



CATCHING UP:

Modernizing Canada's
Electricity Marketplace Rules
and Regulations to Grow &
Decarbonize the Economy



Canadian
Electricity
Association

Association
canadienne
de l'électricité

FOREWORD

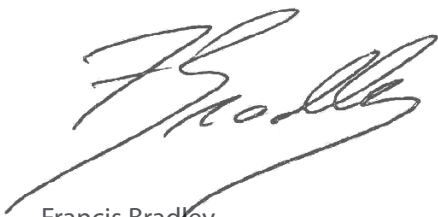
The Canadian Electricity Association (“CEA”) represents electricity generators, transmitters, and distributors from coast to coast to coast. Included in CEA’s membership are our corporate partners from various areas of the electricity supply chain and emerging business lines such as transactive energy companies. A crosscutting priority for all of CEA’s members and corporate partners is grappling with the rapid level of change in the sector that is driven by environmental concerns and technological advancement. These rapidly evolving consumer preferences have led to the emergence of new business models unforeseen by our old regulatory framework. Accordingly, it is crucial that regulatory frameworks evolve to enable the electricity sector to meet these new demands.

One such regulatory framework in need of modernization is the federal Electricity and Gas Inspection Act (EGIA), and specifically, the legal framework for those that sell energy; the EGIA deems them contractors. In 2018 CEA members identified this contractor framework as a major obstacle to innovation, commerce, and environmental progress and since then we have worked internally and consulted broadly with external stakeholders, including representatives from the electric vehicle charger manufacturers, homebuilders, energy storage providers, Canadian municipalities, next generation streetlight manufacturers, and others to find balanced solutions to the contractor framework challenge.

The contractor framework is an obstacle to the evolution of the electricity marketplace and Canada’s environmental goals because we are seeing the emergence of a new class of participant. It used to be true that the electricity marketplace was the sole domain of electrical utilities but now most any business can generate and sell electricity with such technology as rooftop solar panels and electric vehicle chargers. These new Casual Participants are going to be a significant part of the decarbonization and growth of Canada’s economy through their deployment of new clean technology at grid edge, so it is critical that they not be hindered from participating in the electricity marketplace by onerous government regulations, liabilities, and other policies. But that is exactly what the EGIA does.

Thus, CEA working with our external stakeholders have identified 20 targeted recommendations for updating the EGIA to enable new forms of electricity commerce, while maintaining the important consumer protections and legal traceability that the EGIA was originally intended to protect. We present these recommendations to you in the following report and thank you for considering our rationale and conclusions. Our sector believes that these recommendations, if enacted, will be in the best interests of the public we all serve.

Sincerely,



Francis Bradley
President and CEO
Canadian Electricity Association

ACKNOWLEDGEMENTS

CEA acknowledges the important contributions of others in the preparation of these recommendations.

First, we recognize the efforts of the lead author and researcher Bram Abramson of 32M and CEA staff Alex Kent who was the project manager. We also recognize the work of the CEA Metering Technology and Policy Committee, led by Rob Henschel of Alectra Utilities and Robert Heimann of FortisAlberta, for their prioritization of this initiative by recognizing the strategic importance of the contractor framework to the whole of the electricity sector. Finally, we would like to recognize all CEA members and representatives from other sectors that contributed information to this project.

EXECUTIVE SUMMARY

Issue Summary

Using innovative technologies to grow the economy and improve people's lives is a proposition supported by Canadians across the country. And few would argue that businesses should not be enabled to use those new technologies to provide effective and timely services to the consumer. It follows from these premises that legislation and regulations should evolve to keep pace with technological advancement while simultaneously ensuring consumers get the benefits of new technology applications.

In support of these commonly held objectives, CEA has developed 20 specific recommendations pertaining to the modernization of the Electricity & Gas Inspection Act ("EGIA," "Act") and its attendant Electricity and Gas Inspection Regulations ("EGIRs") with a specific focus on the legal framework pertaining to Contractors. This contractor framework is outdated and hinders the use of innovative clean technology which is key to Canada's decarbonization goals and the growth of our economy.

These recommendations are directed to Parliament who oversees legislative changes to the EGIA, the Department of Innovation Science & Economic Development ("ISED") who coordinates and amends the EGIRs; and, Measurement Canada ("MC"), the federal regulatory agency empowered by the EGIA and who administers the statute and associated regulations. If these three bodies enact our recommendations, as applicable to each of their mandates, they will unlock great potential in the electricity market for Canadian economic prosperity and decarbonization.

Why modernization of Contractor is needed

The EGIA and EGIR became law in 1981 and are parts of a national framework developed to regulate the integrity and accuracy of electricity and gas trade measurements. The EGIA is a consumer-facing statute that, among many other elements, regulates anyone who sells measured electricity and deems those persons or entities as "contractors". Contractors under the Act are legally required to follow the rules prescribed by the EGIA & EGIR, which hold the contractor responsible for the fair sale of electricity. Hereafter we refer to the collection of these legal requirements as the Electricity Contractor Framework ("ECF") and they can be summarized as five distinct, complicated, and expansive activity groupings:

1. deployment of sealed and verified meters;
2. registration with Measurement Canada;
3. maintenance of those meters in a state of good repair;
4. reporting and retaining specified data; and,
5. participation in Measurement Canada dispute resolution, should one arise.

The ECF is expansive and complicated because it was narrowly written to regulate the activities of singular, large, and sophisticated provincial utility companies that centrally generated electricity and sold that energy to end users. But despite its complicated nature the ECF used to work relatively well because the framework reflected the structure of the electricity sector at the time. The electrical grid of 1981, when the EGIA became law, could be accurately envisioned as a single strand connecting a central electric generation utility to the end use customer. Flows on this strand were in one direction from that singular utility to the customer and that utility seller of electricity (the contractor), was a sophisticated company whose core business was the sale of electricity.

However, the electrical grid of 2021 has changed greatly over the intervening 40 years and is now better envisioned as a web that connects customers to large power plants, different smaller power plants, other customers, and prosumers (customers that both consume and produce electricity). And this latter category of prosumers are not traditional utilities nor 'sophisticated' actors. We call these parties that sell electricity at a small scale and/or intermittently in a fashion that is not their core business "Casual Participants". For example, a Casual Participant could be a grocery store wishing to install electric vehicle chargers (EVCs) in their parking lot to sell vehicle charging services to their grocery customers. The EVCs are ancillary to the grocery business but do represent a selling of electricity and so under the act the grocery store is considered to be a "contractor" and responsible for following all the rules within the ECF. While this may not sound onerous, the fundamental problem is that the ECF does not recognize the difference in kind between a large electrical utility serving millions of people with a critical service and a grocery store with two EVCs in its parking lot.

Specifically, Casual Participants and the new technology they wish to deploy are hindered by the ECF in four challenge areas:

1. Economic and policy demands have outpaced regulatory mechanisms which is causing significant delays in the adoption of new clean technology despite success of those technologies in other jurisdictions.
2. Casual Participants face the same administrative burden as a sophisticated utility which creates a significant barrier to market entry for individuals and non-utility businesses.
3. Casual Participants must perform complex and potentially legally risky activities which are outside their core business competence with no ability to de-risk those activities.
4. The rules, norms, and processes of the electricity market are opaque which not only makes it difficult to operate as a Casual Participant, but also makes it difficult for a business to assess if an investment to enter the electricity market is worthwhile.

There is an urgent need to solve the issue of how Casual Participants are supposed to deal with these four challenge areas as well as their place and role in the electricity market because the ranks of Casual Participants are exponentially growing. New Casual Participants can include but are not limited to businesses that operate EVCs in parking lots, solar panels on roofs, on premise networked batteries, and other emerging technologies such as hydrogen fuel cells. The list of emerging Casual Participants is also not limited to businesses, as private individuals who participate in vehicle to grid systems are also Casual Participants. What this means is that Canada is swiftly moving from an electricity market with very few Casual Participants to a market where anyone and any business can be a Casual Participant.

To effectively regulate the evolving and increasingly fluid electricity grid marketplace, where the character of market participants and the structure of the grid have both changed dramatically, Canada needs to correct this contractor framework now while the task is still manageable, or else an ever-growing fraction of the economy will be held back from innovation and decarbonization.

Recommended Solution

Across the four ECF challenge areas, CEA's technical metering experts along with a diverse group of industry and public stakeholders¹ have identified 20 modernization measures intended, taken together, to represent a careful, precise path—rather than a wholesale rewrite—to modernizing the Electricity Contractor Framework. Importantly, the recommendations set out in this report are responsive to the ways in which the ECF intersects with electricity marketplace regulation that differs from province to province, i.e., these recommendations will not interfere with provincial electrical mandates or regulations.

