News, Views and Updates from the Electrical Safety Authority

PLUGGED IN

FALL 2024

ESA'S EV CHARGER CRACKDOWN FINDS SHOCKING RESULTS

p.15 ▸

Electrical Safety Authority

Convictions

May 1, 2024 - October 31, 2024

Unlicensed

255194 Ontario Inc.
(o/a BMX Renovations Inc.)

Ottawa

Electrical Installation at multiple residential sites.

- $28,500 fine – Operate – unlicensed, work without permit – NOW, defects – leave hazards
- 2-year Probation Order

Serge Yasmine
(Owner, Director of BMX Renovations Inc.)

Ottawa

Electrical Installation at multiple residential sites.

- $4,000 fine – Fail to Prevent – As director, left hazards – failed to prevent improperly grounded electrical equipment
- 2-year Probation Order

Bosky Inc.

Burlington

Electrical Installation/Renovation/Repairs.

- $18,000 fine – Proposed to carry out – unlicensed
- 2-year Probation Order

Hero Electric & Lighting Inc.

Ottawa

Electrical Installation at multiple residential sites.

- $15,000 fine – Operate – unlicensed, work without permit – NOW
- 2-year Probation Order

Mathieu Clark
(Director of Hero Electric & Lighting)

Ottawa

Renovations at residential site.

- 2-year Probation Order – failed to prevent – operate, failed to prevent – NOW

Fateh Tipu

Toronto

Advertised electrical services while unlicensed.

- $2,400 fine – 2-year Probation Order – Propose (advertising)

Sadadsaralingham 'Ken' Nagamany

Belleville

Renovations at residential site.

- $15,000 – Operate – unlicensed, work without permit – NOW, Hazards

Unlicensed

Stanley Lachapelle

Brockville

Renovations at residential site.
Proposing electrical work.

- $6,500 – Propose to carry out electrical work – Propose (Estimate)

Advantage Electrical Solutions Inc.

Whitby

Electrical work at a residential property.

- $15,500 fine; operate – unlicensed, Work without permit – NOW, Carry out – unlicensed

Randi Buckmaster (Officer/Director of Advantage Electrical Solutions Inc.)

Whitby

Electrical work at a residential property.

- $3,750 fine; fail to prevent – operate – unlicensed, failed to prevent – NOW

Stephen Guerriero

Brampton, Kijiji.ca

Electrical installation at residential site.
Advertising electrical work while unlicensed.

- $22,500 fine; Operate – unlicensed, carry out – unlicensed, propose (advertise)
- 2-year probation period with conditions – Propose (advertise)
- 2-year probation period with conditions – Propose (advertise)

Rogelio (Roger) Quilala

Toronto

Electrical work at residential property.
Unlicensed.

- $7,500 fine; Operate – Unlicensed, fail to prevent work live
- 2-year probation order; work live
- 2-year probation order; conceal/render inaccessible

Turano's Home Improvement Ltd.

Toronto

Electrical work at residential site.
Unlicensed.

- $20,000 fine; carry out – unlicensed, permit/employ unlicensed

Vince Turano (Officer/Director of Turano's Home Improvement Ltd.)

Toronto

Electrical work at residential site.
Unlicensed.

- $14,000 fine; fail to prevent, fail to prevent – operate – unlicensed, failed to prevent

Licensed

PK Electrical Co. Inc.
(Licensed Electrical Contractor)

Toronto

Electrical work at commercial and residential sites.

- $48,000 fine – fail to carry out according to law; permit/employ

Ketankumar Soni
(Owner, Director of BMX Renovations Inc.)

Toronto

Electrical work at commercial and residential sites.

- $22,000 fine – Fail to prevent; failed to prevent permit/employ

Permits for Sale: LEC Caught Fraudulently Filing Notifications of Work for Unlicensed Contractors

A recent ESA investigation uncovered a for-profit scheme involving unlicensed electrical work masquerading as legitimate.

Ketankumar Soni, Officer and Director of PK Electrical Co. Inc., along with his company, pleaded guilty to multiple offences of filing Notifications of Work on behalf of unlicensed contractors. Notifications of Work can only be obtained from the ESA by a Licensed Electrical Contracting business.

Both Soni and PK Electrical Inc. received hefty fines under the *Electricity Act*. The fines totalled $22,000 across six counts for Soni and $48,000 across twelve counts for PK Electrical Co. Inc.

The unauthorized electrical installations occurred at 11 properties across southern Ontario, at both commercial and residential sites.

Soni exploited his status as a Licensed Electrical Contractor to file for the Notifications of Work, while unlicensed contractors performed the actual work, with increased payments funneled straight to Soni.

ESA is cracking down on these dangerous practices, emphasizing the critical need for proper licensing and regulation to ensure public safety.

This case is a stark reminder: scamming the system can and will cost you big time.

REMINDER

It's important to also be aware that an LEC is prohibited from taking out electrical permits for unlicensed persons or businesses, or allowing unlicensed persons or businesses to operate under their EC Licence.

According to the *Electricity Act* (Subsection 113.2(1)) and section 3 of the Regulation, anyone operating a contracting business that plans to do, or is doing, electrical work must hold an EC licence. This includes subcontractors hired to perform electrical work, unless their work is specifically exempted by section 2 of the Regulation.

ESA Investigation Results in $32,500 Total Fines for Unlicensed Ottawa Electrician and his Company

An ESA investigation led to serious consequences for an unlicensed electrical contractor in Ottawa. BMX Renovations Inc., along with its Officer and Director, Serge Yasmine, were fined significant penalties for operating without an electrical contracting licence and for endangering lives through unsafe electrical practices.

On May 30, BMX Renovations Inc. was penalized $28,500 for installing pools and related electrical equipment without a licence and for failing to file required Notifications of Work. Yasmine, who misled clients about obtaining permits, was penalized an additional $4,000 for his role in the infractions.

