

# Learning Power

YOUR TRADES  
TRAINING  
RESOURCE

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Welcome to LearningPower, a joint publication from The MEARIE Group and Hydro One. LearningPower has been created as a forum to share information on trades training issues affecting the electricity industry today. Produced electronically, on a periodic basis, LearningPower is for LDCs and other industry participants to learn about what's new in trades training, including updates on legislation affecting the industry, new initiatives in training and much more.

The MEARIE Group, in partnership with Hydro One, offers one of the most advanced trades training programs, specifically geared to electricity distributors and suppliers of the electricity industry. The MEARIE Group's training certificates are highly regarded, not only in Ontario, but across Canada as well.

As more and more national attention is paid to the projected shortage of skilled workers in Canada, the importance of skills development and training has never had greater priority. Given employees in the trades currently need five or more years to become proficient

at their job, retirement poses a significant risk and emphasizes the need for training and succession planning. The LDC industry is well positioned with a home-grown solution to trades training. The MEARIE Group's Trades Training courses support the industry in preparing the next generation of skilled trades people.

learning experience. Hydro One continues to use industry practices to provide delivery of training programs that reflect training standards as governed by the Ministry of Training, Colleges and Universities.

We hope you enjoy this introductory edition of LearningPower. If you are interested in

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Our long-standing partnership with Hydro One has provided access to the most advanced course materials, facilities and equipment available today. Please see the article on Page 2 "Your Trades Training Programs" to learn more about our new training facilities. Hydro One's investment in the new Kleinburg facility will ensure all students have access to the latest equipment and technology to further their

sharing your feedback with us or have suggestions for future issues, please contact Andrea Greto, Editor, at The MEARIE Group at [mearie@mearie.ca](mailto:mearie@mearie.ca). We look forward to sharing training information with you in future editions of LearningPower.

# Trades Training - Programs & What's

The Municipal Electric Association ("MEA"), now the EDA (Electricity Distributors Association) first offered trades and technical training to the electricity industry in Ontario over thirty years ago. The MEARIE Group assumed responsibility for the training portfolio in 2000 and has continued to deliver a wide range of trades training programs in partnership with Hydro One. The MEARIE Group/Hydro One is the only trainer in Ontario that provides a full range of trades training courses. Our close association with LDCs in Ontario has allowed us to create a unique and home-grown approach to trades training for the electric industry specific to the LDC industry.

## Current Trades Training Programs:

The MEARIE Group's Trades Training Program offers training and associated services for trades-specific apprenticeship programs, as well as advanced skill level training of specified trades. Our Program incorporates only the best industry practices to provide delivery of training programs that reflect training standards as governed by the Ministry of Training, Colleges and Universities (MTCU) or revised industry standards. Our Powerline Technician courses are officially recognized by the MTCU, allowing participants to register students with the MTCU and obtain the applicable rebate available from the government. Our robust portfolio of courses certifies qualified

students in five separate trades:

- Powerline Technician
- Journeyman Underground Power Cable
- Journeyman Electrical Operator
- Journeyman Substation Electrician
- Meter Technician

A number of assessment tools and proficiency courses are also available, including:

- Powerline Technician Assessment Program
- Engineer/Technician Orientation Session
- Meter Technician Proficiency
- Residential Meter Service Provider
- Meter Shop Training
- Substation Electrician Proficiency
- Leadership For Trades Personnel

The cornerstone of The MEARIE Group's training portfolio is its use of proven, tested and accepted work methods that reflect training standards. The training manuals specific to each technical program are the most current revision, inclusive of any significant industry changes. The MEARIE Group and Hydro One believe task and performance based objectives continue to be the most effective means of transferring knowledge and skills during a training program. As a result, our training has been designed to be competency-based. The successful completion of each course of study, combined with practical on-the-job skills demonstration, leads to a certificate in that course. In addition to facility-based training, self-study modules

are also available for some programs. These modules make use of a combination of multi-media, interactive workbooks and provide self-checks to ensure learning objectives are achieved. A unique feature of The MEARIE Group's training is our in-depth Student Evaluation Process that provides both the student and their employer with Performance Summaries that clearly identify recommendations and individual results of the student. This process ensures adequate feedback is provided to the student for maximum training results, while at the same time, provides the sponsoring employer with a progress report.

