





Building Intelligence with Submetering Solutions    

# Easier, more accurate allocations for shared utilities in multi-use buildings

## MAIN BENEFITS OF A SHARED UTILITY METERING SYSTEM:

-  Proper utility allocations lessen risk for building owner/manager
-  Accurate utility measurements – even with different meter systems
-  Use existing equipment where possible
-  An automated system where data can be collected, analyzed and billed remotely using web-based software



Common areas, such as parkades, lobbies and central plants can result in shared utility services between buildings, tenants and other stakeholders. By deploying a QMC-designed Shared Services Metering System, multi-use properties are able to fairly allocate energy use and avoid costly disputes and legal action.

The allocations and reimbursement of shared utility costs has historically been done using square footage calculations or other fixed methods. These calculations are often inaccurate, outdated and unfair for several parties. With the increasing costs of utilities, it has become essential for new and existing properties to properly designate shared utility use. Doing so also ensures the property developers and managers avoid any immediate or future legal action related to unfair utility billing.

**Advanced metering equipment and energy reporting software are cost effective tools for isolating and allocating shared utility use. QMC has designed and deployed numerous shared utility metering systems (SUMS) across Canada over the past 10 years.**

# Fairly Allocate Utility Consumption with SUMS

The key to a successful SUMS deployment is the initial site audit, conducted by QMC, the property management team and the property's preferred contractors and/or engineers. The electricity, water, gas, and central plant distribution is mapped to ensure the correct meter locations are identified and the correct meter sizes specified. Existing utility meters are identified and integrated into the new system. New metering is added where needed and all meters are commissioned to ensure manufacturer acceptance and regulatory compliance (Measurement Canada). Lastly, all meters are automated so data can be collected, analyzed and billed remotely on a web-based software.

## CASE STUDY

### The Challenge:

QMC was invited by a property management customer to review a meter system at a recently built multi-use property. The property consisted of a luxury hotel, retailers, restaurants and high-rise condominiums. The property had one main electrical, gas and water feed from each of the local utilities and needed a way to isolate utilities for their own direct use and to allocate the utilities within commonly used areas, such as the parkade and central plant.

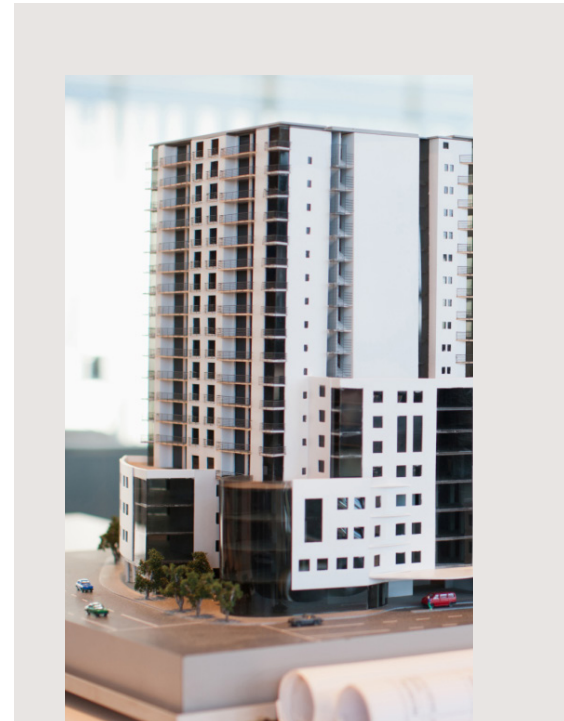
### The Scope:

Our property had electricity, gas, water and thermal energy meters installed during and after the construction phase, which were to be integrated with the building automation system. Unfortunately, the meters were supplied and installed with inconsistent communications options, non-revenue grade accuracy levels and with little or no supporting documentation. Many of the meters were insertion type, which are not recommended for billing purposes. The meters were never successfully integrated with the BAS. For years, accounting and operations could not accurately produce bills to allocate energy use amongst the stakeholders.

### QMC's Solution:

The first task was to complete an audit of the existing meter system and the utility distribution. Recommendations were made to bring all meters up to revenue grade quality, including ensuring that all gas and electricity meters met Measurement Canada standards. Existing revenue grade meters were modified to allow for easy connection to open-protocol data loggers. New meters were added to better isolate and allocate utility use to each occupant. All metering devices were connected to the MeterConnex™ platform for centralized data collection and monitoring.

All our client's meters now communicate to a few data loggers on-site, which 'push' interval meter data to QMC's MeterConnex™ web-based software. The property management team accesses the meter data on-line to produce bills and energy reports.



By deploying a Shared Utility Metering System with QMC, multi-use properties are able to fairly allocate energy use amongst stakeholders and avoid costly disputes and legal actions.



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