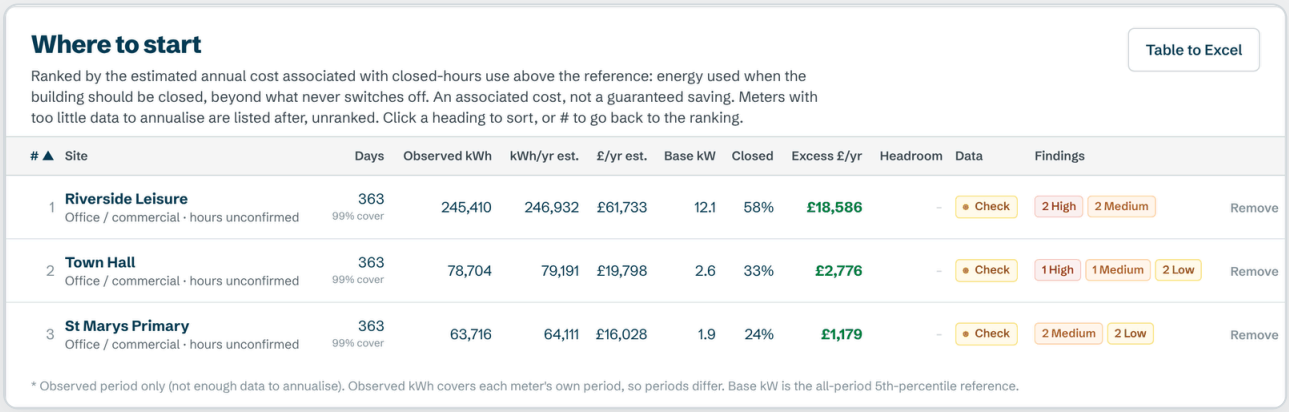
City Energy Partnerships

User guide

Getting started with the analyser

How to load your half-hourly data, read the results and share them



Where to start

Table to Excel

Ranked by the estimated annual cost associated with closed-hours use above the reference: energy used when the building should be closed, beyond what never switches off. An associated cost, not a guaranteed saving. Meters with too little data to annualise are listed after, unranked. Click a heading to sort, or # to go back to the ranking.

# ▲	Site	Days	Observed kWh	kWh/yr est.	£/yr est.	Base kW	Closed	Excess £/yr	Headroom	Data	Findings	
1	**Riverside Leisure** Office / commercial · hours unconfirmed	363 99% cover	245,410	246,932	£61,733	12.1	58%	**£18,586**	-	Check	2 High 2 Medium	Remove
2	**Town Hall** Office / commercial · hours unconfirmed	363 99% cover	78,704	79,191	£19,798	2.6	33%	**£2,776**	-	Check	1 High 1 Medium 2 Low	Remove
3	**St Marys Primary** Office / commercial · hours unconfirmed	363 99% cover	63,716	64,111	£16,028	1.9	24%	**£1,179**	-	Check	2 Medium 2 Low	Remove

* Observed period only (not enough data to annualise). Observed kWh covers each meter's own period, so periods differ. Base kW is the all-period 5th-percentile reference.

City Energy Partnerships
Free half-hourly estate energy analysis. November 2026

Run by Kinetic Energy Consulting
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About this guide

City Energy Partnerships is a free website for council energy, property and climate teams. At its centre is the analyser: a tool that reads the half-hourly data from your electricity meters and shows when your buildings use electricity, what never switches off, how close each supply gets to its agreed capacity, how much solar each building would use, and what all of it costs. This guide takes you through using it, from getting your data to sharing the results.

You don't need any energy background. Where a term needs explaining, we explain it, and the glossary on the website covers the rest.

