Annual PUMA Benchmarking Summary

For BC Municipalities: 2014 Calendar Year

saving you energy

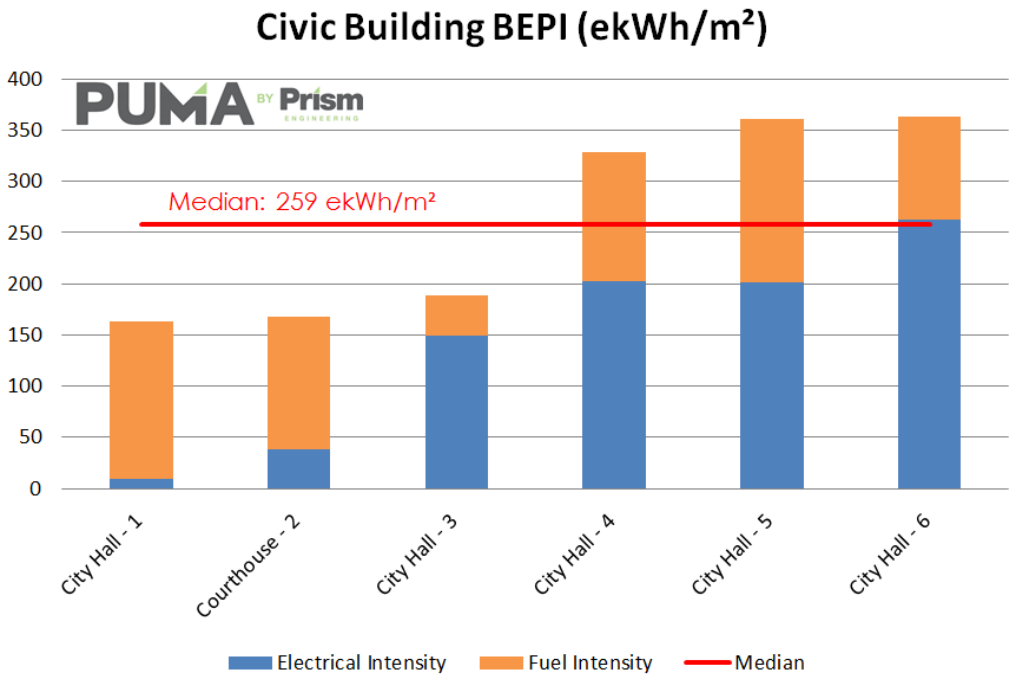
PUMA is software & services (SaaS) from Prism Engineering that tracks 15,000 electrical, natural gas, water, and other fuel accounts for government, commercial, and institutional customers. PUMA helps you get a grip on your energy and utility costs.

For municipalities, like most building owners, a key figure is how much energy a building uses per square metre. This figure is known as the BEPI (Building Energy Performance Index) and EUI (Energy Use Intensity). Calculating the EUI helps building owners & operators know how a specific building compares to similar buildings and helps answer the question: **Is this building better or worse than average?**

The median BEPI displayed for each building category represents the mid-point of energy use for that category; half of the buildings use more energy per square metre and half use less.

If a building uses more than the median, it could be a good candidate for energy saving opportunities, if it uses less than the median it may be a good example of energy efficiency leadership. Looking closely at where a building fits in the distribution may be more instructive in many cases.

The following chart shows the BEPI for one category of municipal buildings – City Halls and Courthouses. Charts for more categories of municipal buildings follow on pages 3 & 4.



Convert to GJ/m² by multiplying by 0.0036

For more information about PUMA and to schedule a free demonstration, contact Duncan Wilcock:
T: 604.205.5516 E: duncan@prismengineering.com | www.pumautilitymonitoring.com

A summary of the 2014 median energy use (EUI) for the building categories in this report is as follows:

Municipal Building Type	Median Energy Use per m^2 (EUI)	Number of buildings in sample
Civic Buildings	**259 ekWh/m^2**	n=6
Protective Services	**312 ekWh/m^2**	n=12
Community Buildings	**215 ekWh/m^2**	n=18
Arenas & Rinks	**432 ekWh/m^2**	n=5
Sports Multiplexes	**602 ekWh/m^2**	n=11

The sites included in the benchmarks are from the following BC Municipalities that subscribe to monthly PUMA utility monitoring software & services:

- City of Chilliwack
- City of Coquitlam
- City of Kamloops
- City of North Vancouver
- City of Port Coquitlam
- City of Trail

These figures are computed without weather or location adjustment for simplicity of comparison and are based on billed energy use. Four of the municipalities are in a common climactic zone, so they are directly comparable. Two municipalities are in colder parts of BC, but the EUIs of their buildings were not simply at the top of all distributions, so we judged it worthwhile to include them.