## Facilities:

The MEARIE Group's trades training courses are delivered at a number of training facilities owned and operated by Hydro One. The facilities, when combined with the experience gained while on the job, provide students access to the latest technology and equipment to learn and practice their trade of choice. Below is a brief summary of Hydro One's training facilities:

## Kleinburg Training Centre Powerline Technician Training, Underground Power Cable Training and Meter Technician Training

The newly built Kleinburg Training Centre is a state-of-the-art facility, located in Bolton, Ontario on 200 acres, providing students access to both distribution and transmission voltage activities at one location. Opened in 2006, its assets include:



# Facilities

## Available For You ?

- A Distribution field covering over 6 acres (currently being expanded due to increased training demands), a Transmission field covering over 10 acres
- 85 wooden poles ranging from 12 to 50 feet
- 12 training towers for 115 kV to 500 kV voltage ranges in a variety of types / heights - includes wooden H-frames used on 115kV systems
- Over 6,000 feet of training lines with capability to energize up to 44 kV for live line training
- Eight aerial devices including four single buckets and three double buckets
- Three RBD's (Radial Boom Derricks)
- A U/G (underground) yard with assorted pad mounts and distribution (U/G) equipment & capacity for energized work
- A tension 1/4 mile stringing area for training operators to run the stringing machines, includes the gravel pads to anchor the machines at each end
- Assortment of live line sticks, cover up, PPE etc. to perform all levels of live line training for delivery at Kleinburg or at field locations
- Assortment of makes/types of electronic and hydraulic reclosers, both single and three phase, to deliver both core apprentice and journeyman upgrading training
- Assortment of makes/types of line regulators both single and three phase to deliver both core apprentice and journeyman upgrading training
- Complete U/G (underground) lab for students to splice and terminate all makes/types of U/G (underground) including lead sheath cable covering lead wipes on potheads and splices, as well as submarine cable splices
- Test equipment as required for all of the above
- Single phase metering including "smart" meters
- Polyphase meters for instrument transformer based metering, instrument transformer and metering unit testing

- Line extension layout and customer service training using Ontario Regulation 22/04 and ArcFM software
- Distribution switchgear for job planning, UWPC, pot test, ground and bond for metering work on primary conductors
- Hands on performance based training on feeder, transformer, bus and breaker failure protections
- Harris RTU terminal installed for telemetry, device operation and maintenance alarm testing
- Feeder protections - Westinghouse CO type, PALC PLC based, SEL 351 and GE F60
- Transformer protections - BBC D21 and D22 differential, GE SR 745 and Siemens 7UT513 (future GE T60 and SEL 387/487)

The training has been very practical. The instructors are excellent and the focus is on learning, teamwork and safety. The Kleinburg Training Centre (Hydro One) has a very positive learning environment.

Kyle Ferguson  
INCO

### Orangeville Training Centre Substation Electrician Training

Like the Kleinburg Training Centre, the Orangeville facility maximizes instruction by locating training centrally and within a reasonable driving distance to excellent accommodations. This Centre, located on 34 acres, has two classrooms and a substation electrical maintenance lab housed in a newly renovated building, office space for instructors and ample parking for students. In terms of

assets, the Orangeville Training Centre offers students access to the following technology and equipment:

- Breakers - 2 - 115 kV OCB, 2 - 28 kV OCB, 1 - 44 kV SF6 breaker and various LV breakers for breaker function training, troubleshooting and timing and motion analysis training
- Transformers - 1 - 10 MVA transformer, 1 - 1 MVA transformer, various transformer cores and regulators for ratio, oil testing, gas relays for testing
- Tapchanger course and training models - LV (FP UZ) and HV (MR type D and M) in development
- Troubleshooting - basic and advanced troubleshooting models
- LV wiring training boards, basic electronics work benches and cut away component models
- Instrument transformers and metering units for IT testing, three phase transformer models and system simulation components for transformer configuration training and IED testing
- Meter sources and loads, electro-mechanical meters, recorders and IMO wholesale market compliant meters
- A variety of mechanisms, disconnect switches and 4 kV transformers are available for future course developments

Hydro One has additional training facilities at Richview (line protection & advanced telecom courses), Oakville (skill training in climbing, TWE, lifts & switching) and Smith's Falls (Forestry Apprenticeship & Proficiency Training).