The ESA investigation identified critical defects at job sites, including undersized electrical wiring, unguarded equipment used for the electrical installation of the pool equipment and a hazardous lack of electrical bonding. The homeowners in all instances contacted ESA to verify if permits had been taken out for the electrical work, confirming that no permits had been obtained for the electrical work completed. This resulted in an inspection by ESA of all three sites and the charges against both Yasmine and BMX Renovations Inc.

This case highlights the importance of adhering to electrical regulations and the severe penalties for those who don't comply.

Strengthening Compliance with Administrative Penalties

Since April 1, 2023, ESA has had the power to impose administrative penalties to reduce illegal and unsafe electrical installations across Ontario.

Administrative Penalties are issued in instances of non-compliance with the *Electricity Act*, its Regulations or the Ontario Electrical Safety Code — holding accountable those who operate outside the law and put public safety at risk.

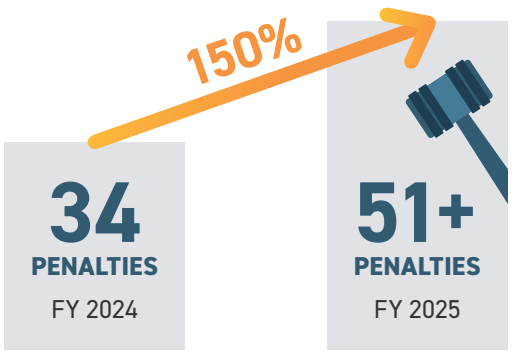
Administrative Penalties focus on violations within the underground economy, helping to protect the integrity of the electrical industry and promote a level playing field for Licensed Electrical Contractors (LECs) and Master Electricans (MEs).

Surge in Enforcement: Key Trends in APOs

Administrative Penalties have been issued for various non-compliances, including but not limited to:

- Advertising electrical services without a licence
- Performing electrical work without a licence
- Failing to comply with ESA Orders
- Failing to file a notification for electrical work
- Failing to comply with the Ontario Electrical Safety Code
- Operating a company without a licence
- Allowing or employing unlicensed contractors for electrical work

Since the introduction of Administrative Penalties, ESA has increased enforcement efforts and refined processes to address violations more efficiently. As a result, while 34 penalties were issued in Fiscal Year 2024, in just the first half of Fiscal Year 2025, 51 penalties have already been imposed — a 150% increase, reflecting ongoing improvements in the Administrative Penalty framework.



How Administrative Penalties Strengthen Industry Integrity

Administrative Penalties enhance ESA's existing tools to motivate compliance, sending a clear message that unsafe practices and unlicensed activity will not be tolerated.

Administrative Penalties strengthen ESA's mandate to improve electrical safety and enhance consumer protection by holding bad actors accountable and discouraging those operating in the underground economy.

By deterring unlicensed, non-compliant and unsafe electrical work, Administrative Penalties help maintain public trust in licensed professionals and uphold the high safety standards that Ontario's consumers expect. Through promoting accountability and driving compliance, Administrative Penalties contribute to a safer electrical industry while reinforcing the reliability and professionalism of LECs and MEs.

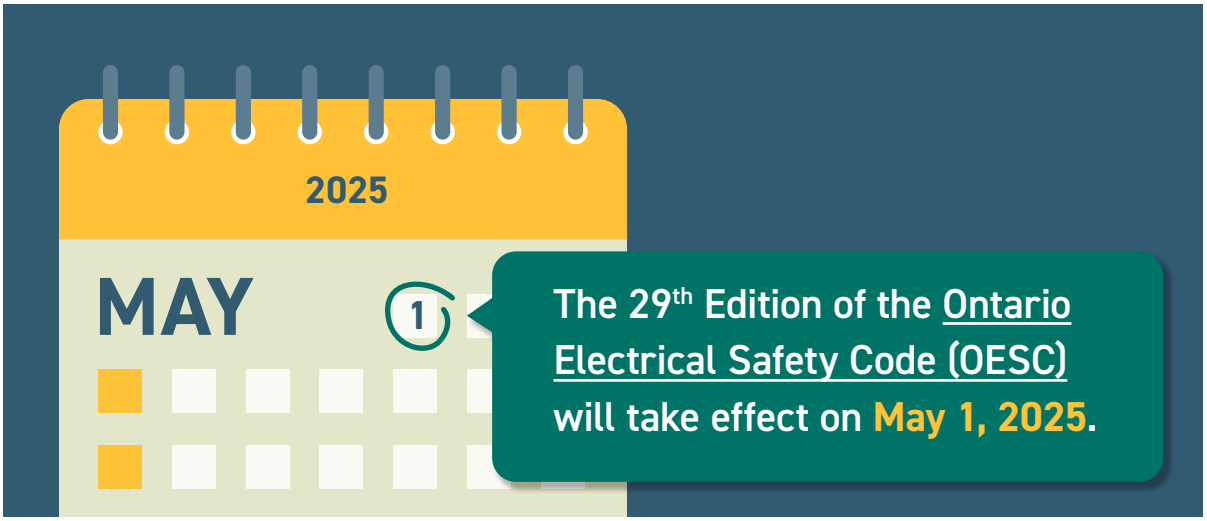
WANT TO LEARN MORE?

For more information on ESA's Administrative Penalty program, visit our Administrative Penalty FAQ.

We also publish information on Administrative Penalties and Convictions (available for two years) on our Administrative Penalties and Convictions webpage.

Details about appeals and outcomes are available on the Review Panel Decisions webpage.

Mark your Calendars: New and Amended Requirements of the 2024 Ontario Electrical Safety Code (29th Edition)



Starting from this date, all electrical installations associated with notifications filed must comply with the latest requirements. ESA strongly recommends that stakeholders familiarize themselves with these important changes ahead of the May 1, 2025 effective date. The OESC has been updated to reflect changes in technology and the marketplace, and incorporates feedback from stakeholders, technical reviews and new safety insights.