This high-level analysis could be improved upon and we plan to do so in future. We are releasing this data now as we have heard from our municipal customers that some guideline benchmarks with explanations would be a significant improvement over the current shortage of municipal building benchmarks in British Columbia.

PUMA incorporates local weather data so that weather adjusted savings and weather normalized figures can be easily calculated. Contact us for more details with the information below.

PUMA BY Prism ENGINEERING

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

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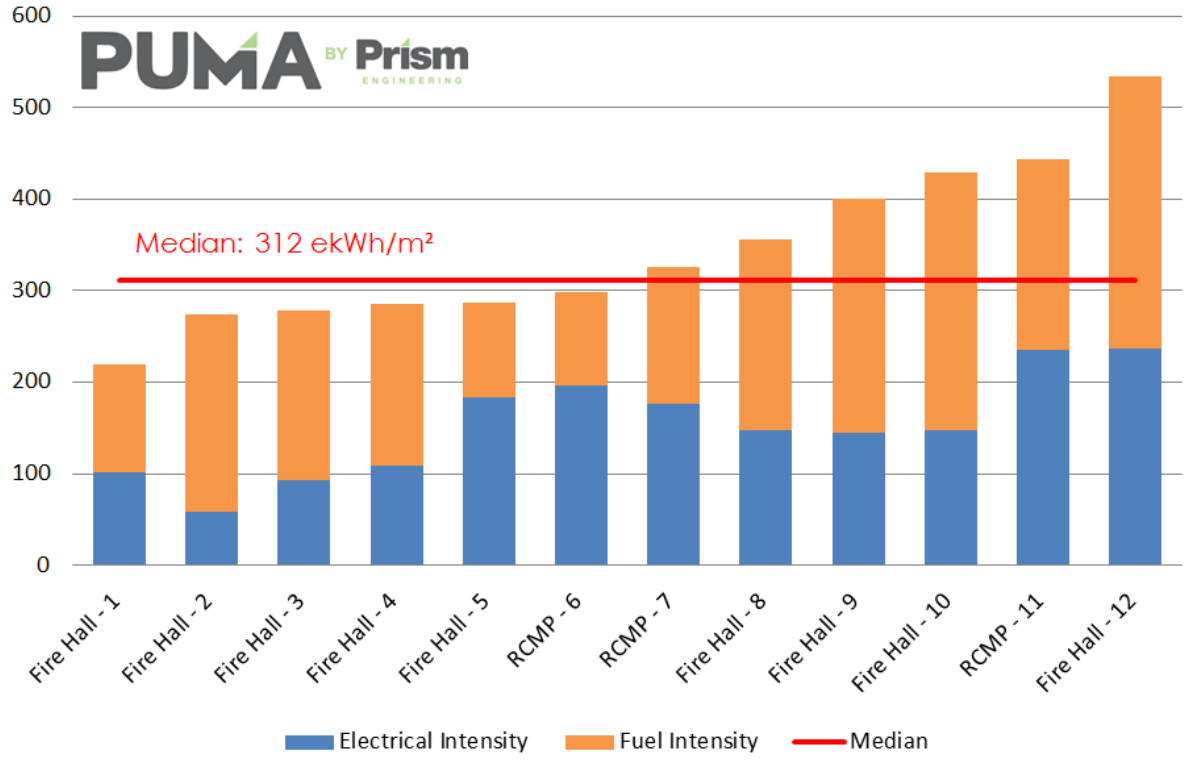
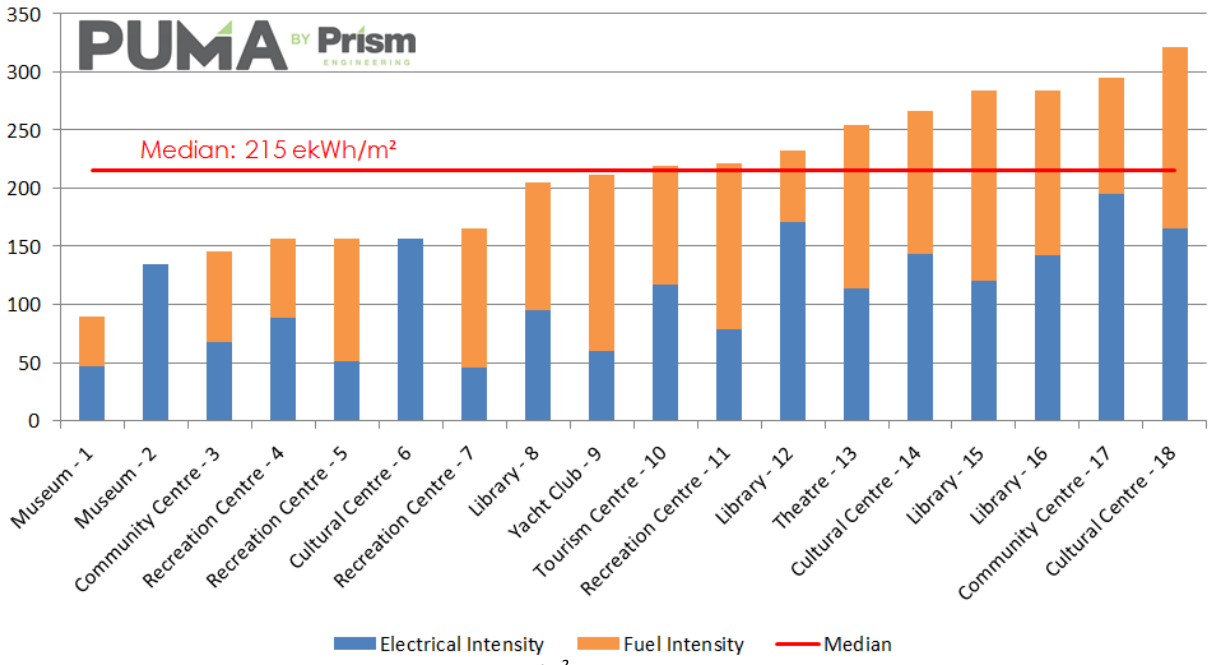
Protective Services BEPI (ekWh/m²)



