How energy intensive is your advanced education institution?

Compare with others in British Columbia

8TH ANNUAL PUMA **BENCHMARKING SUMMARY**

For BC Advanced Education: 2020 Calendar Year

PUMA™

PUMA Utility Monitoring Inc.

Scope

The sites included in the benchmarks are from the following BC Advanced Education Institutions that subscribed to monthly PUMA utility monitoring software & services during the calendar year 2020.

About PUMA

PUMA comprises a combination of software and services that track over 23,000 electrical, natural gas, water, and other fuel accounts for government, commercial, and institutional customers. Since launching online in 2009, more and more organizations have enlisted PUMA to help track and analyze building energy use.

PUMA is currently used by over 20 Energy Managers, and more than 50 organizations across Canada. Our utility tracking software and services save time and money for owners of multiple properties by turning data into actionable information.

About this Report

Each year the PUMA team puts together a benchmarking report for school districts, advanced education and municipalities.
Based on compiled data from PUMA, this report enables the comparison of similar sites across each sector.

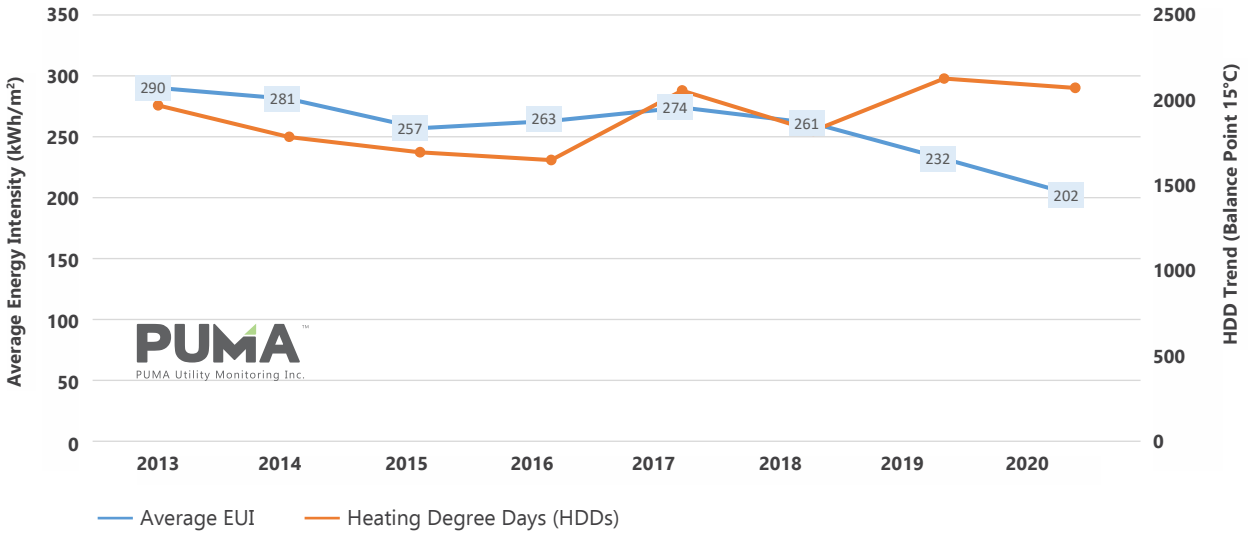
www.pumautilitymonitoring.ca

COVID-19 and 2020 Benchmarks

No benchmarking report for 2020 would be complete without addressing the serious changes to energy use in buildings because of changes in our collective behaviour during the COVID-19 pandemic. We have been quantifying these changes as they unfolded to help our clients understand both increases and decreases in energy use. We presented to a Canadian audience in April on how our techniques can reveal the scale of changes, which you can view online at this link: https://www.pumautilitymonitoring.ca/news-2021/may