Key Changes to the Ontario Electrical Safety Code

The new edition of the OESC introduces several significant updates to wiring and installation requirements, including:

- Enhancing Plan Review requirements to include submission for some electric vehicle supply equipment (EVSE) installations, and to include design for electric power-generating equipment and energy storage systems (ESS) for off-grid installations
- Revising demand load calculation for single dwellings with EVSE loads
- Enabling electrification by recognizing other types of energy management systems in addition to electric vehicle energy management systems
- Complete rewrite of the installation requirements of energy storage systems at residential occupancies
- Additional requirements for outdoor receptacles for single dwellings
- Added requirement for labeling of maximum residential load
- Enhancing bonding requirements for pools and hot tubs to prevent shock hazards
- Permitting insulated conductors within an enclosure when connected to different sources of voltage, with specific conditions
- Additional GFCI requirements for cords used at midways, carnivals, fairs and festivals
- Increase in allowable voltages in electric vehicle supply equipment installations

ORDER YOUR COPY OF THE 2024 OESC TODAY!

The 2024 OESC is available for order. The hardcopy of the OESC will be available for $243, as well as a digital and PDF-version available for $217. OESC bulletins and their updates are included as part of the purchase of the 29th edition of the OESC over the entire 2024 code cycle.

To order a copy of the OESC, please visit csagroup.org/oesc24.

Prepare for the Changes with Training Opportunities

At ESA, we believe that Lifelong Learning is Lifelong Safety.

To help the electrical industry stay informed and comply with the new and amended OESC requirements, ESA Training Solutions will begin offering courses across the province from early March 2025. These courses are designed to provide a comprehensive overview of the key changes in the 2024 OESC.

The **New and Amended Requirements of the 2024 OESC** course will be available through both in-person sessions and self-directed online training, making it convenient for all professionals in the industry.

STAY INFORMED AND DON'T MISS OUT ON IMPORTANT UPDATES!

Sign up for email notifications about this and other ESA Training Solutions courses.

CLICK HERE TO SUBSCRIBE TO EMAIL ALERTS.

Training is a non-regulatory service offered by the Electrical Safety Authority (ESA). Electrical safety and technical courses may be offered by other providers.

View more information about ESA's non-regulatory activities here.

Director's Corner

Welcome Interim Director of Licensing, Patience Cathcart, Effective August 3, 2024

ESA welcomes Patience Cathcart as the Interim Director of Licensing, effective August 3, 2024. Patience steps into this role following Soussanna Karas' resignation from ESA to pursue a new opportunity. We extend our thanks to Soussanna for her contributions and wish her well in her future endeavours.

Patience comes to the position with a wealth of experience as the ESA's Public Safety Officer and Director of Data Science. She will lead the team on an interim basis during the search for a permanent replacement.

A Message from Interim Director of Licensing, Patience Cathcart

PATIENCE CATHCART
Interim Director of Licensing

As Interim Director, I am proud of the continued efforts of the ESA Licensing team. We remain focused on modernizing our processes, reducing administrative burden, improving our support to licence holders, and monitoring compliance while addressing challenges in the underground economy.

I look forward to continuing to collaborate with the licensed community, ECRA, MEC, CoAC, other Advisory Councils and stakeholders as we strengthen our approach to licensing, compliance, exams and enforcement.

Licensing Modernization and Burden Reduction: Amendments to O. Reg. 570/05

On **January 1, 2025,** changes to Ontario Regulation 570/05: *Licensing of Electrical Contractors and Master Electricians* will come into effect. These changes aim to better serve our licensed community and reduce administrative burden for Master Electricians.

Master Electrician (ME) Licence Going Digital as of January 1, 2025

WHAT'S CHANGING:

- **No photo required**: Starting January 1, 2025, MEs will no longer need to submit a personal photo for their licence.
- **Digital licences**: In 2025, ESA will begin issuing digital ME licences and will phase out physical ME Photo ID cards.

KEY BENEFITS:

- Reduced costs and administrative burden for MEs.
- Convenient and easily accessible digital licences.
- Streamlined licensing process.

IMPORTANT DEADLINES

- **Before December 31, 2024:**
  Include a personal photo if you apply for or renew your ME licence.
- **Starting January 1, 2025:**
  You will no longer be required to submit a personal photo for your ME licence.
- **On April 1, 2026:**
  You must be prepared to display your digital ME licence on a device or as a printed copy.

ACTIONS REQUIRED FOR MEs:

- **Ensure your contact information with ESA is up to date.**

  To update your contact information, including to add or update your email address, please complete the Notice of Change to Information Form and send it to ESA.Licensing@electricalsafety.on.ca.

- **Register for the ESA Online Master Electrician Portal.**

  To register to use or if you have trouble signing into the ESA Online Master Electrician Portal, email ESA.Licensing@electricalsafety.on.ca or call 1-877-372-7233 (option 3).

- **Plan how you will display your digital licence during work.**

  The Regulatory requirement to produce your ME licence while engaged in electrical work requiring a licence will still be in place, so ensure you have a plan in place to display your digital licence on a device you carry with you.

Is Your Email Address Current?

Almost half of all Master Electricians are still receiving their renewal correspondence via mail; are you one of them?

As Licensing is moving towards a new comprehensive digital self-serve portal for Master Electricians and Electrical Contractors, we are phasing out the use of paper correspondence.

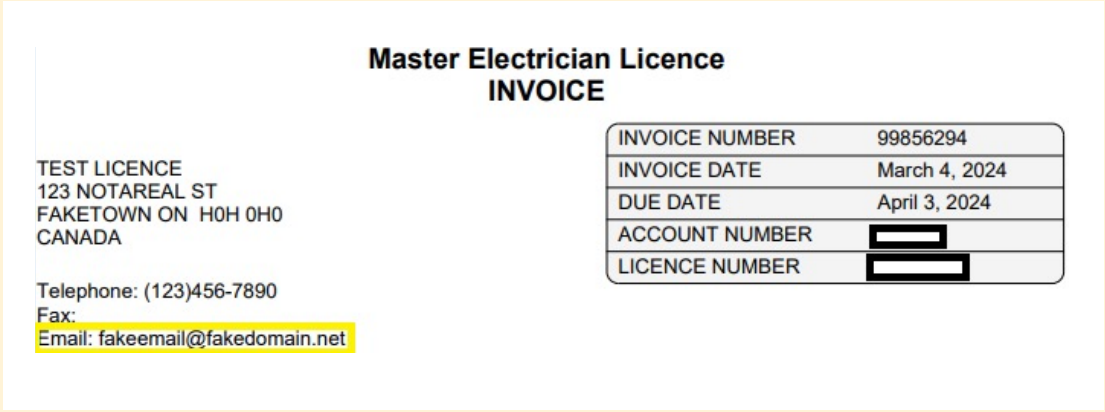
Elect to get your correspondence via email to streamline your interactions with ESA, reduce delays and help with electronic record keeping.