Of these:

- Nine (9) recommendations relate to actions to be undertaken by Measurement Canada (“MC”) as the Framework’s regulator. These recommendations pertain to improved business practices, methods to assess new technology, and clear marketplace guidance that will collectively facilitate both Casual Participants’ market entry and MC’s ability to monitor those Casual Participants to ensure fairness.
- Five (5) recommendations relate to revisions to be made by the Governor-in-Council, led by the Minister of Industry, to the *Electricity and Gas Inspection Regulations* (“EGIRs”). These recommendations speak specifically to amending regulatory wording, primarily regulatory burden, which contributes to the challenges Casual Participants face.
- Six (6) recommendations relate to revisions by the legislature to the *Electricity and Gas Inspection Act* (“EGIA”), to be made through a short amending statute passed through Parliament. These recommendations propose amendments to legal wording which fundamentally cause the challenges Casual Participants face and would allow the EGIA to recognize differences between Casual Participants and sophisticated utilities.

Together, these recommendations would modernize an important legislative and regulatory framework that is proving detrimental to several national priorities including, the deployment of electric vehicle charging infrastructure; innovation and commerce; and environmental outcomes. To remain relevant the “electricity contractor framework” must evolve as the grid and market it regulates has evolved and continues to evolve.

¹ These observations, and those that follow, are based partly on confidential interviews conducted in September and October 2020 with current or former employees of Alectra, BC Hydro, Canadian Electricity Association (CEA), Canadian Home Builders’ Association (CHBA), ChargePoint, City of Ottawa, Enmax, Flo, FortisAlberta, Hamdon Energy Solutions, Hydro Ottawa, Independent Electricity System Operator (IESO—Ontario), LED Roadway Lighting, Lincolnberg Master Builder, Measurement Canada, Priority Submetering Solutions, and Tesla.

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SUMMARY OF RECOMMENDATIONS

The recommendations found within the following report are reproduced below for easy reference. The letter designation for a recommendation conveys what section of the report the recommendation appears in and the number after the hyphen gives the numerical order the recommendation appears in across the whole report.

Recommended Measurement Canada Actions (9)

Recommendation A-1: Update and complement the 2013 Information Bulletin to communicate within a single document the full extent of the Electricity Contractor Framework’s regulatory requirements in clear, plain language.

This practical working document would focus narrowly on the responsibilities of potentially affected parties—including both contractors, potential contractors, and their technology providers such as meter data managers—in order to explain what they must do and not do. Updates to this Bulletin would occur with any administrative changes, no less than annually. *[Discussion: A.ii]*

Recommendation B-2: Continue to prioritize the identification and adoption of approaches to adopt new-technology-relevant specifications more rapidly and working with government, industry, and civil society stakeholders to recommend to the Governor in Council regulations that would expedite the process for type approvals, specification standards, and verification in respect of meters encapsulated in newer technologies.² *[Discussion: B.ii]*

Recommendation C-5: Organize the contractor registry’s data fields and administration to enable registrants to register related entities with common beneficial ownership as a group. *[Discussion: C.i]*

Recommendation C-8: Adopt, subject to consultation, a temporary dispensation or group certificate framework by considering thresholds for individual registration such as, across the related group:

- gross global metered volume during the previous relevant period, e.g. six months;
- gross global revenue billings for the previous relevant period; and,
- whether a related contractor has been informed, within the previous relevant period (e.g. 30 days), of a request to an inspector by a dissatisfied person under subsection 23(1) of the Act.³ *[Discussion: C.ii]*

Recommendation C-11: Establish a periodic data minimization audit to ensure that information that is not strictly required is not gathered, including information that can be inferred from otherwise available indicators; and that such information that is gathered is done so efficiently and effectively. *[Discussion: C.iv]*

² EGIA, paragraphs 28(1)(a) and (c).

³ Compare, for instance, to the requirement on telecommunications service providers that persons become a participant in the Commission for Complaints for Telecom-television Services “commencing 30 calendar days after the date on which the CCTS informs that person that the CCTS has received a complaint related to telecommunications services provided by it falling within the scope of the CCTS’s mandate”: *Review of the structure and mandate of the Commissioner for Complaints for Telecommunications Services Inc.*, Broadcasting and Telecom Regulatory Policy CRTC 2016-102, 17 March 2016, paragraph 45.

Recommendation E-17: Work with appropriate partners, such as Statistics Canada, to consult with industry stakeholders, citizen groups, and open data groups, to develop a program that leverages registry data to generate value from it by (i) making it available as open data at levels of aggregation appropriate to its sensitivity, and (ii) conducting and publishing annual reporting on aggregate numbers of contractors, change trends, and other baseline indicators that can be calculated as a result of information required to operate the registry and to issue certificates, as identified through consultation. *[Discussion: E.i]*

Recommendation E-18: To enhance transparency and predictability in role determination, publish online, and make available electronically to third-party caselaw publishers like CanLII and the Legal Innovation Data Institute, determinations, or summaries of them—redacting any business-sensitive information—as to whether a person undertakes the supply of electricity or gas to a purchaser, within the meaning of “contractor”, and as to related role assignments. *[Discussion: E.ii]*

Recommendation E-19: To enhance transparency and predictability in dispute resolution, publish online, and make available electronically to third-party caselaw publishers like CanLII and the Legal Innovation Data Institute, in respect of each Certificate of Measurement Dispute Investigation Findings and each related appeal decision issued, either the Certificate itself or, to the extent that the public interest in disclosure is outweighed by specific and direct harm likely to result from disclosure, redacted or summary versions of them. *[Discussion: E.iii]*

Recommendation E-20: Work with appropriate federal, provincial, territorial, and Indigenous partners, such as the Privacy Commissioner of Canada and his counterparts, to develop a joint document, updated regularly, that identifies in clear, plain language key data custodianship responsibilities in respect both of personal information and of aggregated information, whether or not depersonalized, flagging areas which may require further local consultation. *[Discussion: E.iv]*

Recommended EGIR Amendments by the Governor-in-Council (5)

Recommendation B-3: Exercise the authority to make regulations “exempting, conditionally or unconditionally, any meter or any class, type or design of meter or any class or type of transaction from any or all of the provisions of the EGIA” in order to grant MC sufficient authority to mandate a basic regulatory sandbox program for launching time-limited market trials of technologies that incorporate revenue meters for which MC has not yet adopted metering standards, provided they (a) adhere to the standard adopted in a designated peer jurisdiction or (b) in the absence of such a standard, meet conditions to be identified by MC. *[Discussion: B.iii]*

Recommendation C-7: To implement size threshold before individual certification becomes required, amend section 9 so as to provide for a group certificate of registration applicable to such classes of smaller contractor to be designated by MC, on such thresholds and terms and conditions and for such period as the director stipulates; and removing the requirement in subsection (1) for members of such classes to apply and to provide the specified information under subsection (2). *[Discussion: C.ii]*

Recommendation C-10: To provide for MC to facilitate digital service delivery, amend sections 9 and 10 to minimize references to specific forms of document (including deletion of references to sending by registered mail), in favour of technology-neutral outcomes; and to delete specific designations as to the information that MC has the ability to obtain, including as the result of implementing other recommendations made here, in favour of Recommendation C-9 to amend the Act so that MC can so designate directly. *[Discussion: C.iii]*

Recommendation D-14: To reduce over-retention of sales transaction data and overcollection of personal information, revise paragraphs 11(7)(a) and 11(2)(b) as follows:

- At paragraph 11(7)(a), regarding retention periods, by adding the underlined words: “An owner shall retain the records containing the information referred to ... in subsection (2) for a period of at least 12 months after the date the meter ceased to be used, **except for paragraph 2(m), in respect of which records shall be retained for a period following the purchase that is equivalent to the period contemplated by section 286 of the Excise Tax Act, R.S.C. 1985, c. E-15, as revised from time to time.**”
- At paragraph 11(2)(b), regarding potential personal information, by reducing the scope of what is to be collected: instead of “the purchaser’s account number, name and address”, “a unique transaction identifier in respect of each purchase”. This change in what is obliged to be collected and retained would not prohibit the owner, or purchaser, from collecting and retaining further relevant information where privacy law permits. *[Discussion: D.iii]*

Recommendation D-16: To allow Casual Participants who sell electricity to contract with a third party standing in their place as the regulated data steward responsible for retaining certain sales records, revise section 11 to replace “owner” with “data custodian”, in conjunction with Recommendation D-15 in respect of the EGIA. *[Discussion: D.iii]*

Recommended EGIA Amendments by Federal Parliament (6)

Recommendation B-4: To allow MC to be the person prescribing the “conditions and manner of determination of units of measurement”, rather than hard-coding these in regulations, revise EGIA subsection 28.1(1) by adding the underlined words: “the Minister may make regulations prescribing units of measurement for electricity and gas sales, in addition to the units specified in section 3; **prescribing the conditions and manner of their determination; or prescribing both.**” *[Discussion: B.iii]*

