



ENERGY REQUIREMENTS FOR CONCESSIONS



Photo credit: Shambala Festival - Samantha Milligan

About this Factsheet

This Factsheet has been designed to help you understand the real power requirements for concessions at your event.

It is common at outdoor events that power-users provide inaccurate requirements. This is particularly the case for food concessions and stage lighting providers for a variety of reasons. Research in 2015 has suggested that many do not understand how much power they actually need. This factsheet offers a helping hand with working out what power you need and aims to facilitate an effective process between the power supplier, festival and all end users for determining more accurate requirements so that there is less fuel wastage, emissions and costs are reduced and onsite power is safer.

What is Power?

Power is the rate at which energy is consumed by a system. We can consider it in two ways, either the amount of power a machine can produce – a generator for example – or the amount of power a system consumes – a kettle for instance. It is measured in watts (W).

For a much more detailed explanation of power, and various electrical terms you can check out [Factsheet #11–How Energy Actually Works and Essential Terminology](#).

16 Amp and 32 Amp Connections

A 16 A connection provides a trader with 3840 W (watts of power) or 3.84 kW (kilowatts). A 32 A connection provides a trader with 7690 W or 7.68 kW. From this you can work out from your appliances what power you require and whether you need a 16 A, 32 A or larger feed.

So, by way of an examples:

1 x Bain-marie (2 kW) + 1 x Juice blender (1 kW) + Lighting (0.5 kW) = Total of 3.5 kW (or 3500 W), **so a 16 A connection is adequate.**

1 x Bain-marie (2 kW) + 1 x Juice blender (1 kW) + Lighting (0.5 kW) + 1 x Microwave (1 kW) + 1 x Coffee machine (3 kW) = Total of 7.5 kW (or 7500 W), **so they will require a 32 A connection.**

For the majority of appliances the power rating will be listed in watts or kilowatts on the appliance rating label, typically found on the bottom or rear of the unit, such as below.



It is recommended that you work out your power requirement on the assumption that everything that you have is switched on at one time for safety.

See **Factsheet #1 – Sustainable Energy Tips for Traders** for ideas to help traders reduce their power needs.