Check your latest invoice from ESA – most Licensing correspondence includes the email address we have on file:

If the email address is correct but your preferred method of correspondence is regular mail, please call our Customer Service Centre at 1-877-372-7233 to have your preferred method of correspondence be email.

If the address is blank, or no longer correct, complete a Notice of Change form and submit it to ESA.Licensing@electricalsafety.on.ca to opt into email.

Ensuring you have an active email address on file will make for more efficient and effective communication and will assist as we move towards a new Licensing platform.



Master Electrician Licence
INVOICE

TEST LICENCE
123 NOTAREAL ST
FAKETOWN ON H0H 0H0
CANADA

Telephone: (123)456-7890
Fax:
Email: fakeemail@fakedomain.net

INVOICE NUMBER	99856294
INVOICE DATE	March 4, 2024
DUE DATE	April 3, 2024
ACCOUNT NUMBER	[redacted]
LICENCE NUMBER	[redacted]

Regulatory Compliance Program (RCP) Update

ESA's EV Charger Crackdown

In a move to further crack down on unpermitted installations of EV chargers, ESA recently launched a safety blitz across five cities in Ontario.

Through the blitz, ESA cross-referenced the Ministry of Transportation's EV registration data with the number of notifications issued for EV charger installations. The results were shocking: over 25% of homes with EV chargers had skipped the notification of work process.

Here's the good news: once homeowners were educated on the proper installation requirements, a whopping 87% promptly filed for a notification.

ESA is sending a clear message to all: notifications of work are not just a formality – they ensure the work complies with the Ontario Electrical Safety Code and keeps everyone safe.

All EV charging system installations require a notification of work, regardless of where it is being installed. At the time of application, the LEC must specifically indicate one is being installed, as there is a separate fee code for the inspection of this system.

Regulatory Compliance Program (RCP) Update

(Continued)

Building Permit Initiative Continues

ESA has extended the Building Permit Initiative to Clarington and Hamilton in our continued effort to address unlicensed electrical work and projects completed without a proper notification.

Clarington

March 28, 2024 – April 6, 2024

Through collaboration and partnership with the municipality of Clarington, RCP staff reviewed commercial, industrial and residential building permit data to identify locations where electrical work was completed without an ESA Notification of Work. These building permits, issued between January 2022 and May 2023, included work descriptions such as Solar Panels, Accessory Buildings, Additions and Alterations.

A total of 66 locations were flagged and provided to ESA's dedicated inspector, Gus Galanis, to follow up on.

Gus found that 24 of the sites had an electrical installation without an ESA notification. Of these 24:

- Sixteen (16) were unknown
- Three (3) were homeowners
- One (1) was a Licensed Electrical Contractor
- Four (4) were unlicensed:
  - → Two (2) received a Notice of Violation
  - → Two (2) are under investigation

RCP staff have reviewed the remaining 2023 Building Permit data from Clarington, with Gus scheduled to inspect these sites. Look out for the results in the next Plugged In!

Regulatory Compliance Program (RCP) Update

(Continued)

Hamilton

March 28, 2024 – June 5, 2024

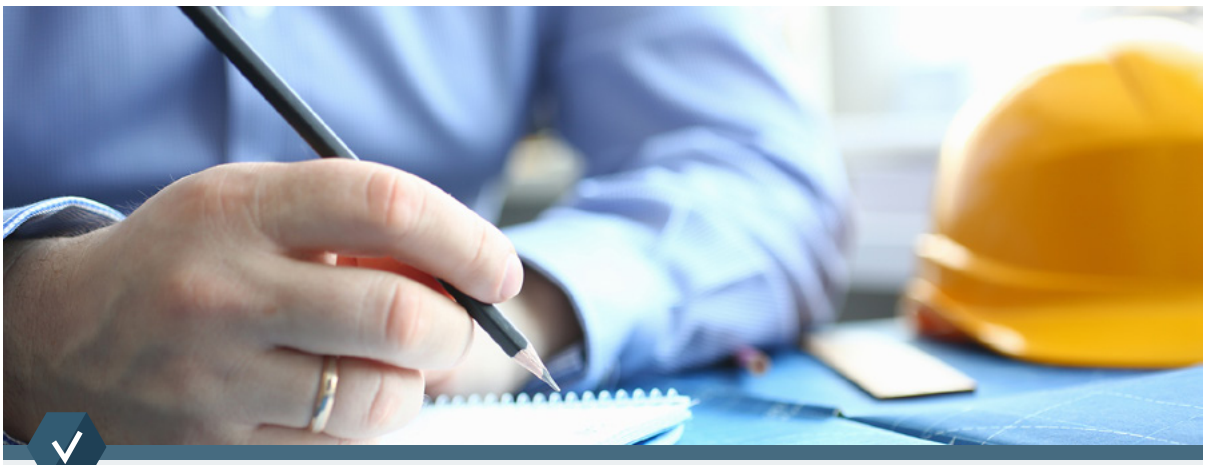
RCP staff reviewed Hamilton Building Permit data issued between June 2022 and April 2023. The work descriptions included Accessory Buildings, Additions, Alterations, New Signs and Swimming Pool Enclosures.

A total of 303 locations were flagged and provided to ESA's dedicated inspector, Joe Lemos, to follow up on. Joe found that 51 of them had an electrical installation without an ESA notification.