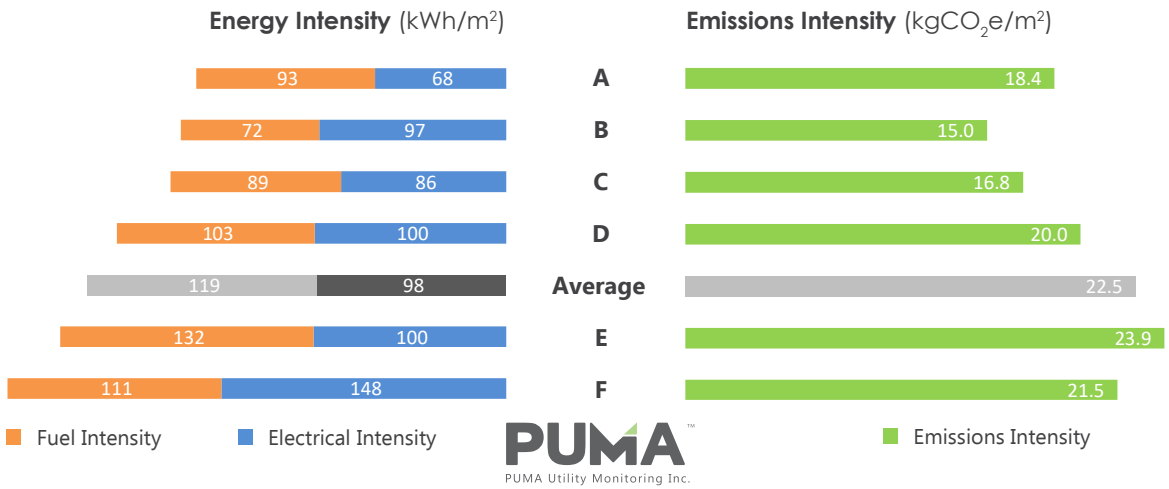
Since **benchmarking compares buildings during the same time period,** and the changes in behaviour largely took effect at the same time across the sample area – British Columbia – **the comparison between how buildings performed remains valid**. Comparisons with prior years are more problematic due to the variability of the weather. However, with the big changes we have all experienced in 2020, the history of average performance provides some important context and is shown below for the sector:

Advanced Education Energy Use Intensity (EUI) Trend Over 8 Years



Plotting the EUIs from each year of the benchmarking report, we see an overall 'positive' downward trend in EUI in the face of relatively constant HDDs.

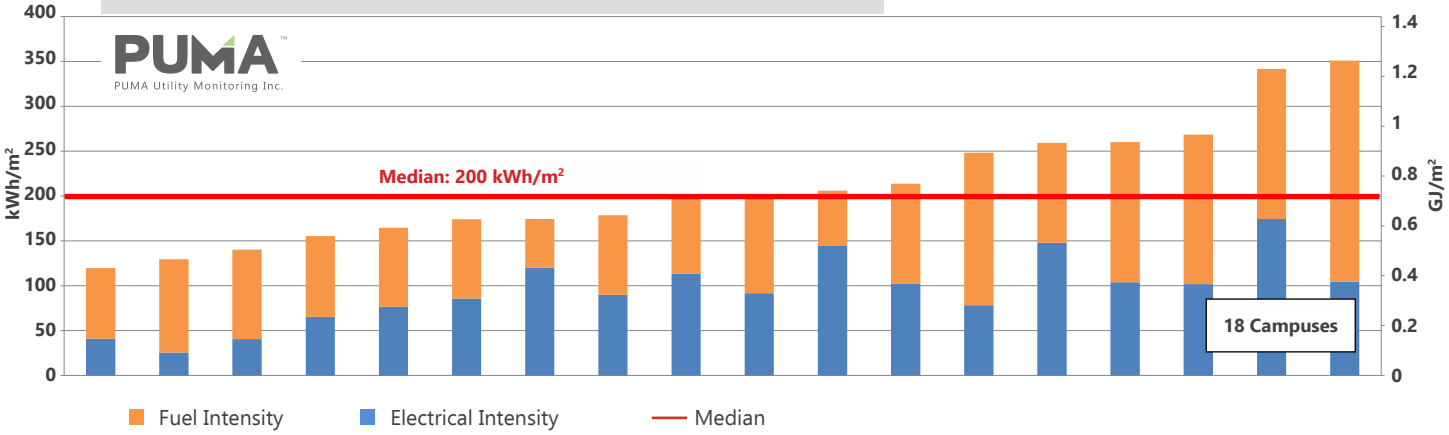
How **energy intensive** is your institution?



