MGBA-ESCO-JA-06

Savings Test & M&V Documentation Checklist

The standard, IPMVP option selection, required disclosures, and where your guarantee stops

TRACK	JOB AID	VERSION	DATE
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You will be asked about the number before anything else. This page sets out the standard, what certification requires, how to document your method, and the one line about your guarantee that has to survive every conversation you have.

The standard

Statutory standard	Economic benefit. The project must demonstrate that the benefits of the improvements over the term justify the financed amount.
MGB working benchmark	A savings-to-investment ratio of at least 1.0 — projected savings over the term equal or exceed the financed amount — certified by a qualified engineer.
How the two relate	The ratio is the industry best-practice method MGB uses to demonstrate economic benefit. It is a program benchmark rather than a statutory threshold, and it is applied on every transaction.
Tested on	The bundle, not measure by measure.
Certified by	A qualified engineer, as a scheduled project deliverable.

CONFIRMATION PENDING — READ BEFORE QUOTING THIS ON CAMERA OR TO AN OWNER

Segment 5.1 of the recording script and its on-screen card present the 1.0 ratio as a statutory requirement. MGB's corrected position, which this page follows, is that economic benefit is the statutory standard and the ratio is a best-practice benchmark applied by the program. The script needs correcting and the card needs rebuilding before recording.

One cross-program item also remains open: the NPCA Capital Provider script states there is no mandated ratio, which now diverges from this script and the Property Owner script. One answer has to govern all three. See MGBA-ESCO-BR-01, item 2.

For most of you this is familiar rather than new

It is the same discipline a guaranteed energy cost savings project already requires. If you are carrying a performance guarantee, you are modeling to something tighter than 1.0 before MGB ever sees the file.

Three practical consequences

1. **The certification is a deliverable with a schedule, not a closing formality.** Put it in the project plan next to the audit. Firms that leave it to the end discover the engineer has questions about the baseline — and baseline questions late in a transaction are expensive.
2. **The ratio is tested on the bundle.** A measure that would never pay back on its own is not disqualified. It gets carried. The roof does not have to clear 1.0 on its own; the project does. That is why the long term matters, and it is why envelope measures belong back in your scopes.
3. **The useful life you assign does double duty.** It drives the term and it drives the ratio. Stretch it and the term extends, the annual payment drops, and the ratio improves — which is exactly why it gets reviewed. Assign it defensibly, document your source, and be ready to defend it.

Useful life documentation

- ☐ Every measure has an assigned useful life with a named source
- ☐ Source is a recognized reference — ASHRAE, DOE, manufacturer specification, or a documented program table
- ☐ Where you departed from the reference figure, the departure is explained in writing
- ☐ Weighted average useful life computed on installed cost and shown on its face
- ☐ Resulting term stated, and confirmed against the 20-year statutory maximum

The cap can bind before the useful life does. Missouri caps assessment contracts at 20 years, not to exceed the weighted average useful life of the improvements — whichever is lower governs. A bundle with a 21.9-year weighted average useful life gets a 20-year term, not a 21.9-year one. Do not quote a longer term to an owner.

IPMVP option selection

Name the option you are applying and apply it consistently. A savings number without a stated method is not reviewable, and an unreviewable number invites a reviewer to discount it. Stating your method protects your own analysis.

Option	What it measures	Best fit	Watch for
A	Retrofit isolation with key parameter measurement — one parameter measured, others stipulated	Lighting retrofits, constant-load equipment where operating hours can be defensibly stipulated	Stipulated hours are the item a reviewer will question. Document the source
B	Retrofit isolation with all parameters measured at the system boundary	VFDs, submetered chiller and boiler plants, variable-load motors	Metering cost and boundary definition. Confirm the boundary in writing before installation
C	Whole facility — utility meter analysis with regression against independent variables	Deep multi-measure bundles where measure interaction is significant. The usual choice for a C-PACE bundle	Requires savings large enough to resolve against meter noise. Non-routine adjustments must be defined in advance
D	Calibrated simulation — energy model calibrated against billing data	No usable baseline, major envelope-plus-HVAC interaction, phased	Calibration tolerance and the burden of

Option	What it measures	Best fit	Watch for
		occupancy, or new systems with no operating history	documenting it. The most reviewer-intensive option

For a bundle of the kind worked through in MGBA-ESCO-JA-03, Option C with Option A or B carve-outs for isolated measures is the usual answer.

Required disclosures

State each of these explicitly in the savings analysis. Not in an appendix — on the face of the document a reviewer reads first.

- ☐ The IPMVP option applied, named
- ☐ Baseline period, with dates
- ☐ Baseline adjustments made, and why
- ☐ Independent variables and the adjustment terms — weather normalization, occupancy, production volume
- ☐ Measurement boundary, drawn explicitly
- ☐ Energy prices used, with source and any escalation assumption
- ☐ Non-routine adjustment triggers, defined in advance
- ☐ Measure interaction, and how it was handled
- ☐ Persistence assumptions for each measure
- ☐ Uncertainty or confidence discussion appropriate to the option

Submission checklist

- ☐ Investment grade audit report
- ☐ Measure list with installed costs and assigned useful lives, sources named
- ☐ Weighted average useful life calculation shown
- ☐ Savings analysis with all disclosures above
- ☐ Savings-to-investment ratio calculated and shown
- ☐ Qualified engineer certification, signed and sealed as applicable
- ☐ M&V plan
- ☐ Scope-to-cost breakdown a third party can follow
- ☐ Contingency identified as a line, not buried in measure pricing

The one line to carry out of this course

WHERE YOUR GUARANTEE STOPS

Your guarantee runs to the owner. The assessment obligation runs to MCED.

> A savings shortfall triggers your contractual remedy with the owner. It does not reduce, suspend, or offset the assessment. Not for a month, not for a year, not at all.

Design to a margin, not to the threshold

A project that clears the benchmark by a hair has no room for an energy price move, a scope adjustment, or a reviewer who is more conservative about one of your measures than you were. You already know what a thin guarantee feels like to administer. Same instinct, applied earlier.