Of these 51:

- Thirty-two (32) were unknown
- Eight (8) were homeowners
- Eight (8) were a Licensed Electrical Contractor
- Three (3) were unlicensed:
  - → Two (2) received a Notice of Violation
  - → One (1) is under investigation

In an effort to reduce electrical work performed in the underground economy, ESA will continue to monitor, educate and take the appropriate enforcement action where appropriate.



REMINDER:
As per the Ontario Electrical Safety Code Rule 2-004, a notification must be obtained **when starting electrical work**.

ESA Educates Realtors About the Risks of Unlicensed Electrical Work

Real estate professionals can play a critical role in educating their clients about the risks involved with unlicensed and unpermitted electrical work in their homes. With that understanding in mind, we are proud to announce that ESA has partnered with the Real Estate Council of Ontario (RECO) to distribute communications, including a webpage, specifically intended for real estate professionals in the province. Shared with all of RECO's brokers and salespersons, the webpage spotlights:

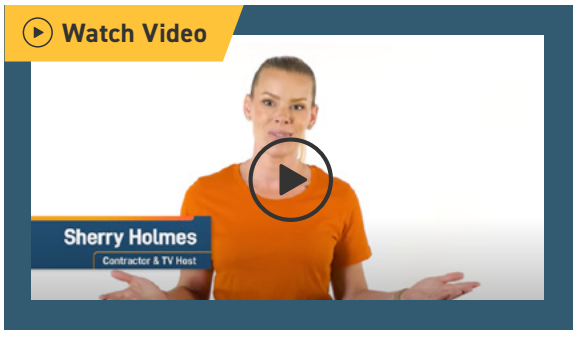
- The importance of hiring a Licensed Electrical Contractor (LEC) who files a notification of work with ESA for all new electrical work; and
- Actions real estate professionals can take to help ensure electrical work in a home that a client is planning to buy or sell is safe.

Importantly, the webpage includes a link to ESA's Contractor look-up tool, and even encourages real estate professionals to consider preparing closing documentation with a clause stipulating that a sale goes through pending verification from ESA that electrical notifications were taken and closed as part of any recent renovations.

Check out
Information for Real Estate Agents

To complement and reinforce the safety themes covered on the webpage, ESA also worked with the Holmes Group to produce a series of short videos targeting Ontario homeowners. Featuring Sherry Holmes, the videos provide Ontarians on the market for a new house with tips to consider to avoid dangerous electrical surprises.

ESA is committed to bringing together partners from diverse sectors to mitigate electrical-related harms. The collaboration with RECO is but one more example of how educating professionals in electricity-adjacent industries can help take on the underground economy, making a real safety impact for Ontarians.



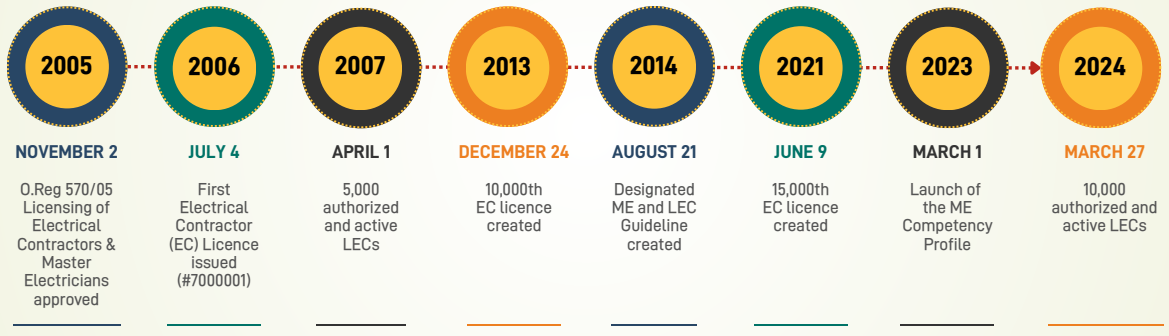
Licensing Reaches Milestone – Over 10,000 LECs Across Ontario

Since the first electrical contracting licence was issued in 2006, the Licensing group has responded to numerous developments to raise the standards of professional integrity and improve safety and consumer protection. They have worked closely with our colleagues across the organization, as well as the ECRA Advisory Council and the Master Examining Committee of ECRA to action feedback on vital issues impacting licensing, consumer protection, compliance and the underground economy.

Here are a few fun facts that you're likely unaware of:

- The Sarjeant Co. Ltd. was established in 1905. This is the oldest start date amongst our Licensed Electrical Contractors.
- OZZ Electric has the highest number of recorded electricians on their EC licence: 863.
- 28.5% of LECs are registered as sole proprietors and 71.5% are registered as corporations or partnerships.
- Fun with Names:
  a) "Power" is the most common start to an LEC name, followed by "Wire", "New" and "Current".
  b) "Volt" is more prevalent than "Amp" and "Ohm", and there are more "Watts" than "Waves".
  c) Fourteen LECs start their business name with "AC", eight with "DC" but only five truly rock it with "AC DC".

LICENSING OF ELECTRICAL CONTRACTORS: MAJOR MILESTONES TIMELINE



ME Competency Profile Resource Library: Now Complete!

Offering voluntary, value-add resources for Master Electricians in Ontario.

We have been steadily adding resources to the ME Competency Profile Resource Library throughout the year, introducing content from a different ME Competency Profile domain each month. We are excited to share that our library now houses all nine ME Competency Profile domains:

1. Health and Safety
2. Ontario Electrical Safety Code
3. Legal
4. Financial
5. Management and Administration
6. Technical Knowledge and Skills
7. Advocacy
8. Professionalism and Ethics
9. Continuing Education

The resource library equips you, our valued licence holders, with resources to uphold the highest standard of professional integrity, regulatory compliance and continuous development. By providing accessible tools and knowledge, we aim to help empower you to deliver the highest standards of consumer protection and customer service, contributing to enhanced electrical safety in Ontario.