Recommendation C-6: In order to implement size thresholds before individual certification becomes required, amend subsections 9(2) and (3) to extend the director’s temporary and permanent dispensation authority to the certificate and registration requirements of the EGIA’s section 6. *[Discussion: C.ii]*

Recommendation C-9: To provide for MC to facilitate digital service delivery, amend subsection 6(1) such that “[t]he director shall **maintain or provide for the maintenance**, in accordance with the regulations **and any standards or specifications established by the director**, of a register for the registration of contractors”. Amend subsection 6(3) to delegate to MC the role of prescribing the administrative obligations of a contractor who ceases to sell electricity or gas on the basis of measurement, if any. *[Discussion: C.iii]*

Recommendation D-12: To allow Casual Participants who sell electricity to contract with a third party standing in their place as the regulated contractor, add to subsection 2(3): “Any reference in this Act, except in subsection 23(2), to the owner of a meter shall, in the case of a meter used by a contractor for any purpose mentioned in subsection 9(1), be construed as a reference to **the person designated jointly by the contractor, meter owner, and designated person; or, in the event no such designation is made, the contractor.**” *[Discussion: D.i]*

Recommendation D-13: To allow Casual Participants who sell electricity to contract with a third party standing in their place as the regulated party responsible for physical good repair, amend subsection 16(1) and add a subsection 1.1:

Owner's liability

16(1) The owner of each verified meter that is in use shall keep it in good repair and is responsible for causing it to be dealt with in accordance with the requirements of this Act and the regulations, and, subject to those requirements, the owner is liable to pay any fees chargeable for dealing with the meter in accordance with those requirements.

(1.1) **The owner of each verified meter, or such other person who agrees to be designated which, for clarity, may differ from the person designated under subsection 2(3), shall keep it in good repair.** "Any reference in this Act, except in subsection 23(2), to the owner of a meter shall, in the case of a meter used by a contractor for any purpose mentioned in subsection 9(1), be construed as a reference to **the person designated jointly by the contractor, meter owner, and designated person; or, in the event no such designation is made, the contractor.**" *[Discussion: D.ii]*

Recommendation D-15: To allow Casual Participants who sell electricity to contract with a third party standing in their place as the regulated data steward responsible for retaining certain sales records, revise subsection 16.2 and paragraph 28(1)(i), in conjunction with Recommendation D-16 in respect of the EGIRs.

16(2) An owner referred to in subsection (1) shall cause to be kept records containing such information related to the administration of this Act, in such form, at such place and for such period as may be prescribed.

28(1)(i) records and documents to be kept, made, issued or used for the purposes of this Act, the form thereof and the information to be contained therein, **the classes of those persons whom the owner may designate to keep such records ("data custodians"), and the security and privacy standards to be adopted or adhered to, to the extent these standards are no less protective than standards applicable to the same records and documents under applicable federal, provincial, or territorial laws.** *[Discussion: D.iii]*

A. BACKGROUND: WHY IS MODERNIZATION NEEDED?

A1: The EGIA: Statutory history Vs. Electrical industry evolution

The *Electricity and Gas Inspection Act* (“EGIA”; “Act”) is federal legislation that operates alongside electricity marketplace regulation.⁴ It regulates anyone who undertakes the supply of measured electricity as a “contractor” to ensure the metering is undertaken accurately and fairly, with consumer recourse if it is not. The EGIA, and the related but not further discussed *Weights and Measures Act*, and their associated regulations⁵ create an integrated national framework to assure the integrity and accuracy of trade measurements within the dairy, electricity, fishing, forestry, gas, grain and field crops, mining, and retail food sectors. Measurement Canada (“MC”), a special operating agency⁶ of Innovation, Science and Economic Development Canada (“ISED”), is charged with administering this framework.⁷ MC therefore acts as a federal frame-of-reference regulator alongside applicable sector-specific regimes that are frequently provincial, including electricity market regulation.

The current EGIA was first introduced in 1978.⁸ It consolidated consumer-facing⁹ statutes, first introduced in 1907¹⁰ but “not ... substantially amended since the 1920s”, with the “main purpose” of allowing the then Department of Consumer and Corporate Affairs to “transfer a portion of its meter inspection function over to the private sector”. As the opposition consumer affairs critic then explained by way of describing why this approach was broadly supported, against “any fears on the part of consumers who may feel that turning over verification of meters to those industries and contractors who sell the product is, in effect, the fox guarding the chickens”: “Only those utilities which are qualified and competent and accredited meter shops will be permitted to inspect gas and electricity meters.”¹¹

When adopted in 1981 the EGIA was hailed in the federal House of Commons as “forward-looking ... in that it will provide for the application of the provisions of the legislation to new sources or supplies of energy or new forms of energy distribution This is a very attractive part of the legislation. We in this House are always being accused of only reacting to change, but here we are anticipating it and applauding it.”¹²

⁴ R.S.C. 1985, c. E-4.

⁵ *Weights and Measures Act*, R.S.C. 1985, c. W-6; *Weights and Measures Regulations*, C.R.C., c. 1605.

⁶ “SOAs are not independent legal entities - no legislation is required to establish an SOA. They remain part of their departmental organization, their employees continue as public servants and union representation stays intact. They remain accountable to their home department for results. However, unlike other departmental units, SOAs operate under a tailor-made, written understanding with the department.” Treasury Board of Canada Secretariat, [Becoming a special operating agency](#), March 2004, section 1.1.

⁷ EGIA, subsections 26(1-2) (appointment of a director and “such other officers and employees are necessary for the administration of this Act”). The EGIRs then refer in subsection 2(1) to the “Measurement Canada office” as “any office of the Department of Industry for use by persons in the administration of” the EGIA.

⁸ As Bill C-26, 31st Parl., 1st Sess., 1978; then, again and in substantially the same language as Bill C-11, 32nd Parl., 1st Sess., 1980, adopted 31 March 1982 and gazetted as S.C. 1980-81-82-83, c. 87 (repealing and replacing the *Electricity Inspection Act*, R.S.C. 1970, c. E-4, and *Gas Inspection Act*, R.S.C. 1970, c. G-2).

⁹ The Hon. R.B. Bennett, then Leader of the Opposition, described the *Electricity Inspection Act* in 1928 as follows: “the difficulty is in the small consumer being able to make complaints effectively. This matter is one that affects every householder in every city in Canada; that must not be forgotten. This is probably the most far-reaching piece of legislation we have dealt with in this house, for it touches every house in which gas is consumed and electricity used for any purpose, and it also affects every factory in which electrical power is employed.” *Hansard (Commons Debates)*, 16 April 28, 16th Parl., 2nd Sess., page 2080.

¹⁰ *Electricity Inspection Act*, 1907, 6-7 Edw. VII, c. 14.

¹¹ Geoff Scott (Hamilton-Wentworth), speaking on the second reading of Bill C-11, cited in the preceding footnote. *Hansard (Commons Debates)*, 18 December 1981, 32nd Parl., 1st Sess., page 14222.

¹² *Ibid.*

The EGIA and its regulations, the Electricity and *Gas Inspection Regulations* or “**EGIRs**”¹³, have from time to time received minor updates since 1981 but at the same time, the electricity sector has substantially evolved in ways not anticipated in 1981 or recognized by the subsequent updates.¹⁴ In fact, this evolution challenges certain key assumptions of the EGIA regarding market participants’ regulatory capacity and, indeed, identities.

The identities of electrical utilities, who are the bodies which the EGIA sought to regulate, have diversified greatly. Many of the vertically-integrated provincial/territorial utilities have been delaminated and repositioned within electricity markets re orienting around fluid, multi-directional grids. Which is to say that the 1981 vision of the electrical grid was uni-directional such that a single large electric utility would generate, transmit, and distribute electricity to the end consumer. Multi-directional grids, which are the norm today even in provinces that retain their vertically-integrated electrical utility, instead have electrical flow volumes ranging from very large to very small, from constant to intermittent, and in multiple directions simultaneously.

In addition to diversified utilities there are also new grid participants who act as both buyer and seller. These new participants include community generators, large scale wind and solar farms, electrical vehicles returning electricity to the grid, home-owner microgeneration, and many others. These new participants form a variegated population that includes big energy conglomerates, small specialists, and more Casual Participants who, whether large or small, are the proprietors or custodians of grid-connected equipment related only tangentially to their core business (e.g. a Casual Participant may be a hardware store with rooftop solar panels) that are all subject to the **Electricity Contractor Framework** despite that framework being designed for the regulation of large and very sophisticated provincial/territorial vertically-integrated utilities.

The administrative capacity of these new market participants and their sector expertise varies with their business size, volume of grid in- and out-flows, and proportion of overall activity for which the electricity sector accounts (i.e., whether electricity is a large or small ancillary business activity). Energy sector innovation is not confined to the research facilities of large energy conglomerates, who understand keenly their symbiotic relationship with broader sector dynamics. Facilitating new entry and innovation, and new end-user participation to drive them, has become an important policy objective and a key component of work to integrate reduced-carbon-emission technologies and techniques into energy infrastructure. Or, to put it another way, the kind of innovation and evolution observed in the electrical grid will need to be expanded on if Canada is to meet Net Zero by 2050.