Contents

1	Getting started	From your meter file to your first report
2	Using the website	Guides, examples and help
3	Getting and loading your data	What to ask for, file formats, how readings are checked
4	Setting opening hours	The most important setting
5	Reading the results	Rankings, findings, the heatmap
6	Reports and saving your work	PDFs, Excel and project files
7	Customer dashboards	Sharing results with a client
8	Troubleshooting	Common problems and what to do

If you only read one page

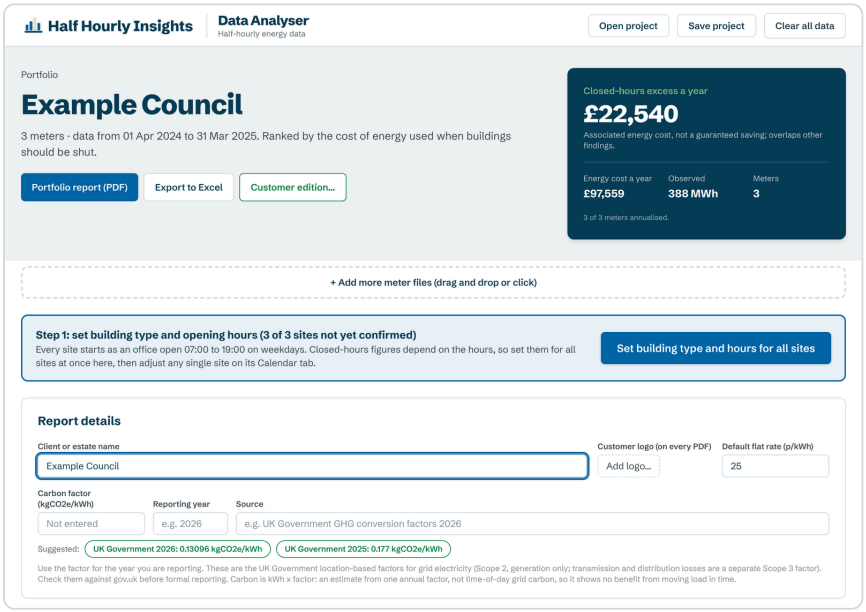
Read section 1. Then, before you share any figures, check three things on every site: the **opening hours** are right and marked as confirmed, the **Data review** tab has nothing important left waiting for a decision, and the **data quality** rating isn't Poor. Most wrong answers come from one of those three.

Your data stays on your computer

The analyser runs entirely in your web browser. Your meter files are read on your own computer and are never uploaded to us or anyone else. Once the page has loaded you can even disconnect from the internet and carry on working.

1. Getting started

1. **Open the analyser.** Go to the website and click *Open the analyser*. It works in Chrome or Edge on a laptop or desktop computer. There's nothing to install and no account to create. It isn't designed for phones, because the charts need a larger screen.
2. **Load your meter files.** Drag them onto the upload box, or click it to choose them. Use one file per meter: each file becomes a site, named after the file. No data to hand? Download the example file from the website and use that.
3. **Set the opening hours.** Every site starts as an office open 07:00 to 19:00 on weekdays, marked as *unconfirmed*. Click *Set building type and hours for all sites* to set them all at once, then open each site's **Calendar** tab to adjust it, add closures such as school holidays, and tick *Hours confirmed with the site*.
4. **Check the data.** On each site's **Data review** tab, read how the file was read and decide on any days held back for review, such as days when the clocks changed.
5. **Check the rate.** Costs use 25p/kWh unless you change it. Enter your own unit rate in *Report details*, or set different rates for one site or for different times of day in that site's **Settings** tab.
6. **Read the results.** *Where to start* ranks your sites by the cost of electricity used while they're closed. Click a site to see its findings, charts and heatmap.
7. **Save and share.** Download PDF reports or Excel files, and click *Save project* to keep your work so you can pick it up later.



The main page after loading three sites: the estate total, the reports, the reminder to set opening hours, and the report details.

Before you share any figures

- Every site's opening hours are checked and confirmed. Until they are, findings that depend on them are rated Medium confidence at best.
- The data quality rating is Good or Check, and you've read any Check notes. Don't quote figures from a site rated Poor.
- The costs are what each pattern costs now, at your rates. They aren't guaranteed savings, and figures for different findings overlap, so don't add them together.

