



How Reducing Greenhouse Gas Emissions Benefits Your Business

Sub-metering: Better Understand your Energy Consumption and What is Driving your Energy Use

A few housekeeping notes...

Thank you for attending. It is helpful to know **how you heard about our webinar series**. Please provide some insight by adding a note in the chat please. Social Media, email, or referred by a friend.

Please put **questions** in the chat.

There will be a question periods after our presenters and at the end of the webinar.

We will be **recording** this session.

This is a valuable tool to support education to for

Tenants to build collaborative relationships with their Building Owners.

Sub-metering: Better Understand your Energy Consumption and What is Driving your Energy Use



Presented by
ClimateWise Building
Challenge



Our Presenters



Ephram Spiegelman
Chief Revenue Officer, Carma Corp.



Daniel Jung, P. Eng.
Director – Commercial Services,
Metergy Solutions Inc.



Who are we



The ClimateWise Building Challenge is a York Region wide, friendly awards and recognition competition created to reduce energy consumption and greenhouse gas emissions (GHGs) in buildings through collaboration, education, and innovation.

The competition is free of cost and open to building owners, landlords, managers, and tenants who want to join the fight to combat climate change while improving your bottom line by implementing responsible energy operations and behavioural practices.

Supported by



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Un organisme du gouvernement de l'Ontario

Share a Roadmap



When it comes to energy performance, building owners and tenants have similar building goals; both want to save money, be recognized for corporate responsibility efforts, engage stakeholders and have transparent access to energy consumption.

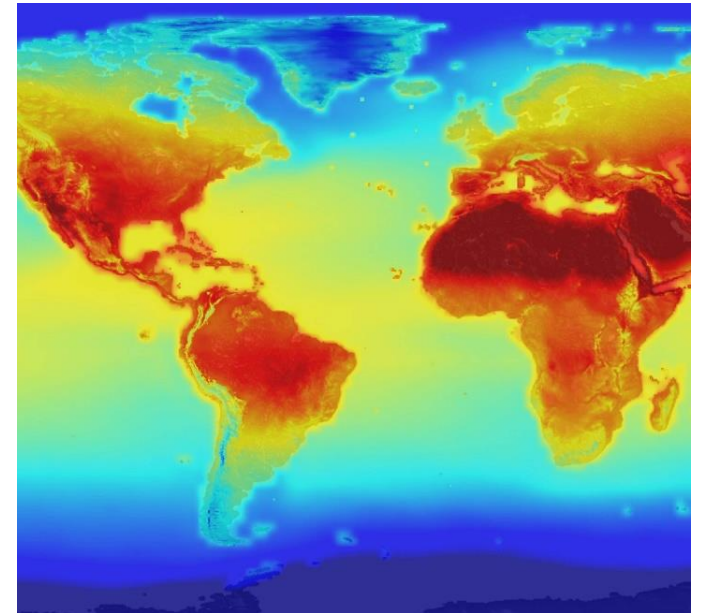
Submetering provides a single solution for all these needs.

What we want to accomplish today

This webinar will inform you why submetering tenant spaces is a priority for both tenants and landlords.

Important topics that will be discussed include:

- Make Tenant Billing Accurate And Effortless
- Identify Sustainability Project's ROI with Measurement and Verification



Exploring Submetering Benefits

**Multiple energy
meter use
intersection ahead**

Our Panelists



Ephram Spiegelman, Chief Revenue Officer, Carma Corp. Is a dedicated and seasoned executive whose people, process, and systems instincts have always proven to be astute and timely. Continuously work towards forging marketplace trust through the ability to build strong and meaningful relationships, and following through with team and customer commitments.

Promoting a true team spirit within a large group of sales and marketing professionals has proven to be a key success indicator, as the businesses Ephram gets involved in tend to improve through both sales and operational efficiencies.



Daniel Jung is the Director of Commercial Services for Metergy Solutions. Metergy is one of Canada's most experienced submetering companies providing turnkey solutions for over 15 years. Daniel has more than 14 years of experience in the field of engineering and has expertise in developing submetering solutions for commercial real estate clients. Previous roles with a smart building OT company and an energy consulting firm gives him a unique perspective on the challenges faced by (and opportunities available to) commercial tenants, property managers, and building owners.

What is Submetering?

Sub metering is a hardware system that lets a building owner break down consumption use based on individual unit consumption.