Modernizing the EGIA and the EGIRs will help further the Net Zero by 2050 objective as well as allowing new clean technology-based business activities in Canada’s economy related to an expansion of the electricity marketplace to encompass more and more of the economy. This works in two ways: by reducing unnecessary administrative hurdles, and by identifying necessary responsibilities that lie upon newer and less-sophisticated players but can be shifted to market participants with the capacity to undertake them. One such set of hurdles flows from the assignment, in the EGIA and EGIRs and by MC, of responsibilities to market participants in the role of “contractor”: “any person or body that has undertaken to supply electricity or gas to a purchaser” (i.e., to “any person to whom electricity or gas is sold”),¹⁵ often as part of a chain of wholesale and retail transmitters.

¹³ SOR/86-131.

¹⁴ EGIA, subsection 28(5); SOR/86-131, as revised in SOR/87-212, SOR/89-317, SOR/89-425, SOR/92-438, SOR/95-333, SOR/95-532, SOR/2006-76, SOR/2007-89, SOR/2009-76, SOR/2014-113, SOR/2018-252.

¹⁵ EGIA, subsection 2(1) (“contractor”; “purchaser”).

A2: Regulatory capacity: Traditional electric utilities vs. New casual participants

Those whom the Electricity Contractor Framework binds as contractors, because they undertake to supply electricity to purchasers, includes “Casual Participants”. These persons and organizations may formally qualify as “contractors” by dint of electric vehicle chargers in their parking lots, solar panels on their roofs, networked batteries out back, and other technologies that provide energy for value at a small scale or intermittently in a way relatively unrelated to their core activities. However, Casual Participants are frequently unsophisticated in respect of these technologies, relying on technology enablers and intermediary service providers to install, look after, and, in certain business models, maintain persistent connections with the meters embedded in the business process.

More than 6000 entities have acknowledged through registration that they engage in activities subject to obligations under the Electricity Contractor Framework. Many, MC has recognized, are in the nature of Casual Participants insofar as their ranks “includ[e] but [are] not limited to ... trailer parks, marinas, property developers, property managers, realty companies, etc.”¹⁶ The obligations these Casual Participants have taken on may be summarized under five areas of responsibility:

- a. deployment of sealed and verified meters;
- b. registration with Measurement Canada;
- c. maintenance of those meters in a state of good repair;
- d. reporting and retaining specified data; and
- e. participation in Measurement Canada dispute resolution in the event a dispute arises.

The Electricity Contractor Framework is reviewed below under these five headings with particular attention to the burden they impose on Casual Participants and on their service providers, and to opportunities to reduce or streamline the associated regulatory burden in view of policy objectives. At the outset, however, it is worth observing¹⁷ that, perhaps unsurprisingly in view of their limited contact with the sector and limited sophistication as to its regulation, Casual Participants appear frequently to be less than familiar with these obligations. It is therefore **recommended** that the first step Measurement Canada takes to resolve confusion regarding the Electricity Contractor Framework should be to:

- update and complement its 2013 Information Bulletin to communicate, within a single document, the full extent of the Electricity Contractor Framework’s regulatory requirements in clear, plain language. This practical working document would focus narrowly on the responsibilities of potentially-affected parties—including both contractors, potential contractors, and their technology providers such as meter data managers—in order to explain what they must do and not do;
- and update this Bulletin upon any administrative changes but, in any case, no less than annually.

In this way, Casual Participants would have access to a straightforward and up-to-date explanation as to what, if anything, they must do. [*Recommendation A-1*]. We consider clear communication of regulatory obligations good practice.

¹⁶ *Information on the attribution and use of revenue meters under the Electricity and Gas Inspection Act*, Measurement Canada Information Bulletin, 22 July 2013.

¹⁷ These observations, and those that follow, are based partly on confidential interviews conducted in September and October 2020 with current or former employees of: Alectra, BC Hydro Canadian Electricity Association (CEA), Canadian Home Builders’ Association (CHBA), ChargePoint, City of Ottawa, Enmax, Flo, FortisAlberta, Hamdon Energy Solutions, Hydro Ottawa, Independent Electricity System Operator (IESO—Ontario), LED Roadway Lighting, Lincolnberg Master Builder, Measurement Canada, Priority Submetering Solutions, and Tesla.

B. ADDRESS STANDARD-SETTING: ECONOMIC AND POLICY DEMANDS HAVE OUTPACED REGULATORY MECHANISMS

Although a contractor includes anyone who has “undertaken to supply electricity ... to any” “person to whom electricity ... is sold”,¹⁸ MC has very particular statutory obligations in respect of a subset of contractors. MC must (a) ensure that anyone selling electricity “on the basis of measurement” has a contractor’s “certificate of registration”—which certificate they are to return on ceasing to sell “on the basis of measurement”; and (b) maintain a register of such contractors.¹⁹

This distinction between contractors who sell on the basis of measurement, and those that do not, has bifurcated the Electricity Contractor Framework. As innovation continues to outpace the Framework, this bifurcation is stressing the framework’s ability to support or even meet other Federal and Provincial policy goals; notably including innovation in Canada’s economy and Net Zero by 2050.

B1: Contractors: Measurers vs. Estimators

Measurement Canada has interpreted the sale of electricity “on the basis of measurement” as occurring when the metering device is used “for the purpose of establishing the basis of a charge for the supply of electricity or gas”. These are so called revenue meters. Revenue meters are contrasted, in this way, to measurement devices “used solely for ‘non-billing’ applications”—like “load monitoring, energy management, utility bill reconciliation or ‘check’ metering”—in which “no assessment of electricity or gas charges is directly established on the measurement readings of such meters.”²⁰

Revenue meters measure in legal “units of measurement”, (“LUM”) defined in the EGIA and EGIRs,²¹ according to well-specified standards.²² Contractors selling on the basis of measurement must ensure that they have incorporated LUM meters of a type that MC has approved as meeting these standards, and have been verified and sealed on that basis.²³ This arrangement ensures those purchasing electricity based on LUMs can know that the volume they are paying for is the volume being supplied.

¹⁸ EGIA, subsection 2(1) (“contractor”; “purchaser”).

¹⁹ EGIA, section 6.

²⁰ 2013 Information Bulletin, footnote 15 above

²¹ EGIA, subsection 3(1); EGIRs, subsection 5(1).

²² See, e.g., Specification for the approval of type of electricity meters and auxiliary devices, LMB-EG-07 (Measurement Canada), as modified by S-E-06, Rev. 7, and Policy decisions and interpretations related to specification LMB-EG-07, E-30 (Measurement Canada), Rev. 4.

²³ EGIA, subsections 9(4) (“No meter shall be verified pursuant to this Act until or the class, type or design of meter to which it belong as received the approval of the director”) and 9(1) (a meter used “for the purpose of obtaining the basis of a charge for electricity ... supplied by or to him” shall not, subject to dispensations, be put into service (“until it has been verified and sealed in accordance with this Act and the regulations”).

B2: Estimators wish to measure but often cannot

The EGIA does not provide for contractor registration and certification, or for meter type approval or meter verification and sealing, in respect of the sale of electricity that does not use a meter as the basis for a charge. Market participants that charge purchasers for electricity based on time-based flat rates, or even based on “estimates” disclosed to the purchaser as such, are still technically contractors, but they sidestep these regulatory requirements.

Contractors do not necessarily sidestep these requirements as a strategy to avoid regulation or escape accurate measurement. Particularly in emerging innovative contexts, like electric vehicle charging or adaptive street lighting, the contractor may wish to sell electricity on the basis of measurement, but lack access to meter specifications, or to an offsetting or “net” metering infrastructure, on the basis of which type-approval can be secured. A view exists that, particularly in the case of specifications and standards, this access is lacking, MC has not been able to timely adopt metering standards for newer metering technologies encapsulated in software,²⁴ and processes for type-approval of software-controlled metering devices are therefore slow and inadequate²⁵—incentivizing their avoidance until such time as specification standards are adopted.

Creating incentives to sidestep the Electricity Contractor Framework, in favour of unregulated bases for charging, is not in line with the market predictability or consumer fairness goals whose furtherance is that Framework’s objective. As such, it is **recommended** that MC continue to prioritize the identification and adoption of approaches to adopt new-technology-relevant specifications more rapidly—working with government, industry, and civil society stakeholders to recommend to the Governor in Council regulations that would expedite the process for type approvals, specification standards, and verification in respect of meters encapsulated in newer technologies.²⁶ There is a pressing urgency to ensure that innovative uses are not per se excluded only because no metering standard has not yet been adopted, whether worldwide (in respect of novel uses) or only in Canada (following trials or initial launches in a jurisdiction that has preceded us in adopting a metering standard). *[Recommendation B-2]*

²⁴ See, e.g., Tesla, “[Canada – enable kWh-billing for EV charging](#)” (“Public EV charging operators currently bill EV drivers on a time-basis (per-minute or per-hour). This is because Measurement Canada has yet to develop metering standards that allow EV charging to be priced on the amount of energy received (kW per hour).”).

