METER DATA VALIDATION TOOL / ILLUSTRATIVE CASE

Which meter checks are worth automating?

The management decision

Decide which errors would change a business decision and what it costs to investigate each flag. Use a file with known answers to test the balance between missed errors and unnecessary checks.

An energy report can look complete even if a source file contains missing readings, repeated records or a change in units. Analysts may only spot the problem when an unusual trend reaches management. A validation tool checks each file against agreed rules and gives people a way to distinguish a real outlier from a mistake. A clear record of the changes can also make recurring problems easier to raise with the team that supplies the data.

Worked example

A test file contains 1,000 records with 20 known errors. A rule catches 18 errors and flags seven valid records. Reviewers must handle the extra flags, and two known errors remain undetected.

Example figure	What it represents
20	Errors in the test file
18	Errors found
7	Valid rows flagged

What changes the answer

A stricter rule catches one more error and flags five more valid entries. Compare the consequence of the extra error caught with the additional review work before adopting it.

Meter data validation tool

What to commission

Build a checker for one meter file format and agreed rules for gaps, repeated rows, units and unusual values.

We agree which rules can be checked automatically and which cases require judgement. The tool keeps the original value alongside each flag so reviewers can see what happened and trace it to the source.

How to judge the result

A reviewer can distinguish detected errors, missed errors and valid records flagged in the agreed test dataset.

Compare reviewer time with the consequences of missed errors. Recheck the agreed sample whenever rules change so any gain or loss is visible.

Decision worksheet

Project detail	Starting point for your team
Decision owner	Meter data or reporting operations lead. Name the person who will approve the next step.
Records to gather	Sample readings and any rules you already use for timing, units and unusual values.
Agreed output	A configurable checker, an exceptions file and a test dataset.
Decision date	Record the deadline, any unresolved assumption and who will confirm it.

Discuss this case

Tell us which problems you see repeatedly and when they usually come to light. Mention who decides whether a flagged reading is valid. We can discuss starting with one file type and the few rules that make the greatest difference to your reporting.

Email info@oxetc.co.uk and mention DEV-04. All figures in the worked example are illustrative.