2. Using the website

The analyser does the number crunching. The rest of the website explains what the numbers mean and what to do about them. These pages are the most useful alongside the analyser:

Page	Use it to
How to get your half-hourly data	Find out who holds your data and what to ask for. It includes a letter template you can send to your supplier.
Worked examples	See a full analysis of a made-up office and a made-up primary school, finding by finding. Download the example files and follow along in the analyser.
Building type pages	See what to look for in schools, leisure centres, civic offices, libraries, depots, street lighting and council housing.
Guides	Read about out-of-hours use, base load, supply capacity, reading a heatmap, proving a saving and half-hourly settlement in more depth.
How it works	Understand the method behind every figure: how files are read and checked, how base load is measured and how costs are worked out.
Glossary and FAQ	Look up a term, or check the answer to a common question.
Contact	Ask us for help turning your findings into savings, or for a full energy audit. There's no obligation.

> **A good first hour**
>
> Read the office worked example, then load the example file into the analyser and find the same figures yourself. You'll then know your way round before you load your own data.

3. Getting and loading your data

What to ask for

Ask your electricity supplier for the half-hourly consumption data for each meter, covering at least the last 12 months, as an Excel or CSV file. Many suppliers also let you download it from your online account. Your energy broker, energy manager or building management system may hold it too. The website's *How to get your half-hourly data* page has a letter template you can use.

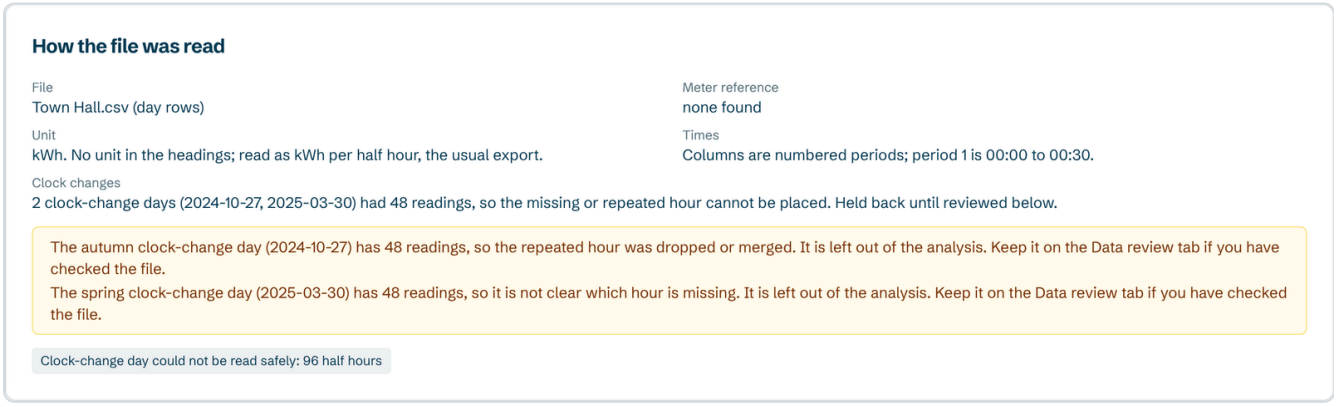
File types and layouts

The analyser reads Excel (.xlsx, .xlsm, .xls) and CSV or text files. Use one meter per file. The file name becomes the site name, so name each file after the building.

Layout	Looks like
Days down the side	A date, then 48 half-hourly readings across the row. This is the most common supplier format.
Days across the top	One column per day, with 48 rows of readings. It's turned round automatically.
Timestamped	One row per reading, with its date and time. 15-minute readings are added up into half hours. Hourly data can't be used.