Community Buildings BEPI (ekWh/m²)



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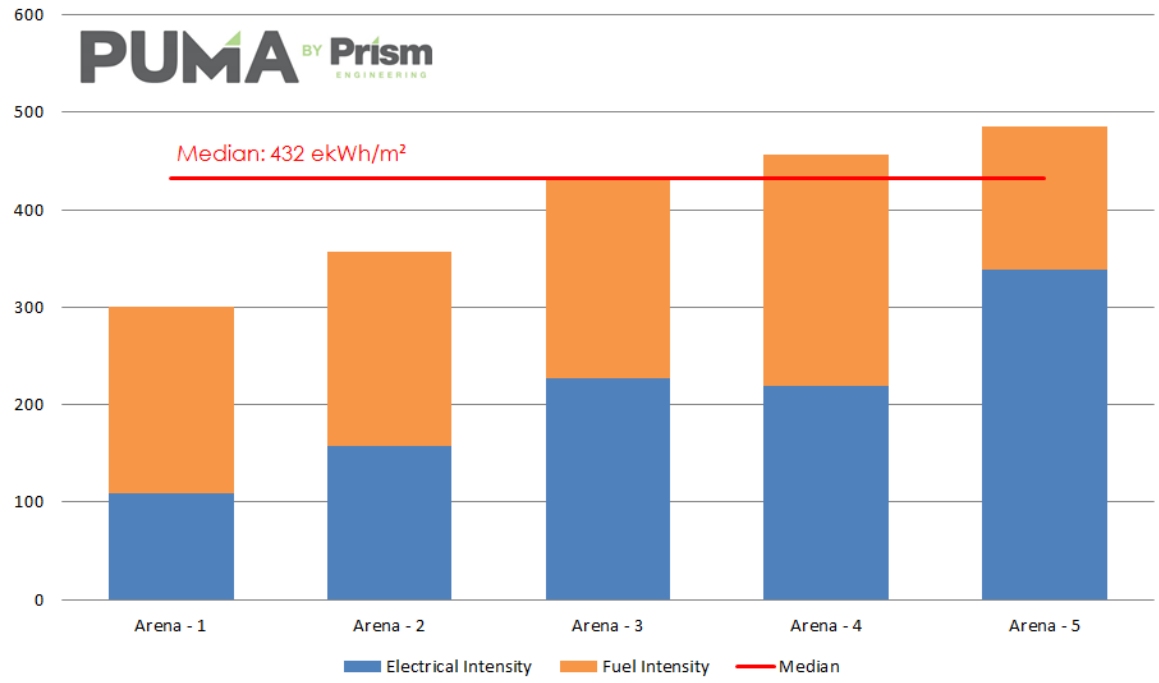
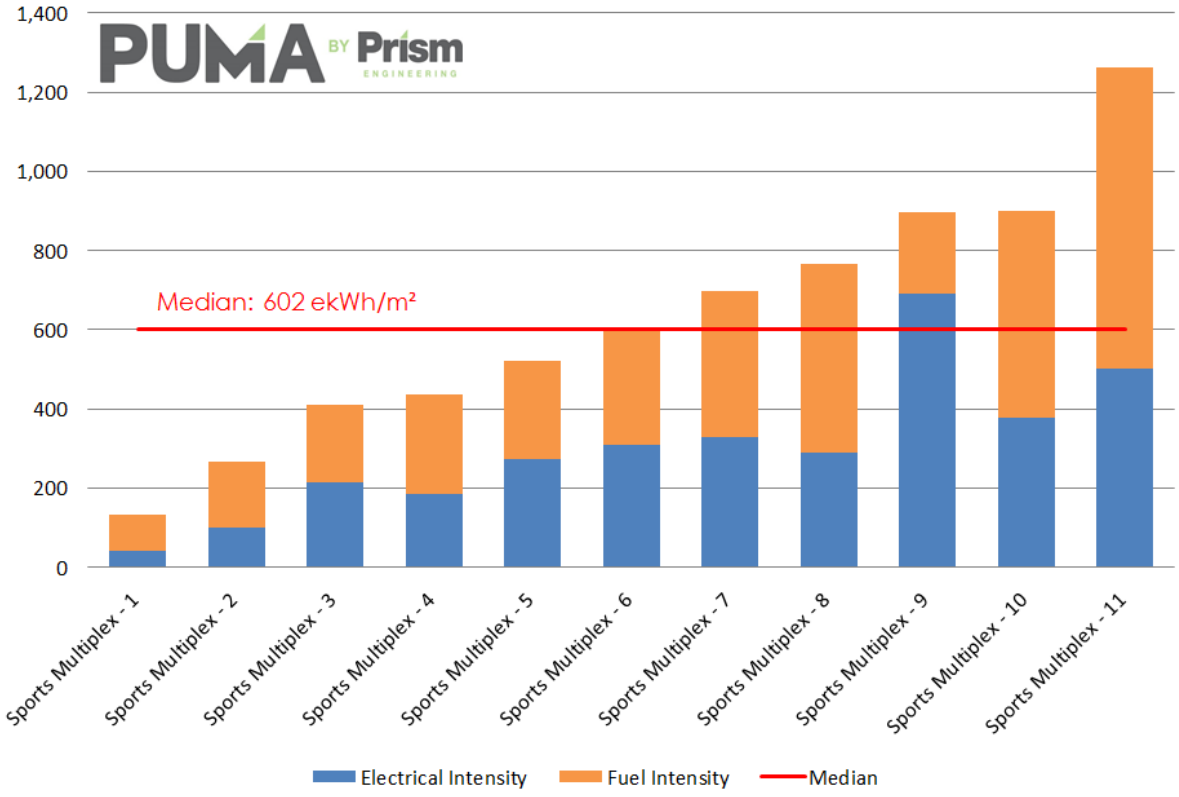
Arenas & Rinks BEPI (ekWh/m²)



Sports Multiplex BEPI (ekWh/m²)



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