

# ELECTRIC METERING IN CANADA:

**Unrealized Opportunities for  
Innovation, Environmental  
Benefits and Lower Costs  
to Customers**



Canadian  
Electricity  
Association

Association  
canadienne  
de l'électricité

[electricity.ca](http://electricity.ca)



# **MODERNIZATION OF THE ELECTRICITY & GAS INSPECTION ACT (EGIA) AND ITS ASSOCIATED REGULATIONS**

is required to overcome several market inefficiencies caused by the current legislation.

These distortions serve as barriers to the development of the Canadian Smart Grid, and in turn, hinder progress on a number of environmental fronts including the decarbonization of transportation and the commercialization of clean technologies.

# MASTER TABLE OF APPLICABLE SECTIONS OF THE EGIA

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## APPLICABLE SECTIONS OF THE EGIA REGULATIONS

### CASE **1** **2** **6** CEA Recommendation: Modernize the Definition of Meter

- 3(1) – calculated LUM
- 9(1) & 12 (1) – verification and reverification preventing a calculated LUM
- 28 (1) (q) – Alternative LUMs

- 5 (1) – calculated LUM
- 29 (1) – require alternative dispute mechanism
- 7 – Concept of virtual meter accuracy
- 31 (1) a & 46 – virtual meter error limit

### CASE **3** CEA Recommendation: Modernize the Definition of Meter

- 3 (1) – LUM defined quantities but not used for metrology
- 9(1) & 12 (1) – verification and reverification restrictions limiting the ability to adapt a meter to support evolving opportunities
- 28(1) (q) – ability to utilize non-metrology features of a meter

- 5 (1) – LUM defined quantities but not used for metrology
- 7 – LUM defined quantities but not used for metrology accuracy
- 31 (1) a & 46 – LUM defined quantities but not used for metrology error limit

### CASE **4** **5** **6** **7** CEA Recommendation: Revise the Definition of Legal Units of Measurement (LUM)

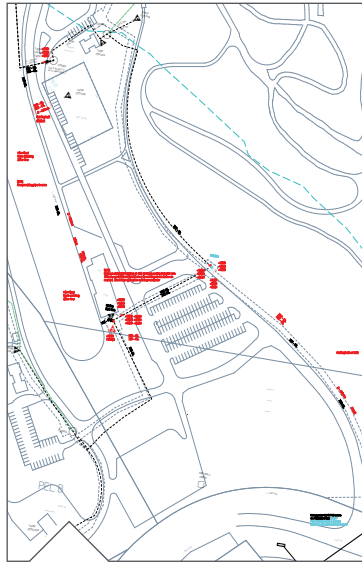
- 3(1) – LUM definition
- 9 (1) & 12 (1) – verification requirements for non-traditional embedded meters
- 28 (1) (q) non-traditional embedded meter exemption

- 5 (1)
- 7
- 31 (1) a & 46



## CASE ①

This condo needs four meters, not one, because metering multiple customers from one meter, called deductive totalization, is less accurate than one meter per customer. If deductive totalization was allowed significant savings could be passed to the customer.



## CASE ②

This new meter installation was required to satisfy an inaccuracy of up to 0.8% or about \$30/month. The entire customer rate base paid for the construction of this installation. Due to the equipment, labour and environmental regulatory compliance costs, the project has an expected 900-year payback.



## CASE ③

Meters gather large amounts of data, however, Canadian utilities are not permitted to access most of it. By mandating these simple, plastic pegs Canada loses out on environmentally valuable data needed to decarbonize transportation, develop the Smart Grid and commercialize clean technologies.



## CASE ④

Electric Vehicle (EV) meters are increasingly being used as measurement points for fuel, just like gas pumps. But unlike gas pumps, EV customers use meters that are not approved by Measurement Canada. This picture shows what a currently approved meter would look like in an EV. A newly designed and approved EV specific meter type would encourage installation by both manufacturers and customers.



## CASE ⑤

Large, heavy and fragile meters could be replaced with embedded equipment, which is not exposed to mechanical damage or vandalism.



## CASE ⑥

Single points of measurement are mandated but multiple EVs could be charged by one charger/metering point.



## CASE ⑦

Traffic lights have stable, predictable loads yet a traditional meter is currently mandated. An embedded meter would be a simpler and cost-effective solution for municipalities.

**CEA's complimentary analysis and recommendations on modernizing the EGIA can be found at <https://electricity.ca/EGIA>**

These include two additional recommendations that do not lend themselves well to visual depiction:

1. Revise the definition of Contractor, and all definitions dependent on Contractor
2. Clarify the distinction between retail and wholesale markets

**FOR ANY QUESTIONS OR ADDITIONAL INFORMATION PLEASE CONTACT:**

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