



Quwa Smart Services
ENGINEERING & ENERGY

COMPANY PROFILE • 2026

Engineering that measures what it claims.

Energy management, building optimization,
decarbonization and clean technology for commercial,
multi-residential, institutional and industrial facilities.

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WHO WE ARE

Most buildings don't need new equipment.

They need the equipment they already have to run the sequences it was designed for. Quwa Smart Services is an engineering consultancy that finds the difference, quantifies it, and verifies that fixing it worked.

Turnkey, not hand-off

We guide projects from initial assessment and energy modelling through design-ready recommendations, funding alignment, implementation support, and measurement and verification. The people who audit the building are the people who sign the verification report.

Fundable, not theoretical

We deliver technically rigorous solutions grounded in real operating and capital constraints, and we build the business case in the format the funder actually scores. A quarter of the buildings we assess go on to secure retrofit funding.



A penthouse chiller plant found running both machines at 100% around the clock, at any load. The finding that reframed an entire engagement.

“We would rather be right than optimistic. Every savings figure we publish carries its uncertainty beside it — that is what makes it a measurement rather than a claim.”

WHAT WE DO

Eight capabilities, one accountable team.

Audit, design, implementation oversight and verification come from the same people — nothing is lost in the handoff between the study that recommended the work and the work itself.

01

Energy Management

ASHRAE Level I–III energy audits, whole-building energy modelling, utility analysis, benchmarking and performance tracking.

02

Building Optimization

Existing and enhanced building commissioning, BAS sequence review and reprogramming, sensor calibration and continuous commissioning.

03

Demand Response

IESO Save on Energy Peak Performance aggregation delivered through our own Q-Peak platform — forecasting, dispatch, measurement and settlement.

04

Engineering Design

Mechanical and electrical engineering for retrofits, from feasibility and concept through tender documentation and construction support.

05

Energy Modeling

Whole-building simulation for new construction and retrofit, calibrated against metered data wherever it exists.

06

Renewable Energy

Solar PV, battery storage and hybrid system feasibility and design, including interconnection and utility coordination.

07

Project Management

Program and project management for energy efficiency and decarbonization projects, including grant and incentive application support.

08

Building Assessments

Building condition assessments supporting asset management, risk mitigation and reserve fund planning.

PROVEN IMPACT

Twenty years, 350 buildings.

20+ years

Of combined experience in energy systems, renewables and decarbonization, led by a credentialed team.

10M+ sq ft

Assessed through energy, carbon and performance studies.

\$7M+

In grants and incentives secured through integrated technical and funding strategies.

16+ MW

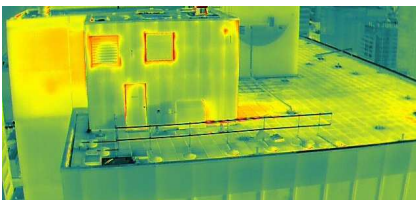
Of renewable energy supported, including solar PV design and grid integration.

250+

Commercial buildings studied — building condition assessments, ASHRAE Level I–III audits, reserve fund analyses and energy modelling.

100+

Multi-residential buildings studied across co-operative, non-profit and affordable housing portfolios.



Drone thermal survey



Clamp-on ultrasonic flow



Boiler tubesheet, opened

A quarter of them secured retrofit funding.

That is the step which turns a study into a project, and it is the reason we treat the funding application as part of the engineering rather than something that happens afterwards.

HOW WE WORK

Measure first. Always.

There is a structural bias in this industry toward capital projects. We look for the setpoint before the equipment, because you cannot size a capital project inside a building whose controls are lying to you.

01

Measure

Clamp-on instruments, temperature loggers and twelve months of utility data. Nothing cut, nothing drilled, and no capital request to find out what is actually happening.

02

Diagnose

Find the gap between design intent and how the building actually runs. It is usually a sequence, a schedule or a sensor — not a machine at the end of its life.

03

Quantify & fund

Energy, carbon and cost, in the format the funder actually scores, with the business case built alongside the engineering.

04

Verify

Savings confirmed under IPMVP against a fitted baseline, with the confidence interval published beside the headline number.

NATION - WIDE

Coast to coast.

Fourteen cities across British Columbia, Alberta, Ontario and Quebec — office towers, retail plazas, housing co-operatives, manufacturing plants and data centres.



SELECTED PROJECT EXPERIENCE

Commercial, retail & institutional.



Rooftop unit survey, Hamilton — the existing fleet assessed unit by unit against replacement heat pump options.