- Electrical
- Natural Gas
- Water
- Heating and Cooling



Access to more granular energy data to make targeted performance investments & improvements



How often do buildings submeter all 4 utility uses?

Why do we need to sub-meter?

Using a space with no meter is like buying a car with no gas gauge or speedometer.

How are tenants typically allocated utility costs (i.e. when submeters are not installed)?

- Utility costs are allocated based on each tenant's proportionate share of the building area – costs are passed on to tenants as part of the operating budget (along with property maintenance costs, cleaning costs, snow removal fees, etc.)
- The issue - one tenant always ends up paying for some portion of another tenant's use



How are the main load costs (common areas) separated from the individual sub-meters?



What is Measurement Canada's role



Government
of Canada

As accredited submetering providers, we are responsible to Measurement Canada in some of the following ways:

- Install and use only approved metering equipment
- Report all installed metering systems
- Keep quality documents throughout the lifetime of assets
- Undergo and pass regular surveillance audits



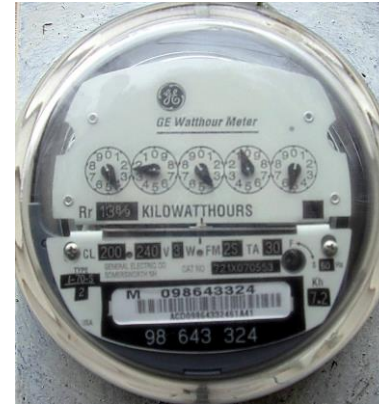
**What are the benefits of
Revenue Grade meters approved
by Measurement Canada?**



Are all sub-meters created equal?

There are many different submeter technologies. Work with a reputable provider to select the right one for your application.

Electricity, gas and submeters are regulated by Measurement Canada for use in billing applications.



"bubble meter"
monitors 1 unit

VS

Submetering
monitors 24+ units -
footprint is much
smaller



**Listen to the
experts!**

Components of sub-metering

- **Cost of managing the project**
- **Productivity Loss / Service interruption**
- **Direct Labour costs**
- **Commissioning**
- **Hardware / Sensors**



What are the challenges for making this happen in the Tenant space?

Success requires Collaboration

Demand response participation not possible without owner installed sub-metering.

**Submetering = Collaboration
Shared Objectives**



How does submetering immediately benefit tenants?

- **Fair allocation** of utility costs – pay for what you use
- This price signal (i.e. pay for what you use) typically leads to a **reduction in use (40% on average)**



Asking the right questions

Make sure the installation works for you. Ask the right questions.

- Have you reviewed the distribution to my space? How can I be sure the submeters are installed on the correct service/feed?
- Are you installing revenue grade meters? (applies to elec/gas/thermal, doesn't apply to water). If not, how can I be sure the submeter readings are accurate/correct?
- How will space consumption data be made available to me?
- Will you provide hourly, daily, or monthly consumption data?



**Do Tenants need to collaborate
with each other to streamline the
install for the building owner?**



Benefits of Sub-metering

GENERAL LEDGER					
ACCOUNT:	CHECKING	ACCOUNT NO. 1100			
		DEBIT	CREDIT		

Simplify energy accounting



What are the benefits?

Proven Business case

Building Type: Shopping Centre

PROFILE:

- 379,280 Square foot shopping centre - 95 Retail tenants
- Consumption surpassed 9 million kWh prior to submetering

Objective

Seeking ways to trim operating costs. As pass-through recipients, commercial/retail tenants are equally concerned about maximizing efficiency and minimizing electricity bills, which historically, they have had little control over.

Meet energy budget reduction targets and increase tenant engagement.

- Decrease annual operating costs and consumption.
- Invest in short pay-back energy saving technology.
- Encourage tenant engagement and awareness.
- Provide accurate and timely tenant billing.

The SOLUTION:

A revenue legal CARMA METER MANAGER Submetering System was installed. Immediately following installation, a monthly tenant billing and collection program was initiated.

The Results

Total annual building consumption prior submetering: **9,156,940 kWh.**

1st Year Savings	899,972 kWh	\$ 89,997.20
2nd Year Savings	1,137,855 kWh	\$113,785.50
3rd Year Savings	1,826,377 kWh	\$186,637.70

**Carbon Footprint Reduction
= 772 metric tonnes of CO2**

- two year equipment pay back
- consistent third party billing
- reducing their average annual tenant usage to 77,000 kWh.