How your readings are checked

- **Missing readings are left out, never counted as zero.** Annual figures are scaled up from the readings that are there.
- **Units.** Readings are treated as kWh per half hour unless the column headings say kW. The **Data review** tab shows which was used.
- **Clock changes.** Days when the clocks go forward or back are read correctly if the file has 46 or 50 readings for them. If it has 48, the analyser can't tell which hour is affected, so it holds the day back for you to decide.
- **Duplicate rows.** Exact repeats are counted once. If a date appears twice with different readings, the day is held back until you choose which to use.



The Data review tab shows how the file was read, and lists any days held back for your decision.

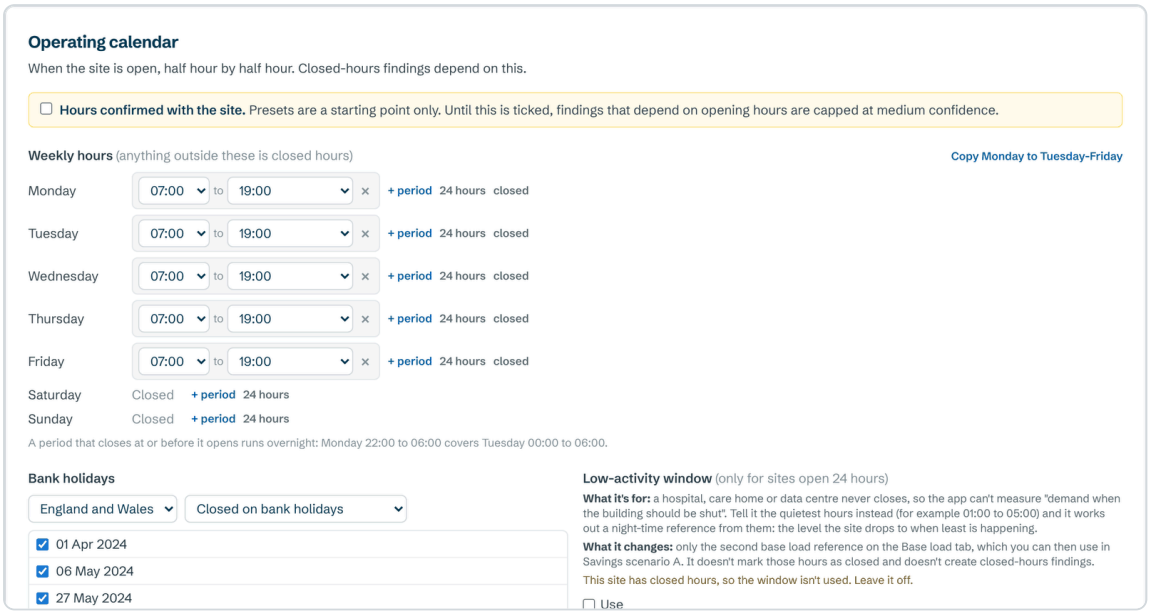
Files covering more than a year

Each site is analysed over its last 12 months by default, so it's judged on how it runs now. You can choose a different period from the bar at the top of the site page. Longer-term trends, such as base load by month, still use the whole file.

Each site also gets a data quality rating: Good, Check or Poor. With less than about 11 months of valid readings, annual figures are marked as estimates, and with less than six months they aren't shown.

4. Setting opening hours

The analyser needs to know when each building should be open, half hour by half hour. Every figure for use while closed depends on this, so it's the most important setting. If a building is used on Saturdays but its calendar says it's closed, all that Saturday use will show up as waste.



The top of a site's Calendar tab: confirmation, weekly hours and bank holidays. Closures and exceptional periods are further down.

