WORKSHEET 3.12

The Energy Performance Test

Subchapter 3.12 · case in the book: Turin

Take the last saving your property claimed for a specific measure (the lighting, the drives, the control change) and ask one question about it. How would you have known if it had not worked? If the only answer available is that the property's total went down, then the measure was never verified. The total was verified, and the total contains every other thing that happened in the same twelve months.

This worksheet turns the tools of the subchapter into a form you can fill in. The texts come from the book; the empty columns are for your own property. Adapt it before use: an unadapted checklist is exactly what the book warns against.

Practical application: what to do in your property

Step (from the book)	Done?	What we found / owner
Before choosing a method, measure the noise: how much did the quantity move, period to period, before anything was done.		
Write the one-page test design before the works order, and date it.		
Draw the boundary around everything the measure affects and as little else as possible.		
Define both periods in advance, with the reason they are comparable.		
Separate routine adjustments from non-routine ones, and record the size of any non-routine adjustment at the time.		
Write the void list: five lines on what would make the comparison meaningless.		
Check the implementation programme for two measures sharing a boundary and a fortnight.		
Verify control and schedule measures as operating, across a season, from trend data.		
State in the report how good the answer is, and prefer a cheap method honestly labelled.		

These steps are the book's method, not requirements of ISO 50001. Evidence can take whatever form suits the property; a separate document is needed only where an applicable requirement, or the property's own system, makes it necessary.

Verification Pact: what is believed, tested against the standard

What is commonly believed	What actually holds	Our position
«Consumption fell, so the measures worked.»	One number cannot confirm four claims. The total contains everything else that happened in the same year.	

What is commonly believed	What actually holds	Our position
«We normalised for weather and occupancy, so the comparison is sound.»	Normalisation does not raise resolution. If the noise exceeds the effect, the method still cannot see it.	
«The saving was two per cent and the total fell three.»	Then the method's own year-to-year variation is the first thing to measure, and in a hotel it is usually larger than both figures.	
«Both measures were installed together to save contractor costs.»	A reasonable commercial decision that permanently merged two pieces of evidence.	
«The setback was programmed and signed off.»	It was installed. Whether it operates is a separate question, answered over a season and not at handover.	
«We chose the comparison weeks carefully.»	After seeing the data, four-week pairs can be found in any hotel's history to demonstrate anything.	

Common mistakes: a self-check

Mistake (from the book)	Present here?	Action / owner
Answering the property-level question and recording it as an answer to the measure-level one.		
Choosing a method whose noise is larger than the effect being claimed.		
Examining the method only when the result is unfavourable.		
Installing two measures on the same circuit in the same fortnight.		
Verifying a control measure at handover instead of over a season.		
Choosing the comparison periods after seeing the data.		
Absorbing a one-off change in the building into a routine adjustment.		
Writing the test design after the result is known, and presenting it as a method.		
Buying formal measurement and verification for measures smaller than the study.		

Operative synthesis

› **A saving is demonstrated when somebody can say what was compared with what, over which two periods, within which boundary, with which adjustments, and can show that the method was capable of resolving an effect of the size claimed. The last clause is the one that is never**

applied and it decides everything. A method whose noise exceeds the effect is not an imprecise measurement; it is not a measurement.

- **Establishing the resolution takes ten minutes of historical data and settles the choice of method by itself. Whole-facility comparison for effects larger than the property's own variability. Isolated measurement of the affected circuit for most hotel measures, which is cheap and is the right default. A key parameter measured and the rest estimated where the load is constant and the hours are what changed. Calibrated simulation almost never.**
- **Two disciplines convert the technique into a control. The first is the void list (five lines on what would make the comparison meaningless) written while the measure is still a proposal, because about a third of the time it reveals that the planned test cannot work. The second is the date: a test designed before the work is ordered is evidence, and one designed afterwards is an argument. It is also the easiest thing in this chapter for an auditor to check.**
- **In Turin four measures were claimed from one number, two of them were merged by a sensible commercial decision about contractor mobilisation, one was verifiable for almost nothing and never was, and one had been running on a third of the nights in its own season for two years. The next subchapter takes what this one produces and asks who it is written for, because an internal audit report that ownership does not read has not been written, and the form of a finding decides whether it reaches a decision or a filing cabinet.**

Action plan for our property

Action	Owner	Due	How we will know it worked

Source: Francesco Dore, The Helm and the Lens, Volume 4b «The Lens», subchapter 3.12. Edizioni Effedore, 2026. Clause references are paraphrased; this sheet does not reproduce the text of ISO 50001, ISO 50003 or ISO/IEC 17021-1. It is not legal advice: energy law is that of the place where the property operates.