Sub-metering Tenant satisfaction

Tenants appreciate being sub-metered:

- Their Lease is Fair
- They are Identified As Sustainability Leaders
- They See The Return-on-Investment Of Their Energy Efforts



A word cloud of sustainability-related terms. The most prominent words are 'Leader', 'Sustainability', and 'Champion'. Other visible words include 'Green', 'Policy', 'Trail', 'Thought', 'Bar', 'Conscious', 'Best', 'Seafood', 'Rum', 'Top', 'Maverick', 'Setter', 'Blazer', 'Business', 'Local', 'Advocate', 'Change', 'Trend', 'Leaders', and 'Breadfruit'.



How to engage tenants through sub-metering to reduce energy use?



Questions

Are there alternatives if you are not able to sub-meter?

ClimateWise Building Challenge



Our vision is to facilitate, support, and mentor York Region building owners and business to reach energy and greenhouse gas reduction targets.

We provide you with a plan of action with detailed resources and technical support throughout the competition. This includes energy saving tips, energy benchmarking tools, and advice from industry leaders.

Benefits you can expect

Bottom-line Cost Savings

Migrating to a sustainable business model is an opportunity for innovation, cost savings and increased profitability.

Stay on Top of Available Incentives

More incentives and regulatory opportunities will be available to help your firm stay competitive.

Attracting and Retaining Top-tier Employees

Research suggests that employees are more inclined to work and stay at a firm with a good reputation with respect to environmental sustainability.

Engaging Employees

Build a culture of employee collaboration and enjoy the benefits of enhanced productivity.

Being Part of a Movement

Consumers and investors turn towards organizations that show a commitment to achieving emission reductions.



Get recognition for your Climate Action

We're here to support you



Our Provincial partner





The Journey's end - Recognition



The Tenant Space Program is recognition for sustainability efforts in leased office space.

TENANT SPACE
RECOGNITION PROGRAM*
By ClimateWise Building Challenge



Create a more energy-efficient/sustainable workplace

- Bottom line savings on business operations.

Demonstrate corporate leadership

- Align with customer demands for more environmentally conscious products and services.

Recognition for your business

- Tenant Space recognition at the fall York Region Sustainability Awards 2022 and 2023.

* The ES Tenant Space program is being adapted by NRCan to the Canadian version of ESPM. In the interim, ClimateWise Building Challenge recognition is available.

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Webinar series to learn more

Wed, Sept 7 – 3-4pm:

Green retrofits that your Business can consider

Wed, Oct 5 – 3-4pm:

Recognizing how Tenants contribute to sustainability of their buildings

Wed, Nov 2 – 3-4pm:

Innovative Building solutions for your energy s



Our Participants



Commercial Leaders:



Municipal Leaders:



Join the Challenge!



If we all work together, we can meet this challenge...

So join the ClimateWise Challenge and let's get started !



[ClimateWise Building Challenge | Registration \(windfallcentre.ca\)](http://windfallcentre.ca)

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Questions



Resource slides with more details



1. Set Sustainability Objective or Intent



In a preamble or as a general clause, the common objectives of the parties are explicitly provided. These are either drafted as aspirational or binding clauses; they may be incorporated in the main lease agreement or attached as schedules; they may refer to third-party certification or be drawn from common objectives set out and agreed upon by the parties.

Example Green Lease Clause:

LEED® Certification/Equivalent: **The Landlord shall design renovate and operate the Building with the intent of encouraging and promoting the implementation of certain environmental objectives on the part of both the Landlord and Tenant through such programs as BOMA BEST (Building Environmental Standards) and targeting a LEED® Silver certification for the Building core and shell. Such objectives may include, but are not limited to: reduced**

energy consumption (electricity and natural gas) and reduced production (direct and indirect) of greenhouse gases, reduced use of potable water, effective diversion of landfill waste streams and recycling of Tenant waste streams, providing indoor bicycle parking and shower facilities for Tenant's employees, and the avoidance of... and within t

The Landlo achieve suc circumstanc

The Landlord and Tenant, acting reasonably and in good faith, shall use reasonable commercial efforts to achieve such environmental objectives and constructively consult with each other on issues, events and circumstances likely to detract from achieving such objectives.

The Landlord shall use commercially reasonable efforts and will diligently pursue LEED® certification for the Building core and shell. The costs to pursue LEED® certification for the Building core shall be to Landlord's account.

