

Eamon Murphy

SUSTAINABILITY FOCUSED ENGINEER

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ABOUT

I'm an Energy Analyst for commercial buildings with a background in Civil Engineering. I work with sustainable commercial real estate leaders, as ranked by the Global Real Estate Sustainability Benchmark, to streamline building performance and sustainability utility data management. I am passionate about sustainability and am looking to deepen my knowledge and expertise in circular and sustainable synergies.

EDUCATION

Bachelors of Civil Engineering [B.Eng]

University of Victoria – *Victoria B.C., Canada* SEPTEMBER 2013 - OCTOBER 2018

The University of Victoria's Civil Engineering program is designed to be Canada's greenest civil engineering program. During my degree, I studied a wide variety of sustainability topics, including Resilient Smart Cities, Sustainable Transportation, Building Energy Simulation, and Green Building Design. I also held advisory roles within the Canadian Society for Civil Engineering – University of Victoria chapter, played soccer on various teams, and provided photography for clubs on campus.

PUBLICATIONS

I co-authored a research paper during my undergrad for the International Building Performance Simulation Association Rome 2019 conference, enabling building operators to better predict HVAC system energy demands and correspondingly reduce consumption. http://www.ibpsa.org/proceedings/BS2019/BS2019_211236.pdf

PROFESSIONAL EXPERIENCE

Energy Profiles Limited

Energy Analyst – *Vancouver B.C., Canada* JULY 2019 - PRESENT

Energy Profiles Limited [EPL] provides custom Energy Management Information Systems and Reporting and Sustainability Data management for an aggregate commercial portfolio in excess of 7,000 properties and \$1 billion in annual utility costs. EPL's clients collectively consume over 2% of Canada's electricity budget annually. I work directly with clients to help achieve sustainability goals and drive quantifiable reductions in utility use at a building and portfolio level. Notable projects include:

- ASHRAE Level II Energy Audit, outlining measures with \$50,000+ in annual utility savings;
- GHG inventory analysis, including quantifying GHG emission impacts as a result of the COVID-19 Pandemic;
- Building portfolio target setting performance reports, detailing trends in utility consumption and GHG emissions for hundreds of commercial properties across Canada and the United States;
- Applications for green building certifications such as LEED, BOMA BEST, and ENERGY STAR.

Operto [Formerly: Slickspaces] + EDGE Sustainability

Project Engineer – *Vancouver B.C., Canada* SEPTEMBER - DECEMBER 2017

- Worked directly with the CEO of two award winning, Vancouver based startups to increase security and energy efficiency for the home rental market across North America by leveraging IOT connected devices ranging from thermostats to smart locks with a custom backend.
- Held a multifaceted role where I provided; engineering support for IOT technologies within a LEED context, B2B advertising in trade shows, web design, front end development, and provided input on product direction and future capabilities.

Ministry of Community, Sport, and Cultural Development

Infrastructure Grant Analyst – *Victoria B.C., Canada* JANUARY - APRIL 2017

- Created a custom Excel macro to review over 200 sustainable infrastructure grant funding applications by analyzing thousands of proponent responses with an emphasis on visual analytics.
- Reviewed and approved progress reports for over 50 active projects across B.C., demonstrating effective project management abilities.

LANGUAGES

English

Native, advanced technical writing proficiency

French

Professional working proficiency

Spanish

Limited working proficiency

CITIZENSHIP

Irish & Canadian

ASSOCIATIONS

Emerging Green

Professional CANADA GREEN BUILDING COUNCIL

Engineer in Training

ENGINEERS AND GEOSCIENTISTS BC

- Reviewed over 30 municipal grant applications for the Clean Water and Wastewater Fund and provided technical feedback on these applications.

Indigenous and Northern Affairs Canada

Capital Project Engineering Student – *Whitehorse, Y.T., Canada* MAY - AUGUST 2016

- Reviewed asset condition and water quality reports from remote First Nations in the Yukon to ensure water quality was within Federal guidelines.
- Networked with several First Nations to ensure timely progression of civil engineering projects including; road resurfacing, housing stock development, septic field replacements, domestic waste collection, and riprap installation.
- Summarized bids and helped to award a contract for a major \$3M+ capital project.
- Provided comments on technical designs for 2 proposed water treatment facilities in First Nations in the Yukon.
- Remunerated a remote First Nations community. I created detailed GIS maps which allowed the community to have a standardized address system. This greatly simplified emergency service understanding of the community and mail delivery.

SOFTWARE

I am easily able to learn new digital tools and software and enjoy coding and technical programs. I have experience with; Microsoft Office Suite, Google Workspace, Adobe Photoshop & Lightroom, OpenStudio, EnergyPlus, Sketchup, AutoCAD Civil 3D, ArcGIS, Google Earth Pro, QGIS, SYNCRO, AutoCad Autoturn, MATLAB, R, Python, SQL, HTML, CSS.

KEY PROJECTS

Light House Sustainability NOVEMBER 2020

I contributed to a calculator allowing B.C. residents to quickly and easily estimate their carbon footprint when considering purchasing or renting a new home. Accounting for; housing type, size, vintage, heating fuels, commute distance and mode. The final results are compared against provincial averages and previously entered values allowing for high level decisions to be made.

Machine Learning HVAC Optimization AUGUST 2018

I researched machine learning and advanced statistical methods to accurately predict future HVAC demand profiles thereby reducing HVAC energy consumption for a large office building in Victoria B.C., using a dataset comprised of 2,100 timeseries spanning several years at sub-hourly resolution. This project gave me experience analyzing big data in Python within a sustainable building science context. I worked with support from the Energy Systems and Sustainable Cities research team based at the University of Victoria.

Capstone Project MAY 2018

I have Academic/Industry experience working on a capstone project detailing extensive renovations to a Department of Fisheries owned Lighthouse Station. Our team produced a design which included; a resilience analysis for climate change impacts and earthquakes, a 100% renewable power micro-grid design using solar, wind, and wave energy systems, and extensive energy focused renovations to on-site residences. Deliverables included a final report, monthly progress updates, and a final presentation to a panel of industry judges.

EXTRACURRICULAR ACTIVITIES

Hiking

Completed various multi-day backpacking trips including; The West Coast trail and the Juan de Fuca trail (Vancouver Island), Hiking to numerous (10+) Alpine Club of Canada huts located in the Rocky Mountains, Camino of Santiago de Compostela (Northern Spain), The Grand Canyon (Arizona, U.S.) , The Chilkoot Trail (Yukon and Alaska), Tombstone Territorial Park (Yukon), Kluane National Park and Reserve (Yukon)

Traveling

Explored many different cultures and countries including; Portugal, Spain, France, Monaco, Italy, Greece, Hungary, Slovakia, Czech Republic, Austria, Germany, Belgium, The Netherlands, Switzerland, The United Kingdom, Ireland, Panama, Costa Rica, Bolivia, México, Nicaragua, El Salvador, Belize, Aruba, Guatemala, The United States, Singapore, Indonesia, New Zealand, Cuba, as well as extensive travel within Canada.

Photography

Accomplished photographer with images appearing in; ELLE Canada Magazine, CBC Weather Network, Awesome Okanagan, Travel Yukon's Instagram, and several self-published photo books.