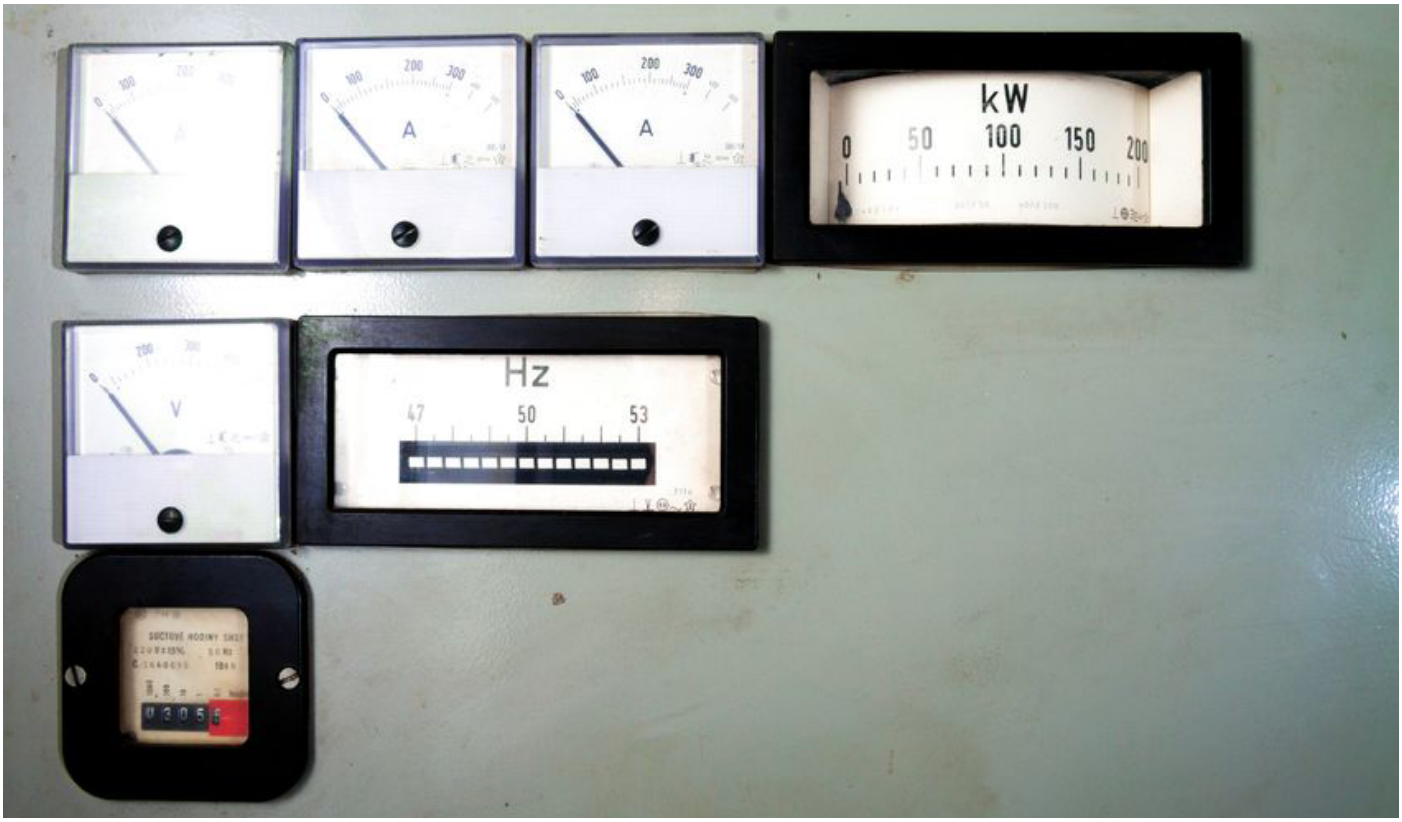
Powerful thinking

FACTSHEET #21:

This Energy Factsheet is part of a series developed by Powerful Thinking with our partners. To see the full series online go to: www.powerful-thinking.org.uk/resources/fact-sheets

ADVANCED POWER MONITORING RESOURCE PACK



About this Factsheet

The purpose of this factsheet is to help you accurately measure and record all types of power consumption at your event so that you are able to calculate your carbon footprint. You can do this using a number of different systems, such as the Julie's Bicycle **Creative IG Tool**. There is an associated recording sheet with this factsheet.

