pump and solar chimney technologies to name a few, this building is winning awards for its design and environmentally friendly efficiency. When complete, the building will be one of the most energy-efficient buildings of its size in North America, consuming 60% less energy than the national building code requirements. After lunch the delegates toured Winnipeg's MTS Centre. This is a modern facility that is home to our Manitoba Moose. We were taken from bottom to top of this building. It was great to get a bird's eye view from the sportswriter's section up in the building rafters. The companions were touring and shopping on Friday also.

Friday evening found the delegates and companions joining for a trip out to Oak Hammock Marsh. Delegates were treated to a wonderful dinner before moving up to the lookout post where we were able to view the marsh at sunset and watch the many migrating birds come back to the marsh for their nightly rest. This is a stop on their lengthy yearly migration.

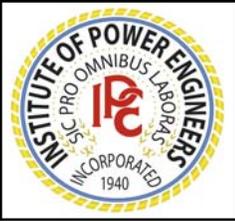
Of course many delegates showed up at the hospitality suite for some socializing each evening after the scheduled events.

While these daily events were scheduled the National Executives were in meetings working hard on the business of the National IPE. Saturday morning saw a lot of business that the National Board had worked on discussed and ratified by the general membership at the Annual General meeting.

Saturday afternoon was scheduled as free time with the Annual President's Ball following that evening. This year we had the privilege of having the ball located in the Sun Center, formerly known as the Blue and Gold Room. This is a first class facility overlooking the Winnipeg Blue Bomber stadium. The delegates from across Canada were able to see the famous and historic stadium as they were dining.

Sunday saw a lot of old and new friends parting ways as they left for their homes in other parts of our great country. I am hoping that these delegates took away some of Friendly Manitoba's hospitality!

Tom Phillips
2009 National Convention Chairman



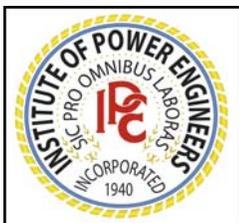
2009 CONVENTION



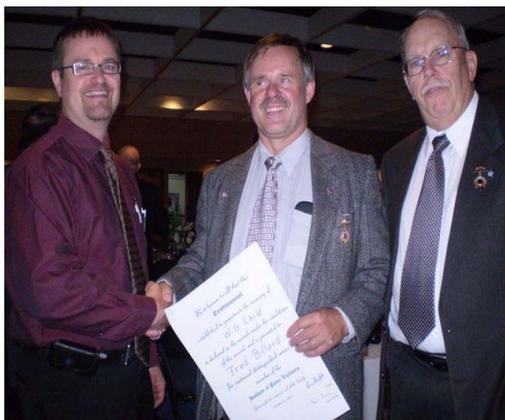
Opening ceremonies



The 2010 National Executive shown from left to right, Chuck Puttenham - Asst. National Secretary, Don Purser - National Secretary, Eric Steinson, PE - 2nd Vice President, Bruce King - 1st Vice President, Jude Rankin, PE - President and Lorne Shewfelt, PE - Past President.



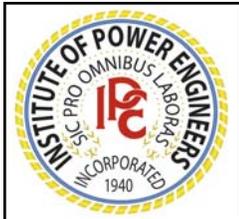
2009 NATIONAL CONVENTION



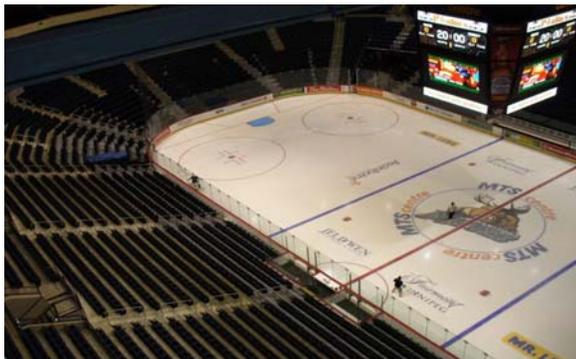
The 2008 W.G.Child Award being presented to Fred Billard by Don Purser

The Trade Show





MTS Centre in Winnipeg Tour





N.S.I.P.E.
FEBRUARY 25TH 2010
NSCC AKERLEY CAMPUS

Several members of the IPE attended a pizza lunch with the Power Engineering Technology students at the Akerley Campus of the Nova Scotia Community College

A presentation outlining the IPE was given and was well received by the students.

Several students filled out IPE Student Membership Application forms.

We were introduced to Tina Kelly, Academic Chair for the Power Engineering Technology Program. She was most enthusiastic about our presence, asking many questions about the IPE and the possibility of a similar meeting with students at the Canso Strait Campus

We thank instructors Dale Leckie & Mark Boudreau for hosting the event.