State-of-the-art facilities, combined with robust courses, provide an advanced learning environment for students to prepare for and excel at their trade. For additional information on course content or facilities, contact The MEARIE Group's training department at (905) 265-5332. □



## MEET THE TRAINER

# An Interview with Jeff Nicol

A key distinguishing factor of The MEARIE Group's Trades Training program is its commitment to qualified and experienced instructors. All instructors are from Local Distribution Companies. This important distinction ensures the instructors' knowledge base is relevant to course participants, allowing for a transfer of expertise and experience beneficial to both the students and companies they work for. In addition, all instructors are fully conversant in the Electrical Utilities Safety Rules (EUSR) Rulebook. To ensure instructors are adequately prepared to facilitate and train students, Hydro One conducts workshops and instructional techniques on a regular basis. These workshops also prepare instructors to:

- Understand & train the adult student
- Be aware of sensitivity issues
- Conduct adult student assessments
- Plan effective training sessions and
- Select & prepare useful instructional material & training aids

The MEARIE Group's Trades Training program has benefited greatly over the years due to the dedication and commitment of our instructors. Jeff Nicol, a Line Technician with Horizon Utilities, has been an instructor for over 18 years. Jeff has successfully trained, on behalf of The MEARIE Group and Hydro One, over 2000 students from more than 100 different LDCs. His commitment to the Trades Training program, in addition to his full-time job with Horizon, has benefited many students who are now actively employed as Line Technicians throughout the Province. LearningPower caught up with Jeff to ask him a few questions about his experience as a temporary instructor.

**Q.** How important do you think instructors are to the success of the Powerline Technician Program?

**A.** I firmly believe instructors have a tremendous influence on students and set the stage for the learning experience each

student will have during a given course. I also believe the use of instructors from LDCs for The MEARIE Group's Trades Training program has contributed to the quality of training students are receiving. There is a certain level of credibility with students when they know their instructor has actually performed the work they are teaching. The MEARIE Group's program has a very low student to instructor ratio (3 to 1) and although this may be a more expensive method of training, it is money well spent on apprentices given the critical work that is being performed. I've also been impressed with Hydro One's commitment to instructors from the LDC industry. Each one is hand-picked by Hydro One and The MEARIE Group and we are very well trained prior to instructing. As an instructor, myself, I also have input to the selection of future instructors for the program.

**Q.** As an experienced Line Technician yourself, what is your opinion on the quality of the course content for the Powerline Technician Program? Is it adequately preparing apprentices for the work they need to perform at their respective LDCs?

**A.** As mentioned, the low student to instructor ratio makes for a great learning environment with personal attention available to all students at all times. This, coupled with a course that is kept very current, meeting or exceeding all the MTCU (Ministry of Training Colleges and Universities) requirements, provides for a quality of training I think apprentices would be hard pressed to get any where else. The temporary instructors have a lot of input with regard to all aspects of the training, including content, instructional design, evaluations and even the equipment. This ensures what is being offered will be useful for the apprentices at the home LDC. It is also very evident safety plays a big part in the training. Hydro One staff do everything possible for the apprentices and they listen attentively to all of the input

of the temporary instructors.

**Q.** In 2006, Hydro One, invested in a new training facility at Kleinburg for the Lines training program. What are your thoughts on the new facility?

**A.** I love the new facility. The field at Kleinburg is better than the one that was previously used at the Orangeville facility and it gets better all the time. The facility creates a very positive learning environment and the building itself is very well thought out and equipped with lots of rooms for training. The equipment we use for training, including trucks, is varied and right up to date, giving the students a great cross section and experience on different pieces of equipment. A bonus is the food is really good - maybe a bit too good!

The MEARIE Group and Hydro One are grateful for the contributions of instructors like Jeff Nicol. Congratulations to Jeff on his 18 year commitment to the Powerline Technician Program!

The new Hydro One training facility far exceeds that which preceded it. The building is comfortable for our classroom work and the level of organization in the yard has been improved as well.

We are also fortunate to have the instructors we do. They've had the ability to create provocation amongst our class, and we have always left school inspired to continue learning in the field and embrace the constantly changing trade we've chosen as our careers.

Geoff Nicholson  
Niagara Falls Hydro Inc.