²⁵ GEN-38—*Principles and prerequisites for approval of electricity and gas metering devices incorporating new technology*, Revision 1, Measurement Canada, 1 July 2017; S-EG-05—*Specifications for the approval of software controlled electricity and gas metering devices*, Measurement Canada, 7 November 2011; GEN-40—*Application and implementation of Measurement Canada’s specifications for the approval of both software controlled electricity and gas meters and event loggers*, Measurement Canada, 7 November 2011.

²⁶ EGIA, paragraphs 28(1)(a) and (c).

B3: Regulatory Sandbox: Balancing the need to innovate and the need to protect the customer

At the same time, it is recognized that halting marketplace activities until the adoption of standards specifications creates a single point of failure that does not serve grid innovation or carbon reduction well and may result in pressure to adopt standards before they have been fully reviewed. What alternatives exist that would allow for measurement-based metering to be harnessed to new and innovative uses in ways that do not compromise this Framework?

Cabinet has the authority to make regulations “exempting, conditionally or unconditionally, any meter or any class, type or design of meter or any class or type of transaction from any or all of the provisions of” the EGIA.²⁷ This regulation could be used to give MC sufficient authority to mandate a basic regulatory sandbox program²⁸ for launching time-limited market trials of technologies that incorporate revenue meters for which MC has not yet adopted metering standards, provided they (a) adhere to the standard adopted in a designated peer jurisdiction or (b) in the absence of such a standard, meet conditions to be identified by MC. It is **recommended** that the Governor-in-Council continue the emerging practice of developing dispensation guidelines doing so. *[Recommendation B-3]*

Cabinet and the Minister may each prescribe units of measurement beyond those named in the EGIA. Cabinet may further prescribe the “conditions and manner of determination of units of measurement”.²⁹ It may once have made sense for parameters such as these to be hard-coded in regulations, but the more fluid market environment in which MC today oversees measurement integrity calls for a greater degree of delegation. It is **recommended**³⁰ that in order to provide for MC to develop a more complete regulatory sandbox program, subsection 28.1(1) be revised by adding the underlined words: “the Minister may make regulations prescribing units of measurement for electricity and gas sales, in addition to the units specified in section 3; prescribing the conditions and manner of their determination; or prescribing both.” *[Recommendation B-4]*

²⁷ EGIA, paragraph 28(1)(q).

²⁸ Regulatory sandboxes provide for tailored, but temporary, regulatory regimes for new and innovative uses in order to derisk their deployment: “A main characteristic of these sandboxes is that they allow for a two-way regulatory dialogue between an experimenter and a regulator to innovate regulation and enable new socio-technical arrangements. ... What is especially interesting about these experiments is that, while experimenters can take on new roles due to exemptions, they do not operate in a vacuum, but experiments need to be designed and implemented in a multi-actor, multi-centred decision-making system.” E.C. van der Wall, A.M. Das, and T. v.d. Schoor, “Participatory experimentation with energy law: digging in a ‘regulatory sandbox’ for local energy initiatives in the Netherlands”, *Energies* 13(458), page 2.

²⁹ EGIA, paragraph 28(1)(b) and subsection 28.1(1), which is a stopgap until Cabinet can have regulated under paragraph 28(1)(b) unless three years elapse, mindful of requirements as to the delegation of powers; and paragraph 28(1)(l).

³⁰ This recommendation is tailored to the scope of the report. Broader legislative changes to the EGIA’s hardcoding of technical parameters in regulation are likely needed to modernize the EGIA more fully. These might, for instance, be achieved by transferring the Governor-in-Council’s regulation-making powers to the director (i.e., to MC) as discretionary powers, accompanied by a statutory purpose and objects clause and oversight mechanisms to structure this broader grant of discretion.

C. RIGHT SIZE ADMINISTRATIVE REQUIREMENTS TO ENABLE NEW MARKET ENTRANTS WHILE PROTECTING CONSUMERS

The Electricity Contractor Regime's individual certificate and centralized registry requirements flow from the EGIA.³¹ The EGIRs bind them together with the following language:

9(1) The register referred to in subsection 6(1) of the Act shall be maintained for the registration of contractors who hold a certificate of registration pursuant to subsection 6(2) of the Act and shall contain for each of the contractors the information referred to in subsection (2).

(2) A contractor who wishes to register ... shall apply in writing for a certificate ... and such application shall contain

- a. the name of the contractor;
- b. the principal place of business of the contractor; and
- c. the geographical area in which the contractor intends to operate.³²

This one-time registration requirement is, on its face, easily met. Particularly in view of MC's sensible publication of the registry online, it results in downstream transparency and accountability to regulators, industry stakeholders, and informed consumers.

This requirement is less easily met by Casual Participants. To a person unfamiliar with the underlying ruleset, a material step across a regulatory threshold without full knowledge of the extent and implications of what lies on the other side carries uncertainty, risk and is therefore daunting. Four changes to simplify the registry and registration process are proposed.

C1: Beneficial ownership grouping to allow efficient reporting

A registry reflecting more than 6000 issued certificates is large, difficult to parse, and reflective of significant effort across the economy. At the same time, several sets of multiple certificate-holders are under common beneficial ownership. MC has the discretion to structure the registry in a way that allows contractors, each of whom is a "person or body", to elect³³ to group themselves by beneficial owner both in the way that the registry is published, and its certificates administered.

³¹ Footnote 18 (above) and accompanying text, referring to EGIA, subsection 6(1) ("The director shall maintain, in accordance with the regulations, a register for the registration of contractors") and 6(2) ("No contractor shall sell electricity or gas on the basis of measurement unless he holds a certificate of registration issued under the authority of this subsection in respect of the supply of electricity or gas, as the case may be").

³² EGIR, subsections 9(1-2).

³³ Subject to the contractors' own internal considerations, such as disclosure sensitivity and compliance with respect to other regulatory frameworks.

It is recognized that market participants may not always wish to collapse all related entities into a single registration, or to make public information as to their beneficial ownership in the absence of other requirements to do so.³⁴ However, for ease of administration and transparency, it is **recommended** that MC amend its registry approach to give those registrants who do wish to do so the ability to by organizing the data fields and administration of the registry so as to include and present this grouping. *[Recommendation C-5]*

C2: Size thresholds focus MC’s attention on important places rather than everywhere

What is gained by requiring the smallest market participants to register ahead of initiating activities? At the outset, the registry’s overall number of registrations and proportion of Casual Participants ought each be lowered through adoption of the previous recommendations permitting grouping by beneficial ownership and facilitating the straightforward shifting of regulatory responsibility to the persons best suited to bear it. However, this does not diminish the importance of modernizing the Electricity Contractor Framework in another way.

It would facilitate the entry of Casual Participants which, together with related entities, fall below specified size thresholds to dispense them from individual registration—or, if not dispensing them completely, to make them instead subject to a collective “group” registration applicable to all players below an established size threshold, and responsible for meeting all of the conditions attached to the registration. Group members would “graduate” to individual certificate obligations once the size thresholds had been exceeded for some meaningful period.

The Act, regulations, and MC’s administrative discretion each have a part to play in developing such an approach. To implement this more fluid form of market entry among smaller and newer participants who may, for instance, wish to test the waters before diving in, it is recommended that:

- subsections 9(2) and (3) of the EGIA be revised so as to extend the director’s temporary and permanent dispensation authority to the certificate and registration requirements of that Act’s section 6;
- section 9 of the EGRs be revised so as to provide for a group certificate of registration, applicable to such classes of smaller contractor to be designated by Measurement Canada, on such thresholds and terms and conditions and for such period as the director stipulates; and removing the requirement in subsection (1) for members of such classes to apply and to provide the specified information under subsection (2); and
- MC adopt, subject to consultation, a temporary dispensation or group certificate framework by considering minimum thresholds for individual registration applicable to entities who are contractors or related to a contractor such as, across the group of related persons,
 - o gross global metered volume during the previous relevant period, e.g. six months;
 - o gross global revenue billings for the previous relevant period; and
 - o whether a related contractor has been informed, within the previous relevant period (e.g. 30 days), of a request to an inspector by a dissatisfied person under subsection 23(1) of the Act.³⁵

[Recommendations C6 – C8]

³⁴ Innovation, Science and Economic Development Canada, [Strengthening Corporate Beneficial Ownership Transparency in Canada](#) (consultation paper returnable 30 April 2020), February 2020.