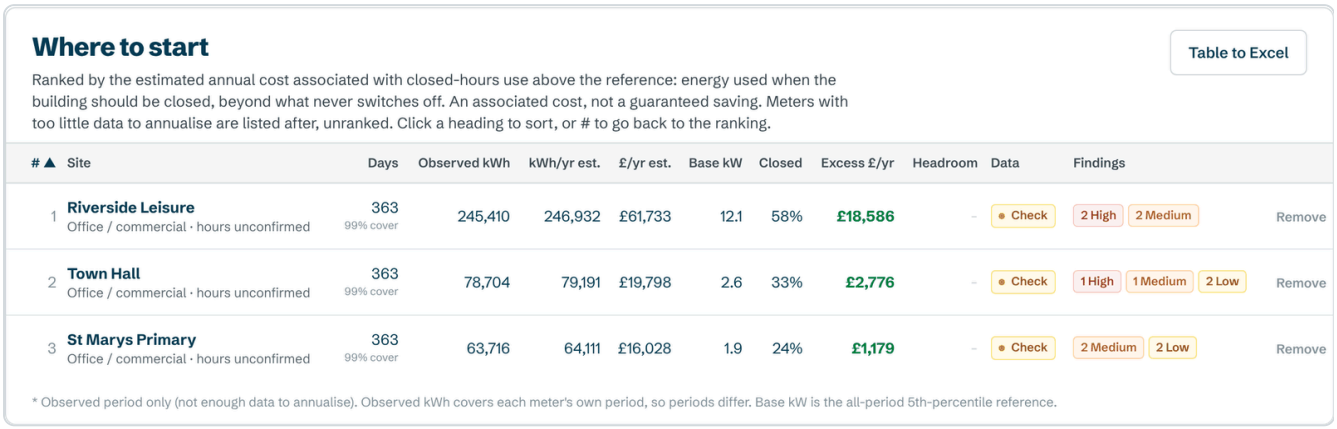
- **Building type and weekly hours.** Choose a building type for sensible starting hours, then adjust each day. A day can have more than one period, and a period that ends before it starts runs overnight, for night shifts.
- **Bank holidays.** Choose England and Wales, Scotland or Northern Ireland, and whether the site is closed, on Sunday hours or open as normal.
- **Closures.** School holidays, Christmas shutdowns and other dates when the site is closed all day. School term dates are never assumed, because they vary from school to school, so enter them here. You can paste several at once.
- **Exceptional periods.** Dates with different hours, such as events, extended opening or building works.
- **Hours confirmed.** Tick this once you've checked the hours with someone who knows the site. Until you do, findings that depend on the hours are rated Medium confidence at best.

> **Sites that never close**
>
> For a care home, control room or other 24-hour site there's no "use while closed" to measure. Set it as always open, and use the *low-activity window* to tell the analyser its quietest hours, such as 01:00 to 05:00. The analysis then focuses on night-time use, base load and peaks.

The *Set building type and hours for all sites* button on the main page sets the same hours for every site at once, which saves time across a large estate. You can then adjust individual sites.

5. Reading the results

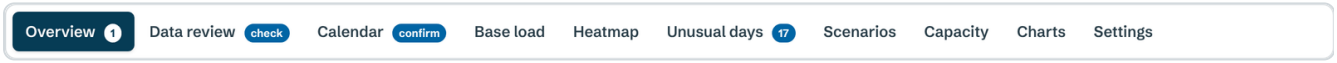
Where to start



Sites ranked by the yearly cost of electricity used while they're closed. Click a heading to sort.