Aspen Properties — 444 5th Avenue SW

Calgary, AB

ASHRAE Level III audit, followed by recommissioning, building envelope analysis, chiller plant assessment and mechanical engineering design.

ASHRAE Level III

Recommissioning

Drone thermography

IPMVP Option C

JLL — 14 William Sylvester Drive

North York, ON

BOMA Enspire Phase II recommissioning and BAS optimization across seventeen fan coil units, found running 53% above benchmark energy intensity with 17 of 21 zones outside their comfort band.

BOMA Phase II

Whole building optimization

BAS analysis

No capital in P0/P1

Office and commercial assets

Toronto, ON

ASHRAE Level II audits, building optimization studies and enhanced commissioning across office buildings and commercial plazas.

ASHRAE Level II

EBCx

Portfolio

Gateway Group — retail building

Hamilton, ON

Rooftop unit heat pump replacement study and building controls optimization, delivered as a business case for capital replacement of an ageing RTU fleet.

RTU heat pumps

Controls

Business case

SELECTED PROJECT EXPERIENCE

Multi-residential & affordable housing.



Fouled fire-tube boiler in a housing co-operative plant. Deferred maintenance shows up as fuel before it shows up as a breakdown.

Toronto Community Housing Corporation

Toronto, ON

Portfolio-wide ASHRAE Level II and III energy audits across approximately twenty buildings, including energy modelling and identification of energy and greenhouse gas reduction measures.

~20 buildings

ASHRAE II & III

Energy modelling

Maurice Coulter Housing Co-operative

Toronto, ON

CMHC-supported deep energy retrofit: ASHRAE Level III audit, energy modelling, building condition assessment, engineering design and project management. Targeting more than 70% energy reduction and more than 90% GHG reduction.

Deep retrofit

CMHC

BCA

Design

Affordable housing portfolios

Across Canada

Building condition assessments, ASHRAE Level III audits, hybrid heat pump design, energy modelling and funding support for co-operative and non-profit portfolios.

BCA

Hybrid heat pumps

Funding

SELECTED PROJECT EXPERIENCE

Industrial & renewable.



Distribution pumping in a continuously operating facility. Optimization has to fit around production.

Ventura Foods — food processing facility

Industrial

Building optimization and enhanced commissioning to improve system performance in a continuously operating process facility.

Process facility

EBCx

PROMPT Assembly & Packaging

Manufacturing & warehouse

ASHRAE energy audit, renewable solar study and building optimization.

Energy audit

Solar study

Utility-scale solar PV

Multiple sites

Project management and EPC decision support for more than 16 MWp of solar power installations, including grid integration.

16+ MWp

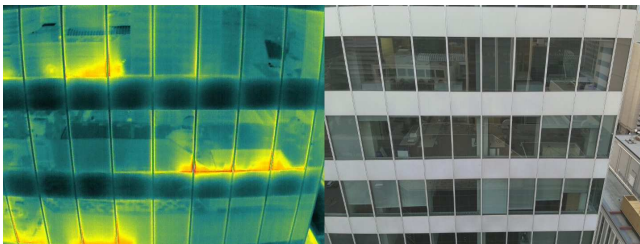
EPC support

CASE STUDY • BOMA PHASE II

444 5th Avenue SW Calgary, Alberta

A 23-storey office tower built in 1972, 15,335 m², assessed for Aspen Properties across five studies: envelope thermography, chiller plant performance, building optimization, monitoring systems and a full measurement and verification plan.

1.54 GJ/m² Energy use intensity, 24% above target	~1.0 Measured chiller COP against a 5.0–6.0 benchmark	5,522 GJ Projected annual savings across eight measures	25 % Of total baseline energy consumption
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Infrared beside visible light — thermal bridging at the slab edges.



Portable instrumentation deployed alongside the BAS.

What we found

- ✓ An outdoor air sensor frozen at 24 °C, disabling every weather-responsive sequence
- ✓ An air handler cooling supply air to 5 °C in August while floors below reheated it
- ✓ Both chillers and all pumps running at 100% around the clock, at any load
- ✓ Boilers holding 69 °C through a Calgary summer with no demand to serve
- ✓ Continuous thermal bridging at slab edges, visible only under drone thermography

What we recommended

- ✓ Six optimization measures, five of them controls work rather than capital
- ✓ Maintenance and staging corrections before any chiller replacement is evaluated
- ✓ Envelope package assessed at 8–12% of HVAC load
- ✓ Eight energy efficiency measures under IPMVP Option C verification
- ✓ Portfolio rollout under BOMA Ensire Retrofit Ready at 80% funding

Published with the client's agreement. Commercial terms, capital costs and payback figures are omitted. Energy, intensity, uncertainty and carbon figures are reproduced as assessed.

