

MGB ACADEMY · JOB AID

Savings Methodology Disclosure*Name the method, show the inputs, bound the uncertainty***MGBA-EA-JA-04 · Version 1.0 · Released at Segment 3**

"We estimate 22% savings" is a claim. "22% savings via a model calibrated to within 8% of billed consumption, inputs in Appendix B" is evidence. The difference between the two sentences is this document. Complete one disclosure per measure or per measure package, and place the set in the technical appendix.

Recognized methods

METHOD	APPROPRIATE WHEN	DISCLOSE
Engineering calculation	Single measures with well-characterized loads and independent interactions — lighting, motors, simple equipment swaps.	Governing equation, ASHRAE or other recognized reference, every input value and its source, operating hours and their basis.
Bin analysis	Weather-dependent measures where hourly simulation is not warranted — economizers, chiller and boiler efficiency, controls setpoints.	Bin data source and location, bin structure, part-load assumptions, equipment performance curves and their source.
Calibrated simulation	Whole-building measures, interactive effects, or packages where measures affect each other — envelope plus mechanical plus controls.	Software and version, calibration tolerance achieved against billed consumption, calibration metric used, all non-default inputs.
Metered / measurement-based	Where sub-metering or short-term monitoring was performed.	Instrument type and accuracy, monitoring period, extrapolation method, how the sample period was normalized to a year.
Utility or program-published deemed values	Screening only. Not a substitute for analysis on a financed scope.	Program and version, the exact measure definition claimed, and an explicit note that the value is deemed rather than modeled.

INTERACTIVE EFFECTS

Measures interact. Lighting retrofits reduce internal gain and therefore reduce cooling savings and increase heating load. Envelope work reduces the savings attributable to mechanical replacement. Where you have modeled measures independently and summed them, say so and state the likely direction of the error. Where you have modeled the package, say that instead. Summed independent estimates presented as a package total, with no note, is the most common overstatement in the field.

Calibration expectations for simulation

METRIC	MONTHLY	REFERENCE
Mean bias error (MBE)	within $\pm 5\%$	ASHRAE Guideline 14 convention
Coefficient of variation of RMSE	within $\pm 15\%$	ASHRAE Guideline 14 convention
Achieved on this project	_____	State the actual figure, not the target

If calibration falls outside these bands, the model is still usable — but say so, explain why, and reduce your savings claim or widen your range accordingly. Reviewers trust a model that reports a 19% CV(RMSE) far more than one that reports nothing.

Methodology disclosure — one per measure

Measure	_____
Method used	☐ Engineering calc ☐ Bin ☐ Calibrated simulation ☐ Metered ☐ Deemed
Reference / standard cited	_____
Tool, software, version	_____
Key inputs and their sources	_____
Operating hours and basis	_____
Interactive effects treatment	☐ Modeled in package ☐ Estimated independently — direction of error: _____
Projected annual savings	_____ kWh _____ therms _____ \$ (state rate used: _____)
Rate basis	☐ Current tariff ☐ Blended actual \$/unit from baseline ☐ Escalated — rate and rationale: _____
Uncertainty	Range: _____ to _____ · Basis for the range: _____
Appendix reference	Inputs at Appendix _____, page _____

Bounding uncertainty

When you are uncertain, say so and bound it. A range with stated assumptions is more professional than a false point estimate — and it reads that way to a reviewer, because it signals that every other number in the report was handled with the same care. Where a single figure is required for a summary table, give the conservative end of your range and note that it is the conservative end.

THE ESCALATION TRAP

Savings expressed in dollars depend on an energy price assumption that will change over a twenty-year term. State the rate you used and whether you escalated it. An unstated escalation assumption is the fastest way to turn a defensible analysis into a disputed one, because the reviewer will rebuild your figure at flat rates and find a number that does not match yours.

Missouri Green Banc

16305 Swingley Ridge Road, Suite 220, Chesterfield, MO 63017 · (866) 554-4083 ·
communications@missourigreenbanc.org

Markets set in motion. It all starts with collaboration.