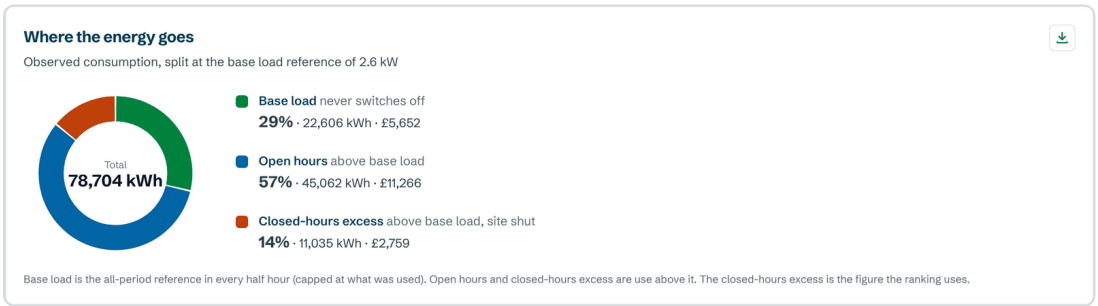
The main page ranks your sites by the yearly cost of electricity used while they're closed, above what never switches off. That's usually the cheapest kind of use to cut, so it's a good place to start. Alongside are each site's yearly use and cost, its base load, the share of use while closed, its data quality rating and how many findings it has. The *Opportunities* view lists every finding across all your sites in one place.

A site's page



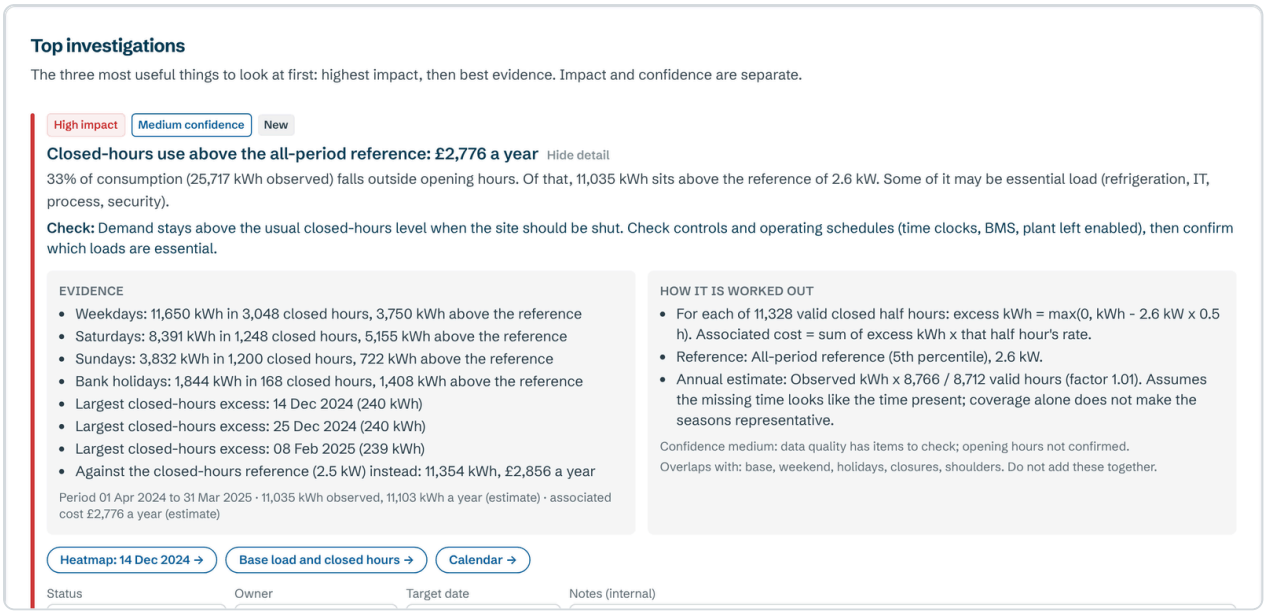
The tabs on each site's page.

Click a site to open its page. The **Overview** tab shows the key figures, each marked as measured or estimated, the three issues most worth investigating, and every finding. Next to it, the **Solar** tab shows how much of a solar system's output the site would use at different sizes, with a button that opens our sister site, the UK Solar Calculator, with those figures filled in. The other tabs go into more detail: **Base load**, **Heatmap**, **Unusual days**, savings **Scenarios**, supply **Capacity**, **Charts** and **Settings**.



Where the energy goes: base load, use while open, and use while closed above the base load.