ME Competency Profile Resource Library: Now Complete! (Continued)

RESOURCE SPOTLIGHT

ESA's Resources, News and Bulletins

ESA provides a variety of quick links to resources specific to Licensed Electrical Contractors and Master Electricians, including:

GROUNDED IN ONTARIO PODCAST

A podcast for Electrical Contractors, Master and Certified Electricians to discuss industry trends, OESC and safety hazards.

TOOLBOX TALKS NEWSLETTER

One-page info sheets on safety, seasonal reminders, licensing matters, code updates and more.

LEC ONLINE STORE

Download free materials for your customers about inspections, safety hazards and more.

SAMPLE BULLETINS

Download clarifications on Ontario Electrical Safety Code requirements.

FLASH NOTICES

Stay up to date on identified hazards.

ME Competency Profile Resource Library: Now Complete! (Continued)

RESOURCE SPOTLIGHT

Open Online Courses

Open online courses offer an affordable, flexible way to gain new skills, advance careers and access quality education. Offered by top universities and companies, courses support individual and team upskilling. From project management, business operations, communications, coaching, mentoring, and more, find a variety of free courses to suit your unique needs:

- **MOOC** (Massive Open Online Courses)
- **COURSERA**
- **ALISON**

Continue to visit the ME Competency Profile Resource Library to advance professional integrity, regulatory compliance, continuous development and safety throughout Ontario's electrical industry!

ESA Wins Several Awards for its Compliance (LEC) Campaign

Drum roll please! ESA's compliance (LEC) campaign was a showstopper at multiple award showcases this year, including the Canadian Public Relations Society (CPRS) Toronto ACE Awards, CPRS National Awards of Excellence and the International Association of Business Communicators Canada (IABC) Silver Leaf Awards. The campaign took home a total of 8 awards, beating out many high-profile campaigns for the top spot.

The CPRS and IABC Awards celebrate Canada's most talented and innovative marketing and communications campaigns, recognizing outstanding work that set the benchmark for programs across a diverse range of categories. The awards are notably judged by some of the industry's most accomplished leaders.

CPRS TORONTO ACE AWARDS

- **Gold**
  Creative Campaign of the Year (i.e., "Best in Show" as judged among Gold finalists)
- **Gold**
  Digital Campaign of the Year
- **Silver**
  Marketing Communications Campaign of the Year
- **Silver**
  Best CSR/Cause-related Campaign

CPRS NATIONAL AWARDS OF EXCELLENCE

- **Gold**
  Best Non-Profit Campaign
- **Bronze**
  Best Integrated Campaign
- **Bronze**
  Canadian Marketing Communications Campaign of the Year

IABC SILVER LEAF AWARDS (CANADA)

- **Award of Excellence**
  Marketing and Communications (out of 92 entries, only nine campaigns were given recognition at this level)

ESA Wins Several Awards for its Compliance (LEC) Campaign (Continued)

The Compliance (LEC) campaign achieved tremendous results, leading to a nearly 2x impact on awareness. The campaign also drove a 41% increase in year-over-year usage of ESA's 'Find a Contractor' search tool (with half of the traffic directly coming from the campaign itself).

Click on the video to watch the campaign highlights:

Watch Video

Proof Strategies x ESA: Don't Take Chances with Who You Hire

ESA Launches EV Campaign Ahead of the Fall Auto Sales Rush

On September 9, ESA launched its refreshed Electric Vehicle (EV) Charger campaign. Building on the success of the 2023-2024 campaign, this round features a fresh sequence of ads across multiple media channels. The objective remains clear: to educate Ontarians about the importance of hiring a Licensed Electrical Contractor (LEC) for EV charger installations and filing a notification of work to ensure safety for their vehicles and homes.

While the previous campaign emphasized the need for hiring an LEC, this time the spotlight is on the critical step of filing a notification of work with ESA. This message will be communicated through engaging content across radio, social media, strategically positioned billboards, and informative materials at auto shows and EV purchase locations.

The primary audience remains prospective EV owners, with additional efforts targeting current EV owners across the Greater Toronto and Hamilton Area (GTHA), along with automotive dealers and associations integral to the EV purchase process. The campaign targets individuals who are excited about switching to EVs but may not fully understand the risks associated with unlicensed electrical work and uncertified chargers.

ESA is also partnering with the Motor Vehicle Retailers of Ontario (MVRO), the province's leading automobile dealers' association with thousands of members. This collaboration will equip MVRO members with essential information to educate their customers on the safe installation of EV chargers, underscoring that their EV deserves the best!

The campaign will run until the end of February, with a survey scheduled for March to assess its impact and success.

Electric Vehicle Supply Equipment

With the surge of electric vehicles, understanding the intricacies of electric vehicle supply equipment (EVSE) becomes increasingly essential for Licensed Electrical Contractors (LECs).

Karen Ras and Trevor Tremblay, Technical Advisor from the Electrical Safety Authority, delve into the latest advancements and safety considerations for EVSE installations, including software-based adjustments, standardized connectors, bi-directional charging, mechanical protection and conduit installation.

From Manual to Software-Based Adjustments

While early EVSEs required manual adjustments through dip switches, allowing users to set the amperage to their specific needs, the industry has evolved towards software-based configurations.

Trevor explains that today, "most of the new ones are actually software-based. So, essentially you have a commissioning app that connects either directly to the unit through WiFi direct or through a WiFi network or Bluetooth, and you do all your programming to make sure that you can output whatever your demand needs."

This software advancement not only simplifies the installation process but also enhances safety by ensuring only authorized users can make adjustments.

Electric Vehicle Supply Equipment (Continued)

Enhancing Safety and Standardization

The industry has made significant strides in standardizing connectors, reducing the need for multiple adapters, and ensuring safer installations.

Safety and standardization have now become critical in EVSE installations. Trevor highlights a significant advancement:

> "Manufacturers are getting together and coming up with a standardized connector. So, when you go to charge your car, leave the home, you don't need multiple adapters everywhere you go to make sure you can charge your car."

One crucial aspect highlighted is the labeling and restricted access for adjustment settings. Permanent labeling of maximum output and ensuring that adjustments are only accessible through tools or unique passwords help prevent accidental changes that could overload circuits.