³⁵ Compare for instance, to the requirement on telecommunications service providers that persons become a participant in the Commission for Complaints for Telecom-television Services “commencing 30 calendar days after the date on which the CCTS informs that person that the CCTS has received a complaint related to telecommunications services provided by it falling within the scope of the CCTS’s mandate”: Review of the structure and mandate of the Commissioner for Complaints for Telecommunications Services Inc., Broadcasting and Telecom Regulatory Policy CRTC 2016-102, 17 March 2016, paragraph 45.

C3: Digital service delivery is a commonplace business activity and should be available

The EGIRs prescribe in detail the administrative procedures by which certificates of registration are to be handled. Applications are to be made in writing, naming a geographical area. An original is to be sent to the contractor (and copy retained by the register) and returned with written notice if the contractor “ceases to sell electricity or gas on the basis of measurement”. The contractor must inform MC of any changes, in writing.

MC’s implementation of these procedures has already, in several instances, migrated towards modern means, such as a portable signed electronic document, within the confines of existing law and regulation.³⁶ However, these should also be capable of fulfilling the functions of both an “original”, and its withdrawal. Such an approach would reduce the cost of market participation and enable new services.

To the same end, some data elements are better gathered from data reporting rather than additional form-filling. Instead of requiring a recounting of geographical area served, for instance, calculate this from contractor returns listing the locations of verified and sealed meters. Instead of requiring immediate notice of ceasing to sell electricity on the basis of measurement, consider an alert on any cession in the flow of meter data required to be retained anyway, establishing a presumed cession of activities subject to the contractor’s communication of other circumstances.

To give MC the ability to implement changes such as these, up to and including designation of external registry services better placed to implement digital service delivery, it is **recommended** that:

- subsection 6(1) of the EGIA be amended to revise the requirement that “[t]he director shall maintain, in accordance with the regulations, a register for the registration of contractors”, to one in which “[t]he director shall maintain or provide for the maintenance, in accordance with the regulations and any standards or specifications established by the director, of a register for the registration of contractors”;
- subsection 6(3) of the EGIA be amended to provide that it be delegated to the director to prescribe the administrative obligations of a contractor who ceases to sell electricity or gas on the basis of measurement, if any; and
- sections 9 and 10 of the EGIRs be amended to:
 - o minimize references to specific forms of document (including deletion of references to sending by registered mail) in favour of technology-neutral outcomes, and
 - o delete specific designations of information that MC has the ability to obtain, including as the result of implementing other recommendations made here, in view of the above EGIA amendments providing for MC to stipulate these directly. **[Recommendations C9 – C10]**

Establishing that MC could both maintain its own registry and provide for the maintenance of such a registry based on standards and specifications it sets, creates the possibility for MC to establish a co regulatory framework by which to leverage private-sector-delivered digital services.³⁷

³⁶ Personal Information Protection and Electronic Documents Act, S.C. 2000, c. 5, section 33 (“Electronic alternatives”).

³⁷ A similar approach is increasingly adopted in the area of spectrum regulation: see, for instance, Decision on the technical and policy framework for White Space Devices, ISED SMSE-003-19, March 2019 (role of white space database administrator) and the related White Space database specifications, ISED DBS-01—Issue 2, January 2020.

C4: Minimize data collection, maximize data usefulness

The preceding recommendations as to the ability to group beneficial entities, to dispense or simplify the registration of contractors below a size threshold, and to incorporate public sector administered or -defined digital service delivery point to pathways for reducing administrative burden will all improve regulatory practices. However, best regulatory practice would also indicate a broader approach to verifying the minimizing of data collection.

Such an approach would seek to ensure that MC collects only such information as is strictly required to operate a registry and certify registrants who require individual certification; cannot be inferred from otherwise-available information; and is gathered in ways that eliminate double-entry and facilitate ease of use. To implement this approach, it is recommended that MC establish a periodic data minimization audit to ensure that information that is not strictly required is not gathered, included information that can be inferred from otherwise-available indicators; and that such information that is gathered is done so efficiently and effectively. *[Recommendation C-11]*

D. CORRECTLY ALIGN RESPONSIBILITIES WITH ROLES TO LOWER MARKET ENTRY BARRIERS AND ADD MARKET FLEXIBILITY

Continuing increase of Casual Participants that own meters used as the basis for selling electricity to purchasers—but which outsource virtually all technical and billing functions to third-party intermediaries like technology integrators and network providers is inevitable in both the absolute number and relative presence, within the electricity grid ecosystem.

The EGIA provides for arrangements whereby these third parties, rather than the Casual Participant who is a meter owner, can act as the regulated contractor. It does so by distinguishing between the “owner of a meter” and the contractor who “undertake[s] to supply electricity or gas to any purchaser”. The Act then assigns to the latter all the responsibilities of the former, including liability, except the modest requirement to include the meter’s bare owner in any dispute filed.³⁸

The separation of meter owner from contractor is an important step, but the “supply [of] electricity” to purchasers remains joined at the hip with all other regulatory roles. The resulting approach has not been successful in facilitating regulated market-based approaches to shifting contractor status under the Electricity Contractor Framework towards those best-suited, and willing, to bear regulatory costs.

Centralization of multiple roles within the registered and certificated contractor as the supplier of metered electricity to purchasers no longer corresponds well with the evolving grid ecosystem. That dilemma is addressed here by reconsidering the necessary aggregation of what have emerged as multiple commercial roles, within electricity markets, into the role of the contractor. Instead, the functions of contractor, state of good repair custodian, and data steward are distinguished. A framework is proposed under which each of these would remain with the contractor by default but provide for the contracting out of regulatory responsibility to another person under MC jurisdiction with the consent of all parties.

D1: Verification, sealing, deployment, and onwards

Consider a movie theatre wishing to install a metered-revenue EV charger in its parking lot, take ownership of it, and book its revenue—but assuming it can hire experts to install, operate, service, and maintain it on a fee-for-service basis just as it may for vending machines and arcade games. Under the existing regime, the movie owner would act as a contractor, notwithstanding lack of familiarity with any aspect of the EV charger’s lifecycle, and similar absence of knowledge or control over the software updates installed over-the-air in the charger. Instead, what if the movie theatre owner had the ability to amend its registration to shop for a supplier that agreed to be designated as the person bearing regulatory responsibility—who, in turn, might interact with further suppliers, both contracted and counterparts, each of whom would be answerable either to the supplier, as a contractual matter, or to MC as a regulatory one? Rather than being required to structure arrangements to show that the third party is, in fact, acting as the person who has “undertaken to supply electricity ... to a purchaser”, the meter owner could in this way contract with service providers in a straightforward fashion but for a more modest role.

³⁸ EGIA, subsections 2(3) and 23(2); subsection 16(1).

Such an approach would also help address a related expertise gap in respect of verification, sealing, and deployment obligations. A meter that a person “intend[s] to use[,] or cause to be used ... for the purpose of obtaining the basis of a charge for electricity or gas supplied by or to him” must first have been “verified and sealed in accordance with this Act and the regulations”.³⁹ Standards and procedures for verifying and sealing meters are set down in specifications, plans, and notices adopted by Measurement Canada.⁴⁰ After verification, sealing, and deployment, the contractor undertaking to supply electricity to purchasers continues, in that role and stepping into the shoes of the meter owner, to be responsible for ensuring that the meter is “dealt with in accordance with the requirements of this Act and the regulations”, like payment of any regulatory fees.⁴¹

Yet, whether responsible for ensuring this verification and sealing, Casual Participants are likely, as non-specialists, to have little knowledge of where to find related standards. They may not be able to understand the distinction between, for instance, a meter of a model that has received type approval, and a meter that is itself sealed and verified. They may not be able to undertake such verification or sealing regardless, to the extent that the meter is encapsulated in software or operated remotely by network software over which the contractor has little purchase. And they are poorly placed to maintain vigilance over subsequent compliance with the evolving requirements of an Act, and regulations, with which they are unfamiliar and ill-equipped, in comparison with their technology enablers, to become familiar.

To give Casual Participants the flexibility they need it is **recommended** that subsection 2(3) of the EGIA be amended as follows, adding the underlined words: “Any reference in this Act, except in subsection 23(2), to the owner of a meter shall, in the case of a meter used by a contractor for any purpose mentioned in subsection 9(1), be construed as a reference to the person designated jointly by the contractor, meter owner, and designated person; or, in the event no such designation is made, the contractor.” This approach would simplify the process by which the meter owner, or other person involved in the supply of metered electricity to purchasers, designates a technology enabler, network software operator, or other third party to bear the regulatory burden of a contractor, shifting the default away from the meter owner by mutual agreement—and help more fully enable a market for the assumption of that role, allowing the parties to allocate risk between themselves on the back end. [*Recommendation D-12*]

³⁹ EGIA, subsection 1 (emphasis added).