Findings

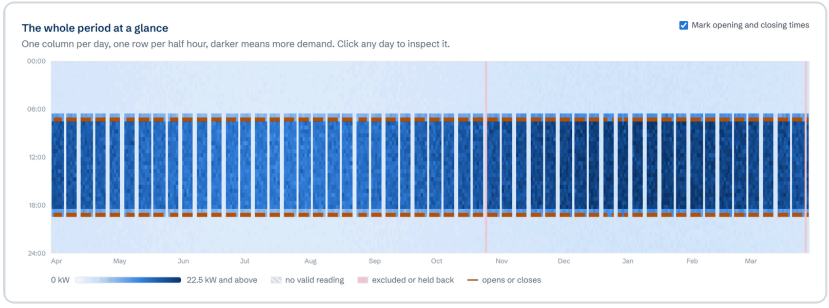


The top issues to investigate, with the evidence for the first one open.

Each finding has two separate ratings. **Impact** is how much it could matter, based on its cost and share of the site's use. **Confidence** is how reliable the evidence is, based on data quality, how much data there is and whether the hours are confirmed. A finding with high impact and low confidence is worth checking before you quote it. Click *Show calculation and evidence* on any finding to see exactly how it was worked out.

You can also record what's happening with each finding, such as *Under review* or *Action agreed*, with an owner, a date and notes. These are saved with your project.

The heatmap



One column per day, one row per half hour. Darker means more demand.

The heatmap shows every half hour of the year on one chart. Normal use shows as a dark band during opening hours. Anything dark outside that band, at night, at weekends or in holidays, is worth a closer look. Click any day to compare it with a typical day. The website's guide to reading a heatmap explains the common patterns.

> **Costs are not savings**
>
> Each cost shows what a pattern costs now, at the rates you entered. Any saving depends on what you change. Findings also overlap (weekend use is part of the use-while-closed figure, for example), so don't add them up. To estimate a saving, use the **Scenarios** tab, which avoids counting the same saving twice.

6. Reports and saving your work

Downloads

Download	What's in it
Site summary (PDF)	One page per site, with an appendix covering the top issues, every finding and how it was worked out, the data review and the opening hours.
Download all charts (PDF)	A full report for a site, with every chart and table, plus the appendix.
Portfolio report (PDF)	The ranked table of sites, the findings across your estate, then a page for each site.
Table to Excel	The Where to start table, in the order shown.
Export to Excel	A full workbook: summary, findings, scenarios, data review, calendars and rates, and the half-hourly readings for each site.
Charts	Every chart has its own download button, so you can use it in a presentation or report.

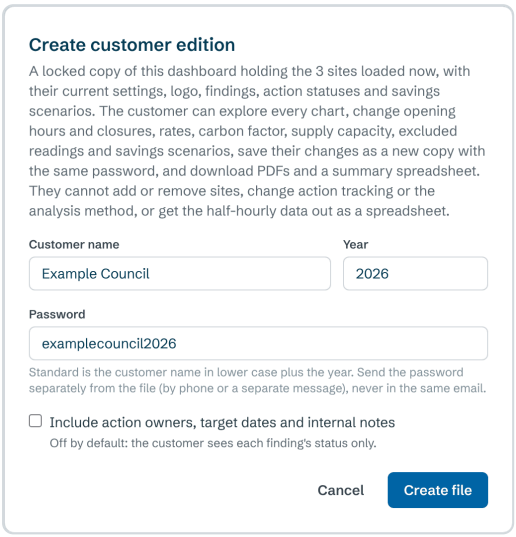
Enter your organisation's name, and add your logo if you'd like, in *Report details* before you download. Both appear on every PDF.