2. Recover Capital Costs Through Operating Costs



A net lease should provide provisions to recover the capital costs of any investment into sustainability and/or energy efficiency initiatives. A gross lease has a built in incentive for the Landlord to reduce operational costs which can be accomplished through sustainability efficiency measures.

Example Green Lease Clause:

"Operating Costs" means the total amounts incurred, paid or payable by the Landlord or by others on behalf of the Landlord in operating, administering, maintaining in good repair and operating condition the Shopping Centre including, without limiting the generality of the foregoing and without duplication, the aggregate of the following costs and expenses:

the cost of energy conservation equipment, and all other fixtures, equipment and facilities that are added for the greater comfort and convenience of the public or the tenants, and the cost of repairs (including major repairs) and replacements to, and maintenance and operation of the Shopping Centre, and the Common Area and Facilities, and the systems, facilities and equipment serving the Shopping Centre and the Common Area

the greater comfort and convenience of the public or the tenants, and the cost of repairs (including major repairs) and replacements to, and maintenance and operation of the Shopping Centre, and the Common Area and Facilities, and the systems, facilities and equipment serving the Shopping Centre and the Common Area and Facilities (including, but not limited to, escalators, elevators, and other transportation equipment and systems, but excluding the heating, ventilating and air-conditioning systems serving the Common Area and Facilities and Leasable Premises), except for the cost of repairing any inherent structural defects or weaknesses;

3. Use Restrictions



Use clauses need to be considered by the landlord in order to ensure that the lease prohibits any uses that may compromise environmental performance standards or the building's certification standard. For instance, certain uses may require greater consumption of energy and water than others or could jeopardize indoor air quality.

Example Green Lease Clause:

10.3 Nuisance, constitute waste, nuisance or unreasonable annoyance to Landlord or other tenants of the Building. Tenant shall not use or operate the Premises in any manner that will cause the Building or any part thereof not to conform with Landlord's sustainability practices or the certification of the Building issued pursuant to any Third Party Sustainability Standard applicable to the Building at any time as determined by Landlord.

Tenant shall not use or occupy the Premises for any unlawful purpose or in any manner that will constitute waste, nuisance or unreasonable annoyance to Landlord or other tenants of the Building. Tenant shall not use or operate the Premises in any manner that will cause the Building or any part thereof not to conform with Landlord's sustainability practices or the certification of the Building issued pursuant to any Third Party Sustainability Standard applicable to the Building at any time as determined by Landlord.

4. Monitoring And Reporting Requirements



As green leases are essentially intended to ensure that green buildings are continuously operated and maintained in a way that maintains their green features, monitoring and reporting provisions are key. Provisions are usually focused on authorization to install monitoring devices within leased spaces and the ability for both parties to share data while respecting and complementing confidentiality clauses.

Example Green Lease Clause:

The Tenant will comply with all Applicable Laws pertaining to waste management and reduction in connection with the Premises and the Tenant's conduct of business. The Tenant will also co-operate with the Landlord by providing any documents and other information and doing whatever else is reasonably requested by the Landlord in order to reduce and manage waste. If responsibility for any waste related

Section 9.04 Waste Management

The Tenant will comply with all Applicable Laws pertaining to waste management and reduction in connection with the Premises and the Tenant's conduct of business. The Tenant will also co-operate with the Landlord by providing any documents and other information and doing whatever else is reasonably requested by the Landlord in order to reduce and manage waste. If responsibility for any waste related matters is imposed by Applicable Laws, on both parties to the Lease and/or third parties, the Landlord may give notice to the Tenant particularizing the responsibilities which the Tenant will assume.

Additional Considerations

Green lease provisions may interact with the lease clauses identified below. The interactions need to be understood and considered during the lease negotiation.

- **Prescriptive Elements for Tenant Improvements, Alterations, and Repairs:** Applicable if Epic has a Tenant Design Criteria Manual which specifies green requirements around products, materials, water efficiency, energy efficiency, healthy interiors, and construction processes.
- **Assignment and Subletting Requirements:** It is important to ensure that the assignee's or sub-lessee's operations will not compromise the sustainability objectives set forth in the lease.
- **Default, Remedies and Dispute Resolution Mechanisms:** It is important to consider the extent and seriousness of commitments to sustainability objectives may vary, clauses addressing a failure to comply with these objectives should vary accordingly and reflect the proper level of commitment as set out in the lease.