Commercial and Institutional Buildings Energy Use Survey (CIBEUS)
Data Accuracy

Since all CIBEUS estimates are based on sample results, they are subject to sampling error. This error can be expressed as a coefficient of variation (CV). The CV is a percentage that expresses the size of the standard error as a proportion of the estimate to which it is related. For example, a CV of 10% indicates that the standard error is 10% of the estimate. If an energy intensity estimate is 0.2 gigajoules per square foot, with a CV of 10%, then the standard error is 0.02 gigajoules per square foot. In CIBEUS, CVs are used to rate the quality of each estimate, using the following table:

CV	Associated indicator	Quality of estimation
<20%	A	Excellent
20%-29%	B	Good
30%-39%	C	Acceptable
40%-49%	D	To be used with caution
50%+	F	Too unreliable to be published

Most estimates in CIBEUS are either "excellent" or "good".

Survey estimates may also contain non-sampling error. Non-sampling errors are not related to sampling and may occur for many reasons. Population coverage errors, differences in the interpretation of questions, incorrect information from respondents, and mistakes in recording, coding and processing data are examples of non-sampling errors. Non-response is an important source of non-sampling error. While the impact of non-sampling errors is difficult to evaluate, measures such as response rates and imputation rates can be used as indicators of the potential level of non-sampling error. CIBEUS had a response rate of 88%, which is considered very good for a voluntary survey.