Saving and reopening your work

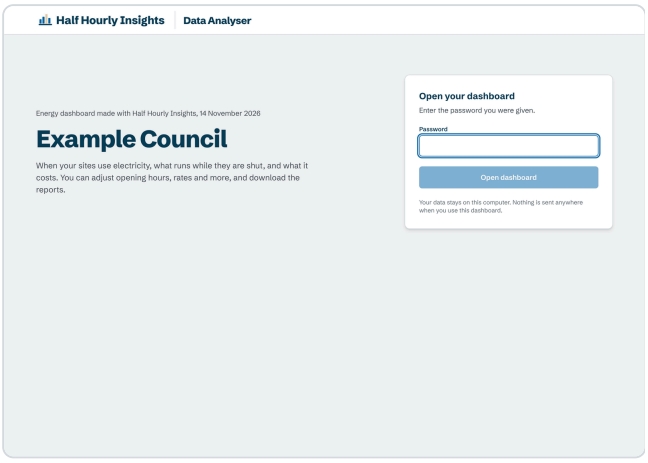
Nothing is stored in your browser between visits, so closing the page clears your work. Click **Save project** to download a single project file containing your readings, settings, opening hours, finding statuses, notes and scenarios. Click **Open project** next time to carry on where you left off, or send the file to a colleague. The project file contains your meter data, so store it as securely as the original files.

7. Customer dashboards

If you're a consultant or energy manager sharing results with someone else, you can create a customer dashboard: a single file holding one client's sites, locked with a password. Your client can open it in their browser, explore every chart, adjust the things they know better than you do, such as opening hours and rates, and download their own reports.



Creating a customer dashboard.



What your client sees first.

1. **Load only that client's sites**, or open their project file, and set them up fully, including opening hours, rates, their name and logo.
2. **Click *Customer edition*** on the main page, check the name and year, and choose whether to include your internal notes. Normally you wouldn't.
3. **Click *Create file***, then open the file yourself with the password to check it.
4. **Send the file and the password separately**, for example the file by email and the password by phone.

> **Choose a stronger password for sensitive data**
>
> The suggested password is the customer's name in lower case followed by the year, such as *examplecouncil2026*. That's easy to guess, so for anything sensitive add something random and keep a note of it. A forgotten password can't be recovered, and a dashboard can't be updated or withdrawn once it's sent.

Your client can't add or remove sites, change your finding statuses, or export the half-hourly readings. If they change anything, they can save a new copy of the dashboard with their changes, and every report they download afterwards says it includes their changes.

8. Troubleshooting

Problem	What to do
A file is refused because it contains several meters	Split it into one file per meter (one per MPAN) and load them separately.
Hourly data is refused	The analyser needs half-hourly (or 15-minute) readings. Ask your supplier for half-hourly data.
"Already loaded"	The same readings are already loaded as another site. Use the existing one.
Some days are missing from the analysis	Check *Held back for review* on the Data review tab. Clock-change days and conflicting duplicate rows wait for your decision.
No annual figures	There are fewer than six months of valid readings. Use the figures for the period you have, or load a longer file.
Every finding is Medium confidence	Confirm the opening hours on the Calendar tab, and read any Check notes on the data quality rating.
Use while closed looks far too high	Check the opening hours. A site that's open 24 hours but set up as an office will show most of its use as closed hours.
Time-of-day rates are ignored	Read the message under the rates. A gap or overlap between time bands makes the analyser fall back to the flat rate.
A customer dashboard won't open	Check the password. Save the file and open it in Chrome or Edge, not in an email preview.

What the analyser can't tell you

- Data from the main meter shows when electricity is used, but not which equipment is using it. Findings are things to check on site.
- Figures aren't adjusted for weather or changes in occupancy, so a cold winter shows as more use.
- Costs cover unit rates only. Standing charges and capacity charges aren't included.
- Supply capacity headroom is an early check based on half-hourly averages. Confirm it with your network operator before relying on it.

> **Need a hand?**
>
> If you'd like help understanding your results or turning them into savings, get in touch through the contact page on the website or email enquiries@cityenergypartnerships.co.uk. There's no obligation.