CASE STUDY · BOMA ENSPIRE PHASE II

The building that was fighting itself.

14 William Sylvester Drive, North York — a six-storey mixed-use commercial building managed by JLL, with restaurants and retail beneath five levels of open-sided parking. Seventeen fan coil units, each with its own condenser. In the trend logs, a building spending most of its energy undoing its own work.

1.964 GJ/m² Baseline intensity against a 1.28 benchmark	53 % Above benchmark for comparable space	17 of 21 Zones outside their comfort band	12 of 17 Compressors replaced in eight years
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17 of 21 zones outside their comfort band



Built from the trend logs rather than photography — every zone is one bar, shaded where it sat outside its comfort band.

The diagnosis

- ✓ Thermostats mounted in the ceiling plenum, reading warmer than the occupied space
- ✓ Fan coils delivering 27.5 °C air with the heating valve commanded fully closed
- ✓ CO₂ sensors trending with no corresponding damper response anywhere in the logs
- ✓ Fans commanded on with status reading off — and no alarm configured to catch it

The programme

- ✓ **P0, same day** — clear overrides, repair command/status mismatches, valve tests
- ✓ **P1, one to three days** — calibrate CO₂, test dampers, tune deadbands
- ✓ **P2, one to two weeks** — relocate thermostats, clean condensers, verify piping
- ✓ Two of the three waves require no capital at all

10–20% of utility consumption within the first billing cycles.

Commercial terms, capital costs and payback figures are omitted. Energy, intensity and comfort figures are reproduced as assessed.



08 • OUR PLATFORM

Q-Peak.

The same plant that wastes energy all summer is a grid asset on a peak afternoon. Q-Peak is our aggregator platform for the IESO Save on Energy Peak Performance Program.

Enrol the load

Every curtailable asset is audited and entered with its own kW, strategy and constraints. That register is what gets registered with the LDC and the IESO.

Forecast and dispatch

A peak-risk outlook flags the days that matter. Standby notices go out the day before, so operators have the afternoon to prepare rather than react.

Build the baseline

Fifteen-minute interval data regressed against outdoor temperature using the IESO demand response methodology. This curve is what every payment is measured against.

Prove and settle

Per-event and per-season settlement with the owner share applied and the underlying intervals attached as evidence.

Aggregation is what makes a reduction saleable. A single building's curtailment is lumpy and its baseline noisy; a portfolio's is neither. Everything required to participate — instrumentation, working controls, defensible data — is work that lowers the operating bill whether or not a single event is ever dispatched.

qpeak.quwaservices.com

TRUSTED BY

Who we work for.

Owners, managers and institutions across commercial real estate, banking, retail, industrial and multi-residential portfolios.



Industry presence

Data Center World, 2025.

We are at most BOMA, AEE and building performance events across Ontario and beyond, in the same rooms as the owners, operators and program administrators we work with.

CREDENTIALS & STANDARDS

Someone else can check our arithmetic.

That is the point of working to a published standard. Our work is delivered by a multidisciplinary team operating within recognized professional, technical and industry frameworks.

Designations

- ✓ Licensed Professional Engineers (P.Eng.)
- ✓ Certified Energy Managers (CEM)
- ✓ Certified Measurement & Verification Professionals (CMVP)
- ✓ Project Management Professionals (PMP)
- ✓ Advanced Building Commissioning (EBCx)
- ✓ LEED Accredited Professionals
- ✓ WiredScore SmartScore Accredited Professionals

Frameworks

ASHRAE Level I–III

Energy audit scope, from walk-through survey to investment-grade analysis, with measurement depth matched to the size of the decision.

IPMVP

Options A through D for savings verification. We state which option we are using, why, and what its uncertainty is.

ASHRAE Guideline 14

Statistical requirements for baseline models — R^2 , CV(RMSE) and NMBE limits a fitted model must clear before we build a savings claim on it.

BOMA BEST & Enspire

Phase I and II building performance assessment, and Retrofit Ready funding streams under NRCAN's Deep Retrofit Accelerator Initiative.

IESO Save on Energy

Peak Performance Program aggregation, delivered through Q-Peak.

CMHC

Deep energy retrofit programs for co-operative and non-profit housing.



Quwa Smart Services
ENGINEERING & ENERGY

10 • CONTACT

Bring us a building you have questions about.

Twelve months of utility bills and an afternoon in the mechanical room is usually enough to tell whether a building has a capital problem or a controls problem. They are very different budgets.

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