"You have to permanently label the equipment, making sure that it's identified what the maximum output is and the new rating and if the access to the adjustment is restricted," says Trevor. Permanently labeling equipment helps prevent accidental changes that could lead to overloading circuits.

Electric Vehicle Supply Equipment (Continued)

Disconnecting Means and Mechanical Protection

One common query about EVSE installations is whether a separate disconnecting means is necessary. Trevor clarifies:

> "You can use the new derated value when determining if a disconnect is required. So, if your new rating value is under the 60 amps, then you would not need a separate disconnecting means. But if it's over 150 volts, you'd still need that."

This flexibility is particularly useful for maintaining aesthetics in commercial installations, such as car showrooms, without compromising safety.

In terms of mechanical protection, EVSEs located in parking lots often face damage from vehicles. Trevor notes, "we also see damage to the cords. We do have that bulletin, again, 86-1, dedicated to EVSEs that give some requirements on what we'd accept from mechanical protection and where they could be located."

Addressing Load Management and Service Upgrades

Trevor explains that installing an EVSE doesn't always require upgrading the home's electrical service: "It would depend on a load calculation from Section 8, or you can also provide historical demand for the dwelling."

For older panels, however, an upgrade is recommended to avoid future issues. Trevor notes:

> "Nothing beats time. It always wins. And the older your service is, the more likely it is to give you issues in the future."

Electric Vehicle Supply Equipment (Continued)

Bi-Directional Charging and Utility Notifications

Bi-directional EVSEs, which allow for backfeeding power from the car to the home or grid, are gaining traction. However, it's vital for users to notify their utility companies to prevent unintended backfeeding into the grid. These systems must comply with Sections 84 and 64 of the code, similar to battery storage or solar installations, ensuring comprehensive safety measures are in place.

Trevor explains that you need to "make sure your utility does know that you'll be backfeeding because there is a possibility you could backfeed the grid and they need to know this." Additionally, a connection authorization is needed for these bi-directional chargers.

Trevor also clarifies whether it is permissible to install an ENT conduit underneath concrete slabs in direct contact with the gravel base:

> "Yes, it is permitted provided that the slab is at least a hundred millimeters thick, and the location and depth of the underground installation is marked in a conspicuous, legible and permanent manner and not subject to mechanical damage."

By staying informed and following the updated guidelines and technology, LECs can promote safety and compliance when handling EV Supply Equipment, increasing utility and ensuring the safety of residents and workers.

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Understanding UL 9540 Markings for Battery Energy Storage Systems

In Ontario, almost all Battery Energy Storage Systems (BESS) that are 1 kWh or greater must be approved to UL 9540 — whether they are connected to the grid or not. The exception is systems that use lead acid batteries.

UL 9540 is not to be confused with UL 9540A, which is a testing method related to fire safety hazards. Some sellers reference UL 9540A when promoting uncertified systems — always be sure you are purchasing a UL 9540 approved BESS with all the proper markings and labels. We also recommend asking for the Certificate of Compliance.

Markings and What to Look For

Under UL 9540, a BESS has crucial, mandatory marking requirements that ensure safety and compliance. They help users, installers and inspectors identify critical information about the system. The marking should include:

- an Ontario-recognized certification or field evaluation label indicating it is a BESS
- Manufacturer
- Model
- Serial number
- Electrical ratings

These markings must be durable and permanent so they can remain legible throughout the lifespan of the installation.

Important Differences Between Self-Contained and Multi-Part BESS

If a BESS is self-contained, there will only be one mark to look for, and it should have the information as described above.

A multi-part BESS is a little more complex. First, each component of the system will have its own certification mark, related to the component's function. For example, the battery would be certified to UL 1973, whereas the inverter would be certified to C22.2 No.107.1.

Secondly, one of the major components will have an additional label indicating that it is a BESS and will list all the parts of the system. This label will identify compatible inverters, charge controllers, battery models, racks, etc. The multi-part BESS certification label does not always report which standard the system is approved to, which is why we recommend asking for the Certificate of Compliance. This will help you ensure that a 1 kWh or larger multi-part BESS is approved to UL 9540. You can find a list of recognized Canadian certification marks and labels at: ESAsafe.com/approvalmarks.

Transferring Ownership of a Temporary Service Notification

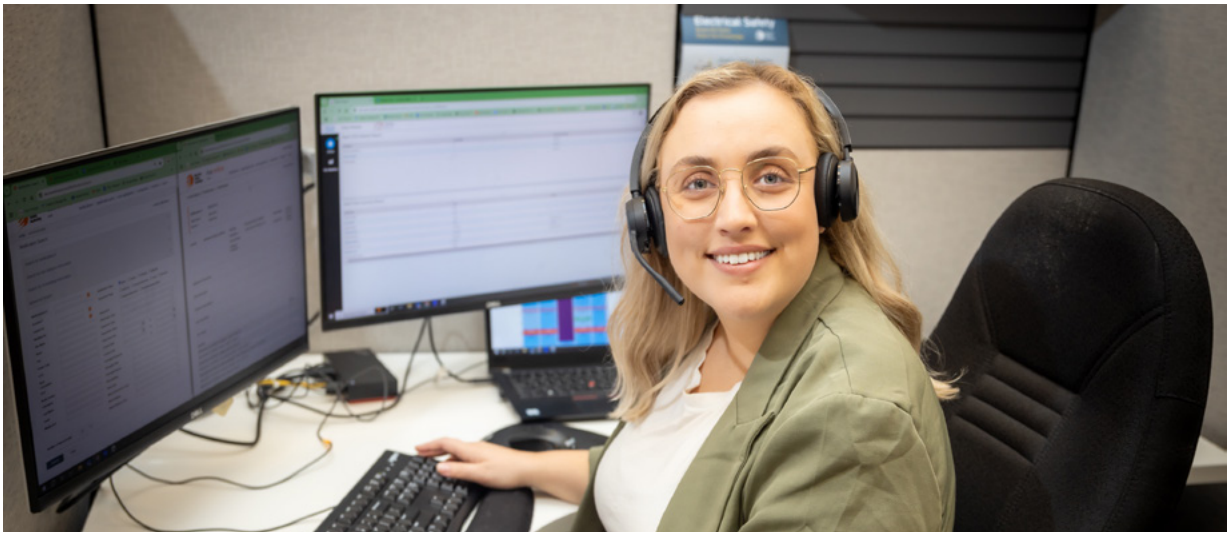
A temporary service is defined as the connection of a non-permanent service (e.g., temporary pole, shack, transportable trailer). As per Rule 2-014, a connection authorization is valid for a stated length of time. A re-inspection may be required to ensure the service and connected loads are still in serviceable condition.