This factsheet and the recording spreadsheet were originally produced by Kambe Events and Resource Futures, as part of a European Green Capital project funded by Bristol 2015 through the Bristol Festivals group. It forms part of a suite of Green Event Guides available online at **www.kambe-events.co.uk**.

What to measure and why:

You'll need to measure the amount of gas and electricity which is used as a result of your event. This means taking readings and measurements at the start and end of your tenancy or site occupation. For outdoor venues you'll need to work out how much fuel has been used in generators and how much bottled gas has been used by your traders and for heating space. Don't worry about the conversions, we've **provided a spreadsheet** for you to record your data. We recommend that you delegate the task to a dedicated member of your team who will not become otherwise distracted by managing, building or dismantling your event.

How to measure

Mains gas:

Take a **meter reading** for each building at the beginning and end of your tenancy.
Ask the venue owner for a recent gas bill which will tell you the calorific value of the gas in the area and enter this into the spreadsheet. If you can't get hold of a figure then leave the default figure (39.3 MJ/m3) in the cell.

Find out if the gas supply is renewable or not so you can enter the meter readings into the correct sheet.
If the venue is being used by a number of different tenants, then it will be difficult to know who used what; in this case you'll need to estimate the proportion of gas used based on the size of each part of the building and how gas is being used in each space. In the UK, gas is used in service type buildings for heating space (77%), water (15%) and food (8%). Keep your calculations simple and make a guess as to the percentage of gas used.

Mains electricity:

Take a **meter reading** for each building at the beginning and end of your tenancy.
Find out if the electricity supply is renewable or not so you can enter the meter readings into the correct sheet.

As with mains gas, if you're sharing the building then you'll need to estimate the amount of electricity you're event has used compared to the other tenants. In the UK, electricity is used in service type buildings for heating space (14%), water (4%), and food (13%); computing (6%); cooling (9%); lighting (41%); and other (13%).

Bottled gas:

The simplest way to calculate this is to ask your on-site bottled gas supplier how much they delivered at the start and collected at the end. However this won't account for any gas brought to the site by individual traders or taken away at the end. You need to decide how accurate you want to be and how much time you have.

If you want to get a more accurate figure, you'll need to delegate someone to check or estimate the number, size and fullness of all the bottles on-site at the beginning and end of the event; this can be entered into the spreadsheet.

Generator Fuel – Diesel & Biofuel:

The simple way to ascertain how much fuel is used on the site is to ask your power supplier – this will likely be on your invoice in any case. A drawback to this method is that suppliers are not always able to provide an accurate fuel consumption figure, one reason being that machines can come or leave site with fuel in the tank.

If you want to accurately audit the amount of diesel used on-site:
You'll need to delegate someone to take readings from every generator and tower-light on the site before and after the event.

You'll also need to record the size of the fuel tank on each generator and tower-light. You'll probably need to inform your supplier in advance so that they can prepare this information for you.
You may want to inform your power contractor that you'll be undertaking the audit at the time of signing the contract to ensure their cooperation.

If you're using biodiesel then make sure this is recorded on the separate sheet provided in the recording template spreadsheet.

Other Electricity Generation:

If you are generating electricity via other means, such as solar or wind, then we suggest you ask your supplier to provide you with the amount of power generated and used in kW.

See **Factsheet #17 – What to Ask your Energy Supplier** & **Factsheet #6 –Five Tips for Smart Energy Contracts** for more advice on successful communication with your suppliers.

Download the Advanced Power Monitoring Spreadsheet.