

Management Guide

Integrating energy efficiency into outdoor events contracts and systems

This guide provides essential management techniques and tips to integrate energy efficiency into pre-event planning.

Greener Live Performances
through energy efficiency



Introduction

Great event managers are great planners, and planning is key to achieving an energy efficient event.

Putting energy efficiency processes into pre-event planning, contracting and communications will help to keep the power bill down and your events lean and green.

The key to great energy efficiency management is measurement. Without measuring you can't manage. Measurement relies on accurate data collection and importantly, commitment to its collection by the event team, generator suppliers and power contractors.

Pre, during, and post-event measurement is essential. Measuring allows you to;

- forecast what power you need to provide onsite;
- ensure no power-outs occur during the event;
- allows you to assess the event's efficiency rating post-event; and
- set reduction targets for the future.

This management guide highlights strategies you can adopt to ensure you get accurate and timely data collection.



Get Contractor Commitment

Power generator suppliers and electrical contractors are key to hitting your efficiency targets.

Consider ways you can motivate them to commit to planning for the smallest number and size of generators, and to achieving reduced running hours and reduced fuel consumption.

- **Offer a multi-year contract**
A guarantee of a multi-year energy supply contract will give your supplier security and commitment to you and may motivate them to help meet your energy reduction ambitions.
- **Build in an end-of-contract bonus**
For multi-year events and/or large and complicated events, build in an end-of-contract bonus if targets for reduced fuel consumption, or optimal load efficiency are met.
- **De-couple fuel supply from generator hire**
Use a fuelling service rather than having refuelling done by the generator supplier. There is profit to be made by supplying fuel, which is at odds with trying to reduce it. Take the profit motive out of the energy efficiency equation!

Formalise Power Assessments

The key to planning-in energy and fuel efficiency is to know your event's power requirements in advance

Ensure whoever on the team is gathering power requirements information from users, gets accurate and useful estimates.

- **Create a form which asks for detailed power requirements**

This should include:

- what equipment will need power
- equipment wattage and AMPs
- known start up or operational peaks
- likely timing of power use (e.g. overnights?)

Set the form up so you can collate the information across individual users and clusters of users. Look at an online format such as Google Forms.

- **Look for over-statements of power requirements**

When analysing power requests look for over-statements of requirements. Go back, seek clarification and request further consideration of power requirements. Encourage reductions where practical.



Contract-in Power Reporting

To be sure you get the power and fuel consumption data from your generator supplier that you'll need to set reduction targets, include power reporting in hire agreements

Without measuring your event's energy consumption, you can't set accurate reduction targets. But extracting this data from generator suppliers or electrical contractors can sometimes be a drawn-out and frustrating process. Ask them to provide you information on:

- generator sizes (kVA)
 - running times
 - location placed on site & power distribution details
 - litres of fuel used by each generator
- **Include power usage data and reporting in hire agreements and tenders**
Incentivise timely provision of data by holding off a proportion of the total invoice payment until the data has been provided.
 - **Get a 'planned' versus 'actual' report of generators supplied**
Include contractual provision for generator supplier reports to include generator sizes and locations.

If they are able, ask generator suppliers to **monitor kWh demand** and provide a report for the generators across the usage period.

This will give you the loadings of the generator compared to its output capacity. This information can then be analysed to see if the generator was loaded to its optimal efficiency across the duration of the usage period (you are looking for an average 70 to 80% loading).

- **Use this Worksheet to record generators and power usage**
This information is useful when planning the next year's power supply, especially if there is a change of supplier or staff.
- **Collect fuel receipts or set up clipboards to log refuelling at smaller events**
If re-fuelling yourself, remember to collect all fuel receipts, which will have litres supplied on them. Alternatively put clipboards on each genset to record re-fuelling volumes.



Sample Contract Insert

<Insert your Company/Event Name> are active participants in the *Live Performance Australia, Greener Live Performances through Energy Efficiency* program, and are committed to planning for temporary power supply at our event to be as energy and fuel efficient as possible.

We require reliable and constant power supply for our event, operating at maximum efficiency. We expect our generator suppliers and electrical contractors to take an active role in reducing fuel consumption and GHG emissions through devising ways we can:

- Reduce total kVA
- Configure distribution to optimise power demand on generators for maximise time
- Configure distribution to allow complete power down of some generators
- Utilise power outlets on flood lights
- Ensure no over supply of generator capacity, with the optimal loadings to always fall between 50% and 80% of capacity.

<Insert your Company/Event Name> will be collecting energy consumption data for analysis and archival purposes.

<Insert Contractor Name> is expected to supply all requested information in a timely manner, to facilitate the measurement and reporting process of <Insert your Company/Event Name>. The following data is required to be supplied within two weeks of the event completion. Final payment will be withheld until reporting is provided.

- List of generators supplied, including kVA of each
- Reconciliation of generators planned versus actual generators supplied
- Total fuel consumption, and type of fuel used (by each generator if possible)

Additional information to be provided if possible:

- Running hours of each generator
- Total kWh power drawn
- Average kWh loading/capacity draw of each generator

<Insert Contractor Name> is also expected to work with <Insert your Company/Event Name> on the following summary reporting:

- Location of each generator on a site map
- Description of what was powered by each generator



Build in Demand-Reduction Motivators

Linking power consumption to the bottom line is a sure-fire way to incentivise conservation attempts by power users.

Consider separating power provision to traders and stallholders, from the actual site fee. Provide a minimum amount, for example 1 x 10 amp socket, and explain the maximum load allowable. Make sure the minimum is realistic for a lean operator! Charge users for additional access or power provision. Advise them they will be audited at the event.

- **Monitor power consumption by users at the event**
This should include auditing what's being powered compared to what users pledged pre-event they would be plugging in. Be prepared to address over-usage, perhaps through charging additional fees.
- **Set up sub-metering for large users**
If you have commercial operators such as bars or catering outlets with their own entertainment, set up sub-metering to enable a user-pay system for power supply. Alternatively dedicate a smaller generator to that user and monitor and bill power consumption.

Set achievable yearly targets, such as a 5% or 10% reduction. Reductions could be focused on:

- fewer generators
- smaller generators or lower total kVA
- reduced total fuel consumption
- optimised loadings on generators
- reducing total running hours

In order to set realistic targets, and to know if you've hit them, you must have measured power usage accurately and to have data which can be compared from one edition of your event to the next.

- **Set comparable measurement targets**
If your event is growing in size (either attendance or physical site size and number of event activities), then choose a relevant metric to compare energy consumption against (kWh or litres of fuel), such as;
 - number of attendees;
 - square metres of staging; or
 - square metres of active event site