Temporary installations must be reviewed every 90 days until disconnected/removed. Once the temporary service has been energized, Licensed Electrical Contractors (LEC) can transfer the ownership of the temporary service, along with the responsibility of the renewal fees, to the owner, builder or contractor.

Temporary service fees are valid for 180 days, starting from the date of the first inspection. Renewal fees will apply every 90 days following the initial 180-day period until the temporary service is removed (see section 5.3 of the Wiring Fee Guide at www.esasafe.com/fees).

To transfer ownership:

1) The LEC must advise ESA's Customer Service Center that they wish to transfer the ownership of their notification to another party. The LEC must be able to provide the new parties' information to be documented on the notification.
2) The new party (owner, builder or contractor) must contact ESA's Customer Service Center to acknowledge the transfer of ownership, take out a notification and pay the appropriate re-inspection/renewal fees every 90 days until the temporary service is disconnected.
3) Once ownership has been transferred, the LEC's original notification will be closed, and no further renewal fees will be applied to the account.



Mellon Inc. 2024: Our Licensed Electrical Contractor Recognition Award Recipient

On September 19, ESA presented the 2024 Ontario Electrical Safety Awards. During the event, the Licensed Electrical Contractor Recognition Award (LECRA) was awarded to this year's recipient, Mellon Inc. Established in 2020, the LECRA honors Licensed Electrical Contractors who have made significant contributions to electrical safety in their workplaces and communities, while exceeding customer expectations. This year's recipient certainly checks all the boxes. Neil Christopher and Pat Robb accepted the award on behalf of the company.

With 43 years of experience, Mellon Inc. provides integrated multi-trade solutions for the electrical, communications, instrumentation, reliability and engineering needs of various industries. Over the years, they have evolved into a multi-trade contractor known for their exceptional record of employee safety and a strong commitment to worker well-being.

Mellon Inc. is an active contributor to the electrical industry, engaging in various professional associations and earning numerous esteemed accreditations. Since 2012, they have maintained the Certificate of Recognition from Ontario's Infrastructure Health & Safety Association. Additionally, they have received the prestigious Imperial Oil Outstanding Safety Award and the Electrical Contractors Association of Ontario's R.H. Carroll Annual Safety Award from 2015 to 2023.

These accolades underscore the company's commitment to employee safety and well-being, highlighting their dedication to fostering continuous professional development through regular safety training and educational initiatives.

Mellon Inc. believes in and practices continual improvement in all areas of workplace safety. A strong safety culture is promoted through a robust incident reporting system, well-defined safety policies, strong mentorship and field-based coaching. Recently, they have also focused on promoting psychological safety as a foundational aspect of work, helping employees understand the impacts of mental health and workplace stress on decision-making and incident risk.

All these initiatives reinforce Mellon Inc.'s dedication to creating a safety culture among their employees, and they have been referred to as the gold standard for Licensed Electrical Contractors by their peers.

Congratulations to Mellon Inc. for being this year's recipient of the 2024 Licensed Electrical Contractor Recognition Award!

CODE CONUNDRUM

Q1

How many standard 15A duplex receptacles can be installed on a general purpose branch circuit fed from a standard 15A circuit breaker?

a. 8

b. 10

c. 12

d. Unlimited

Q2

What is the minimum size grounding conductor required for a 45 kVA 600-120/208 Δ/Y transformer with 60A primary overcurrent HRC fuses and connected to a 200A 4 wire splitter?

a. #6CU

b. #4AL

c. #3CU

d. None of the above

Q3

What is the minimum height from the floor for a receptacle intended to be used to connect to an emergency battery pack with two lamps to illuminate the area upon loss of power?

a. 2.5m

b. 3m

c. 1.7m

d. 1.5m

Answers

Question 1:

c. 12

Ref Rule 8-304 1) a)

Question 2:

d. None of the above

Ref Rule 10-212 2)

Question 3:

a. 2.5m

Ref Rule 46-304 1)

Metallic Cable (Teck 90) Bonding for Service Equipment

10-604 1) c) of the Ontario Electrical Safety Code (OESC) requires that the bonding continuity for service raceways, cable armour, cable sheaths and all service enclosures containing service conductors shall be robust to ensure that there is a low impedance path during a fault. Since Teck90 style cables have an inner jacket, the bond conductor is not in contact with the cable armour, resulting in the need to utilize bond bushings at each end of the cable because the standard connectors available on the market for Teck90 cables rely on one locknut.

For the 29th edition of the OESC, which will be introduced for installations in May 2025, this rule has been revised. For notifications after May 1, 2025, only one end of the armoured cable will require a bond bushing as the rule has been updated.

2023 Ontario Electrical Safety Report

The Ontario Electrical Safety Report (OESR) is the only document of its kind in Canada and one of the few in the world that compiles and publishes electrical safety data every year to provide a comprehensive perspective of electrical fatalities, injuries and incidents in Ontario.

Each incident means that someone suffered a serious injury, lost a home or business in a fire, or lost a family member due to an electrical contact. The ESA uses incident data from the OESR to identify areas that present the greatest risk to Ontarians, to monitor changes in incidence and to identify emerging risks and trends.

The OESR would not be possible without the collaboration of our safety partners: the Office of the Chief Coroner, the Ministry of Labour, Immigration, Training and Skills Development, the Office of the Fire Marshal, the Canadian Institute of Health Information and the Workplace Safety and Insurance Board of Ontario.

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