⁴⁰ EGIR, sections 18-19; GEN-25—Policy on the approval, initial verification, and re-verification for electricity and gas meters: Legal Units of Measurement and functions used for billing, Measurement Canada, 1 February 2016; S-E-02—Specifications for the verification and the re-verification of electricity meters (rev. 5), 26 March 2015; S-E-08—Specifications for the installation of electricity meters – Measurement Canada standard drawings for electricity metering installations (rev. 2), Measurement Canada, 19 October 2012.

⁴¹ EGIA, subsection 16(1).

D2: State of good repair should not mean you must repair it yourself

A person undertaking to supply electricity to purchasers is a contractor who also steps into the meter owner's shoes in respect of a self-standing, but related, responsibility to keep a verified⁴² meter "in good repair".⁴³

Software-based metering separates stewardship of the physical device from that of the software and data responsible for EGIA-relevant functions. As the device's physical steward, the Casual Participant relies on metering and charging network service providers whose monitoring and over-the-air updating is essential for the assurance of ongoing good repair. To manage their own stewardship, metering and charging network service providers require the ability to efficiently and timely roll out a traced update process that does not engage software components legally relevant to EGIA compliance, as well as an efficient process in respect of those components that are relevant.

For aspects of "good repair" that pertain to non-physical meter attributes, the preceding recommendation is well-aligned with the interest of Casual Participants without knowledge or access to the relevant meter functions to contract this responsibility out to a better-positioned designate. Insofar as good repair also extends to physical attributes, however, the responsibility may be better-aligned with the steward of the physical site at which the supply is made, who may be further subject to provincial physical good-repair obligations that relate to that site—or, again, to a designate with a different skillset involving securing and ensuring the good upkeep of physical meters in parking lots or on light standards, to borrow two previous examples.

Given the fluidity and rapid evolution of both business models and technology designs selling revenue-metered electricity, there is not likely a straightforward way to split state of good repair responsibilities into two categories cleanly. However, the importance of physical site stewardship to state-of-good-repair responsibilities indicates that parties may wish to create different binding arrangements with respect to this obligation than to others—and that the statute should allow them to. It is therefore **recommended** that the first portion of subsection 16(1) of the EGIA, which pertains to state of good repair, be separated out in order to allow parties to negotiate its responsibility separately:

Owner's liability

16(1) The owner of each verified meter that is in use shall keep it in good repair and is responsible for causing it to be dealt with in accordance with the requirements of this Act and the regulations, and, subject to those requirements, the owner is liable to pay any fees chargeable for dealing with the meter in accordance with those requirements.

(1.1) The owner of each verified meter, or such other person who agrees to be designated which, for clarity, may differ from the person designated under subsection 2(3), shall keep it in good repair.

[Recommendation D-13]

⁴² A meter dispensed only from sealing would thus remain automatically subject to this good-repair responsibility, whereas a meter dispensed from verification would be subject to it only if so specified in Measurement Canada's dispensation.

⁴³ EGIA, subsection 16(1).

D3: Data retention: Preserve what is important in safe places

The EGIA authorizes the Governor-in-Council to specify by regulation what records and documents electricity contractors must keep, for how long, in which form and at which place.⁴⁴ The EGIRs in turn identify data attributes to be retained in respect of each meter.⁴⁵ These data attributes include meter information (like installation address, inspection information), transactional information (like metering information used to establish the charge, conversion factors), and identifying information (like purchaser's account number, name and address). They provide for preserving information that could be used to resolve a billing dispute that later arises.

The retention period for these data is unusual. For a range of data that includes, “for each billing period, the metering information used by the owner in establishing a charge,”⁴⁶ they must be retained for “a period of at least 12 months *after the date the meter ceased to be used*”.⁴⁷ Meters may last many years. While a life-of-the-meter-plus-one retention hold may be appropriate for diagnostic and certification information about the meter itself, for transactional information used in establishing each “charge” that period far exceeds the seven-year period typical for sales records.⁴⁸ Further, the identifying information required to be collected and retained is in many circumstances likely, in the retail setting, to be personal information tying a purchaser to a particular place at a particular time,⁴⁹ engaging applicable privacy legislation in parallel to the Electricity Contractor Framework.⁵⁰

Over-retention creates business risk and, in an era of promiscuous data generation, imposes growing costs. Over-retention of personal information creates further privacy risk: “[t]he collection of personal information shall be limited to that which is necessary for the purposes identified by the organization.”⁵¹ In addition to applicable privacy legislation, these risks further intersect with change in how different provincial energy schemes address access to electricity usage on retail and wholesale bases, such as Ontario's Independent Electricity System Operator's exploration of designation as a Smart Metering Entity for the purpose of providing access to aggregated data about electricity usage to third parties.⁵² Addressing these considerations suggests a review of what information is required to be retained and what leeway exists to outsource its retention and management.

⁴⁴ Contractors acting as such in respect of a meter, or else the meter's owner, noting the revisions recommended to this construction at Recommended 7, above: EGIA, subsection 2(3), in respect of subsection 16(2) and paragraph 28(1)(i).

⁴⁵ EGIRs, paragraphs 11(2)(a)-(m) and subsection 11(3), with additional requirements at subsections 11(4)-(5) in respect of “electricity metering installations” (multiple meters at the same location). Subsection 11(7) then sets out minimum retention periods, which are generally not less than 12 months.

⁴⁶ EGIRs, paragraph 11(2)(m)

⁴⁷ EGIRs, paragraph 11(7)(a), emphasis added.

⁴⁸ See, e.g., Excise Tax Act, subsection 286(3) (“Every person required under this section to keep records shall retain them until the expiration of six years after the end of the year to which they relate or for such other period as may be prescribed”, with reference to “records ... in such form and containing such information as will enable the determination of the person's liabilities and obligations” at subsection 286(1)), cited in Canada Revenue Agency, General requirements for books and records, GST/HST Memorandum 15.1, June 2005.

⁴⁹ PIPEDA, subsection 2(1) (“personal information”).

⁵⁰ The EGIA giving rise to these obligations is federal legislation. Nonetheless, which privacy legislation is applicable may depend on whether the contractor, purchaser, and any third-party intermediaries are public- or private-sector entities.

⁵¹ PIPEDA, Schedule 1, section 4.4 (“Principle 4 – Limiting Collection”); Council of Europe, Convention for the protection of individuals with regard to the processing of personal data (“Convention 108+”), CETS No. 108 (2018), Article 5(4)(c) and Explanatory Report, paragraph 52.

⁵² Independent Electricity System Operator (in its capacity as the Smart Metering Entity)—Application for approval to provide access to certain non-personal data to third parties at market prices, Ontario Energy Board Decision and Order EB-2018-0316, 24 October 2019.

With respect to data collection and retention, changes are needed in respect of over-retention generally, and personal information in particular. Overall, it is suggested that minimum retention obligations be aligned with those that apply to taxable sales generally, i.e., six years past the current year. Insofar as the purpose of retaining purchaser-side identifying information is to allow a later dispute to proceed, no more than a unique transaction identifier—against which the contractor retains relevant transactional information—ought to be required in order to launch a dispute in respect of that transaction. The following revisions to the EGIRs are therefore **recommended**:

- At paragraph 11(7)(a), regarding retention periods, by adding the underlined words: “An owner shall retain the records containing the information referred to . . . in subsection (2) for a period of at least 12 months after the date the meter ceased to be used, except for paragraph 2(m), in respect of which records shall be retained for a period following the purchase that is equivalent to the period contemplated by section 286 of the Excise Tax Act, R.S.C. 1985, c. E-15, as revised from time to time.”
- At paragraph 11(2)(b), regarding potential personal information, by reducing the scope of what is to be collected: instead of “the purchaser’s account number, name and address;” “a unique transaction identifier in respect of each purchase”. This change in what is obliged to be collected and retained would not prohibit the owner, or purchaser, from collecting and retaining further relevant information where privacy law permits.
[Recommendation D-14]

And, with respect to data management responsibility, the following changes are **recommended**:

- Revise subsection 16(2) of the EGIA: “An owner referred to in subsection (1) shall cause to be kept records containing such information related to the administration of this Act, in such form, at such place and for such period as may be prescribed.”
- Revise paragraph 28(1)(i) of the EGIA: “prescribing (i) records and documents to be kept, made, issued or used for the purposes of this Act, the form thereof and the information to be contained therein, the classes of those persons whom the owner may designate to keep such records (“data custodians”), and the security and privacy standards to be adopted or adhered to, to the extent these standards are no less protective than standards applicable to the same records and documents under applicable federal, provincial, or territorial laws”.
- Revise section 11 of the EGIRs to replace “owner” with “data custodian”.

Providing for MC to designate the classes of data steward in this manner is intended to allow for MC to harmonize its approach with those of provincial energy data regulation as it emerges. *[Recommendations D-15 – D-16]*

D4: Registry implications

This section has focused on ways to disaggregate three regulatory roles that the person supplying metered electricity to purchasers is currently required to play. Doing so is intended to enable broader marketplace collaboration in ways that align regulatory responsibility with roles and expertise, rather than relying solely on contractual allocation—an approach that has not met with success.

