Daniel Dicaire

P.Eng, C.E.M., C.M.V.P. WELL AP

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CERTIFICATION

AEE Certified
Energy Manager

AEE Certified
Measurement
and Verification
Professional

WELL Accredited Professional

Professional Engineers Ontario

Canadian Passive House Institute: Passive House Designer Course

EDUCATION

M.A.Sc. Chemical Engineering, Solar Thermal Energy Storage, University of Ottawa -2008-2010

B.A.Sc. Chemical Engineering,

Environmental
Engineering
Specialization,
summa cum laude,
University of
Ottawa - 2003-2007

Entrepreneurship Edge - OCRI 2009

PUBLICATIONS

"Wireless Heating Management System and Tenant Usage Behavior in Bulk-Metered Apartment Buildings: A Case Study" ASHREA (Jan 2017)

"Save Energy and Extend Building Life— Window and Balcony Door Replacements" CMHC (Dec 2016)

LANGUAGES

English (Fluent) French (Fluent)

AWARDS

Ottawa
Community
Housing Net-Zero
PEER Pilot Clean50 Top
Project 2022

2020 Young
Energy
Professional of
the Year for
Canada Association of
Energy Engineers

Clean50 Emerging Leaders Award 2016

Relevant Work Experience

Manager, Energy & Sustainability, Ottawa Community Housing (OCH), Mar. 2018 – Present

OCH 2040 Climate Change Compliance Plan (for existing buildings)

- Analyzing utility and greenhouse gas (GHG) inventory of 17M sqft portfolio on annual basis
- Developing portfolio compliance strategy to meet net-zero GHG emissions by 2040
- Developing capital strategy to achieve 25% GHG (7,800 tons) & utility reduction targets
- Applying to CMHC to secure \$220M of funding for the next 8 years of capital planning
- Developing strategy for \$750M of funding to address 75% (22,000 tons) of emissions

OCH Sustainable Development Plan (for new buildings)

- Developed guiding principles of sustainability for OCH's developments, including Passive House standard, WELL Building Standard, and Zero Carbon Standard
- Managing implementation of sustainability standards during concept design, design development, and construction phases
- Managed sustainability standards and Passive House requirements for:
 - o 1290 Coldrey (WELL Standard) 40,000 sqft
 - o 811 Gladstone 130,000 sft
 - o 715 Mikinak (CaGBC Zero Carbon w/ campus district utility) 300,000 sqft
 - o In design 818 Gladstone (campus district utility) 250,000 sqft
 - o In design 933 Gladstone (district energy system) 350,000 sqft

Presland Net-Zero Energy Retrofit

- Lead research project with NRCan to retrofit a 4 unit block of townhomes to net-zero energy and GHG emissions. Foundation, exterior walls and roof were over-cladded with prefabricated insulated panels to achieve EnerPHit retrofit standard
- Managed mechanical contractors to retrofit natural gas equipment with air-source heat-pumps
- Time Lapse Video of Project: 211110 Final Timelapse with Energuide.mp4
- Managed electrical contractor to upgrade system and install 34.8 kW solar PV array.

Energy & Sustainability Officer, Ottawa Community Housing – June 2010 – Mar. 2018

OCH Sustainability Framework

- Developed and lead the implementation of OCH's Green Plan (2011-2015) and OCH's Eco2Plan
- Managed the Green Fund annual plan and budget, which has grown from \$1M (2010) to over \$5M (2018), while providing \$1-\$2M of annual endowment for various sustainability initiatives
- Secured over \$14M of grants, incentives, and in-kind work
- Supported Capital Planning with additional applications for over \$35M of grants (REI, SHARP, SHAIP)
- Managed sustainability projects leading to over \$45M of cumulative utility savings

Implementation of OCH's Utility Management System (Energy Cap)

- Lead implementation of EnergyCap to manage OCH's \$23M of annual utility costs
- Implemented a bill import automation process for over 7,000 monthly utility bills that were previously manually entered
- Facilitated an interdepartmental team (Tenant Services, IT, Finance, Asset Management) to develop a scope of work and tender documents

Implementation of Renewable Energy Initiative 500kW of solar photovoltaic generation

- Lead the restructuring of OCH's Renewable Energy Initiative project and secured \$3.7M of funding
- Supported and coached the project managers throughout the implementation of 300 kW of solar array across 32 sites
- Partnered with HydroOttawa and SPARQ to have 200kW of solar arrays donated and managed the implementation across 3 sites
- Developed and implemented ongoing monitoring and maintenance for \$4.5M of solar assets, which generate over \$350K of revenue annually

Portfolio-wide in-suite plumbing retrofit (15,000 units)

- Coordinated implementation of the retrofit in over 15,000 units and ensured all parts were recycled
- Developed maintenance and warranty protocols across multiple districts for 10 years of free parts
- Reduced OCH's water consumption by 40% by retrofitting plumbing fixtures: 1.6M m³ of water annually (approx. \$6M)

Portfolio-wide LED lighting retrofit

- Identified hazardous chemical risk and improper disposal practices that were a liability for OCH
- Planned multi-year roll-out and managed installation schedule of 30,000 fixtures
- Developed maintenance and warranty protocols across multiple districts for 5 years of free parts
 - Reduced consumption by 4.6 GWh of electricity saved annually (approx. \$600,000)

Recent Conference Presentation Experience

- Canadian Consulting Engineering Better Buildings PodCast: Prefabricated Panels for Energy-Efficient Building Envelopes
- Net-Zero and Deep Energy Retrofits in Community Housing Federation of Canadian Municipalities - 2020 Sustainable Communities Conference
- The Passive House Path to Affordability
 Ontario Not-For-Profit Housing Association 2019 Regeneration Forum
- Energy Efficiency Strategy for New Social Housing (Re)Developments
 Association of Energy Engineers 2019 World Energy Engineering Congress

Leadership, Collaboration, and Team Building Experience

- Energy Management Program Advisory Committee (PAC) at Algonquin College Centre for Construction Excellence (ACCE)
- Chief Returning Officer, Civic Institute of Professional Personnel; 2016-2018
- Joint Health and Safety Representative, Civic Institute of Professional Personnel, 2015-2018