For 6 BC Institutions - Calendar Year 2020

BC Campuses EUI Calendar Year 2020

Electrical median is 100 kWh/m² and fuel median is 102 kWh/m².



Although four buildings at Selkirk College are in a colder climactic zone than the other five institutions around Coastal BC, the Selkirk college buildings are not the most energy intensive buildings in our sample. Since the sample size would be that much smaller without these buildings, and because of where they slotted into the distribution, we included them in this analysis.

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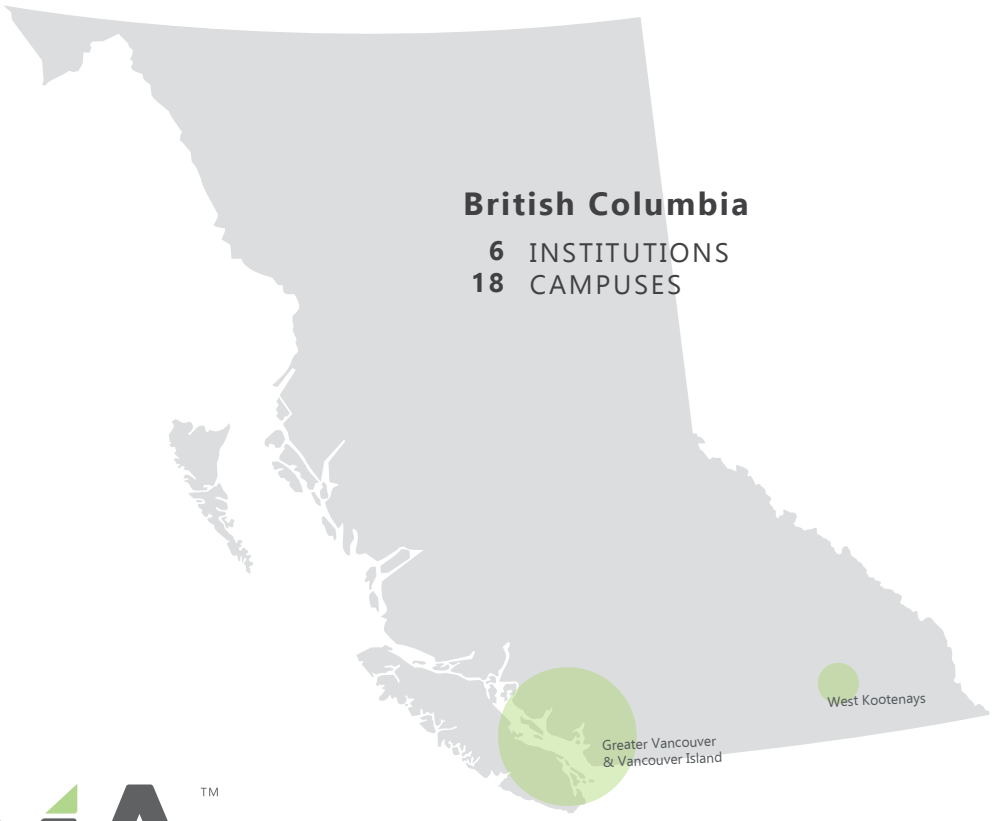
2020 Median Energy Use Intensity

	Energy Use per m^2 (EUI)	Number in sample
Institution	**Average 217 kWh/m^2**	n=6
Campus	**Median 200 kWh/m^2**	n=18



PUMA™

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PUMA is an affordable and effective way to compare the performance of all the buildings in your portfolio, including the ability to normalize for weather.

www.pumautilitymonitoring.ca

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