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A Case Study: the Energy Performance Gap of the Center for Interactive Research on Sustainability at the University of British Columbia

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Abstract

This work is a case study of the energy performance gap in a LEED Platinum-certified university building. Comparing the whole-building energy modelling results with the overall measured energy consumption, the building shows approximately 60% higher energy consumption during its first year of operation than the initial model prediction. The building is heavily instrumented and a large amount of detailed data is logged, providing a unique opportunity to compare energy model prediction to actual building performance and operations. Energy performance gaps of this magnitude are commonly found and the reasons are not yet well understood. There are many potential sources for discrepancies: different usage of the building in model and reality, design, construction and commissioning deficien-

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