It is recognized that this approach would also render the registry maintained by MC more complex by opening it to new, and to more, actors. This hews in a direction opposite, on its face, to the earlier discussion and recommendations focused on reducing the size and complexity of the contractor registry, and related certification process, to reduce administrative burden.

Such an outcome is likely inevitable if the goal is to affect the role-responsibility alignment discussed in this section. It is to be hoped that the efficiencies gained by enabling related entity grouping, size thresholds, and a framework for digital services will offset increased complexity. At the same time, it should be underlined that much of this complexity ought not burden market participants directly. It would fall to MC to manage the scheme either directly or indirectly, through a coregulatory scheme for private sector registry services, to maintain market oversight.

E. ENHANCE MARKET GUIDANCE TO ALLOW BETTER BUSINESS DECISIONS

Alongside more innovation-focused standard setting, reduced administrative burden, and better alignment of regulatory responsibilities with emerging marketplace roles, the Electricity Contractor Framework could be better understood, and complied with, through enhanced guidance to current and potential market participants. An earlier recommendation suggested that MC update, complement, and regularly update single-document guidance on the full extent of the Framework's regulatory requirements in clear, plain language accessible to Casual Participants. More fine-grained insight into particular aspects of the Framework would be similarly useful with respect to contractor designations, registration data, personal information retention, and dispute resolution outcomes.

E1: Registration data has value beyond regulatory compliance tracking

Even in minimizing collection, the Electricity Contractor Framework's certificate and registry undertaking generates significant, albeit relatively static, data holdings. These holdings have the capacity to provide unique insights into Canadian electricity markets. The value of doing so should be seized in order to partially offset the burden created.

These data are infrequent. Their release back into the market creates no presumption against the earlier recommendation as to data minimization auditing. However, occasional registration data will continue to be collected at scale. It is **recommended** that MC work with appropriate partners⁵³ to consult with industry stakeholders, and citizen and open data groups, in developing a program that leverages registry data to generate value from it by (i) making it available, at levels of aggregation appropriate to its sensitivity, as open data, and (ii) conducting and publishing annual reporting on aggregate numbers of contractors, change trends, and other baseline indicators that can be calculated as a result of information required to operate the registry and to issue certificates, as identified through consultation. *[Recommendation E-17]*

E2: Role clarity allows both industry and government to learn and improve

From time to time, MC is called on to decide as to which party is the contractor on a given set of facts. These determinations, by their very nature, shed light on how regulatory responsibilities are understood and interpreted by the regulator. They are important signals to those engaged in contracting to allocate regulatory risk or designing professional services as market enablers.

Such determinations are highly fact driven, often engaging confidential business information. They are not precedent setting, in the sense that an administrative agency is not bound, or entitled to be bound, by them. Yet they are instructive, in that the agency may well be persuaded by them. And they are relevant, in that market participants are "entitled to expect that like cases will generally be treated alike and that outcomes will not depend merely on the identity of the individual decision maker — expectations that do not evaporate simply because the parties are not before a judge."⁵⁴

In this respect, it is important that a record be created in order that both stakeholders and deciders know what it means for like cases to be treated alike. "Access to past reasons and summaries of past reasons enables multiple individual decision makers within a single organization (such as administrative tribunal members) to learn from each other's work and contribute to a harmonized decision-making culture."⁵⁵

⁵³ For instance, Statistics Canada.

⁵⁴ Canada (Minister of Citizenship and Immigration) v. Vavilov, 2019 SCC 65, paragraphs 129.

⁵⁵ Ibid., paragraph 130.

Business confidentiality need not be a bar to providing such access to the public. By selecting between full written decisions, redacted decisions, and decision summaries, MC can create this record in a manner compatible with commercial sensitivity. The Office of the Privacy Commissioner of Canada’s “Report of Findings” format, including metadata tagging by disposition, complaint type, industry sector, topic, relevant rule, and year of findings, is instructive in this regard.⁵⁶ It is therefore **recommended** that MC commit to publishing online, and to making available electronically to third-party caselaw publishers,⁵⁷ determinations or summaries of them—redacting any business-sensitive information—as to whether a person undertakes the supply of electricity or gas to a purchaser, within the meaning of “contractor”; and as to related role assignments. *[Recommendation E-18]*

E3: Dispute resolution guidance allows consistent application of precedent

A key function of the Electricity Contractor Framework is to provide recourse to independent investigation and adjudication of measurement disputes relating to meter performance, condition, or registration. A “contractor or purchaser who is dissatisfied with the condition or registration of any meter used in respect of electricity or gas supplied to him”, and has attempted unsuccessfully to resolve the issue directly, may file a Statement of Complaint. If within MC’s jurisdiction, an MC inspector will test and issue a Certificate of Measurement Dispute Investigation Findings. These findings can, in turn, be further reviewed by the inspector and, within 30 days, appealed to MC itself for a ruling.⁵⁸ All of this may require the contractor to produce extensive records, including detailed meter and installation data; and the meter itself to be removed for testing.

Casual Participants are unlikely to have experience with the uses that this tool can play within the overall landscape of mechanisms and redress options available, nor with the range of likely outcomes and practical constraints that hands-on experience and informal peer reports provide. If the Electricity Contractor Framework’s dispute mechanism is to serve all stakeholders, especially the emerging Casual Participant group, a public record generated by publishing either written decisions or, where appropriate, redacted versions or summaries of them, would contribute to consistency and predictability and assist parties’ preparation in a dispute resolution system.⁵⁹

To implement this approach, it is **recommended** that MC commit to publishing online, and to making available electronically to third-party caselaw publishers,⁶⁰ in respect of each Certificate of Measurement Dispute Investigation Findings and each related appeal decision issued, either the Certificate itself or, to the extent that the public interest in disclosure is outweighed by specific and direct harm likely to result from disclosure, redacted or summary versions of them. *[Recommendation E-18]*

⁵⁶ Online: <<https://www.priv.gc.ca/en/opc-actions-and-decisions/investigations/investigations-into-businesses/>>.

⁵⁷ In particular, inclusion of these decisions in discoverable online databases like the Canadian Legal Information Institute (CanLII, constituted by the Federation of Law Societies of Canada) and Legal Innovation Data Institute, a data trust, would enhance the development of a record towards developing consistency and predictability.

⁵⁸ EGIA, sections 23-24; EGIRs, sections 29-31; GEN-43—Policy for electricity and gas measurement dispute investigations, Measurement Canada, 18 April 2016.

⁵⁹ See, e.g., Global Financial Integrity comments on OECD public discussion draft, BEPS Action 14: Make dispute resolution mechanisms more effective, 19 January 2015, page (“like cases should be treated alike, and decisions should be published, to ensure consistency); Hon. J. Douglas Cunningham, 2014 Ontario Automobile Dispute Resolution System Review, 18 February 2014 (“I believe publishing arbitration decisions makes the DRS more accountable and creates public confidence in the system. Although publishing arbitration decisions does not necessarily make the system more predictive, it does inform users how their issues might be dealt with within the system.”).

⁶⁰ Footnote 52 (above) and accompanying text.

E4: Safe retention of personal information benefits everyone

Casual Participants are data aggregators and recommendations D-15 and D-16 above would allow them to delegate this role and Electricity Contractor Framework responsibility for it. At the same time, basic material is required to assist Casual Participants and their designees in playing that role—including, at the outset, considerations that relate to the Casual Participant’s appointment of a data custodian, and to connected regulatory obligations or requirements both under privacy law and under sector-specific energy regulation within a province or territory.

It is **recommended** that MC work with appropriate federal, provincial, territorial, and Indigenous partners⁶¹ to develop a joint document, updated regularly, that identifies in clear, plain language key data custodianship responsibilities in respect both of personal information and of aggregated information, whether or not depersonalized, flagging areas which may require further local consultation. *[Recommendation E-20]*

⁶¹ For instance, the Privacy Commissioner of Canada and his provincial counterparts.

CONCLUSION

We trust that these 20 recommendations, and their reasoning have resonated with you for their common-sense approach to solving existing electricity marketplace challenges, as well as creating space for the future electricity marketplace to flourish. A future marketplace full of clean technology, both new and old, and where that technology is properly regulated to the benefit of all Canadians.

Together, these recommendations would modernize an important legislative and regulatory framework that is proving detrimental to several national priorities including, the deployment of electric vehicle charging infrastructure; innovation and commerce; and environmental outcomes. We hope that you agree with CEA that now is the time for the government of Canada to modernize the “electricity contractor framework” in the EGIA and EGIR. To remain relevant the “electricity contractor framework” must evolve as the grid and market it regulates has evolved and continues to evolve. For any follow-ups or inquiries about this report please contact info@electricity.ca.