Minutes compiled by;

Ernest Clarke, CET, PE





Ottawa Branch Goes Curling



The 2010 IPE Curling Bonspiel was held February 06, 2010 at the Cumberland Curling Club. Participants took in the event battling for this year's coveted title.

A brief overview of the game rules with an explanation of terms such as hack, hogline, button etc... was given prior to play. Two teams made-up of veteran curlers equally divided by those new to the game, played 8 Ends. Congratulations to Ron Lapierre and his team for taking the title.

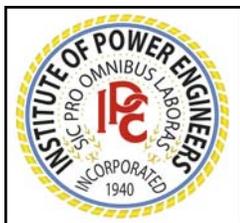
Following the game, a skills competition was held for closest to the button. The newbie curlers were given first pick of the prizes, to which a young player said he'd be back next year after winning top prize.

IPE members, family, and friends all enjoyed themselves on this fun filled day of curling. Let's hope that the bonspiel becomes an annual event.



Thank You to the Event Sponsors

<http://www.ipe-ottawa.ca>



2010 National Convention

The Toronto Branch of the Institute of Power Engineers has been awarded the honour of hosting the 2010 National Convention, Trade Show & Annual General Meeting September 29, 30, October 1, 2, 2010.

More information will be available at [the Toronto Branch web site](#).



The 2010 National Convention & AGM
is to be held at the
Four Point Sheraton, Airport Road, Mississauga

MEMBERSHIP APPLICATION FORM

**(PLEASE DOWNLOAD, TYPE/PRINT IN INFORMATION, THEN FORWARD VIA EMAIL OR POSTAL)
(IF APPLICATION IS FILLED IN ELECTRONICALLY, EMAIL A COPY TO YOUR BRANCH)**

- 1) ARE YOU APPLYING FOR (Check one only): Date :
 New Membership (full Member)
 Associate Membership
- 2) IDENTIFICATION:
- First Name: Surname:
- Credentials: Date of Birth ((DD/MM/YY):
- Address: P.O. Box # (if applicable):
- Bldg #: Street: Apt. #:
- City: Province: Postal Code:
- Country: Canada or:
- Home Phone #: Fax # :
- E-Mail Address Prim: Sec :
- 3) EMPLOYMENT:
- Company Name:
- Position or Title:
- Address: P.O. Box # (if applicable):
- Bldg #: Street:
- City: Province: Postal Code:
- Country: Canada or:
- Work Phone #: Fax # :

4) POWER ENGINEERING STATUS

- a) Are you a Power Engineer? Yes No
- b) If yes, do you currently hold a valid Certificate of Competency? Yes No
- c) If so, issued in what jurisdiction?
- d) Is your Certificate interprovincially recognized? Yes No
- e) Provincial Jurisdiction File Number:
- f) If not, then to what allied trade or profession do you belong?

5) BRANCH SELECTION

Please select which Branch you would like to be affiliated with. If you are unsure which Branch is closest to you, then you may check the website "AREA MAP" for Branch locations. Applicants from remote areas, or from outside of Canada, may select the Branch of their choice. If you have no preference for a specific branch, you are invited to select the York Branch. French-speaking applicants may select the Montreal Branch for French language service, or the Ottawa Branch for bilingual service.

Note : All membership applications are subject to Branch approval.

Calgary	Edmonton
Hamilton	London
Montreal	Newfoundland/Labrador
NovaScotia	Ottawa
Sarnia	Sault Ste-Marie
Sudbury	Toronto
Vancouver	Victoria
Windsor	Winnipeg
York	

6) DUES PAYMENT

Please note that dues payment in the form of a cheque or money order payable to the INSTITUTE OF POWER ENGINEERS must accompany this application which is to be mailed to the National Office.

The dues amount is \$105.00, including a one-time initiation fee of \$10.00. Future annual dues of \$95.00 will be invoiced annually on the anniversary date of your membership acceptance, and are subject to a \$5.00 discount if paid within 30 days.

The mailing address is: Institute of Power Engineers
PO Box 878
Burlington, Ontario, L7R 3Y7
Forward to : ipenat@nipe.ca

Please also note that the dues constitute an Income Tax deduction if you live in Canada.

For further information : Website: www.nipe.ca

Where Is Your Local Branch?



Victoria
Vancouver
Edmonton
Calgary
Winnipeg
Windsor

Sarnia
London
Hamilton
Toronto
Welland
Ottawa

Lakehead
Sault Ste Marie
Sudbury
Montreal
Newfoundland
Nova Scotia

Saguenay
