Power Planning Pathway

Outdoor Events:
The Players, The Issues and The Challenges

Greener Live Performances

through energy efficiency

There are many players on the power planning pathway that need to be on board with energy efficiency ambitions to see these efficiencies realised. There is a tightly entwined relationship between power users, planners, suppliers with energy efficiency outcomes.

At outdoor events on temporary power, the issues and challenges to achieving energy efficiency become more complex than on mains power.

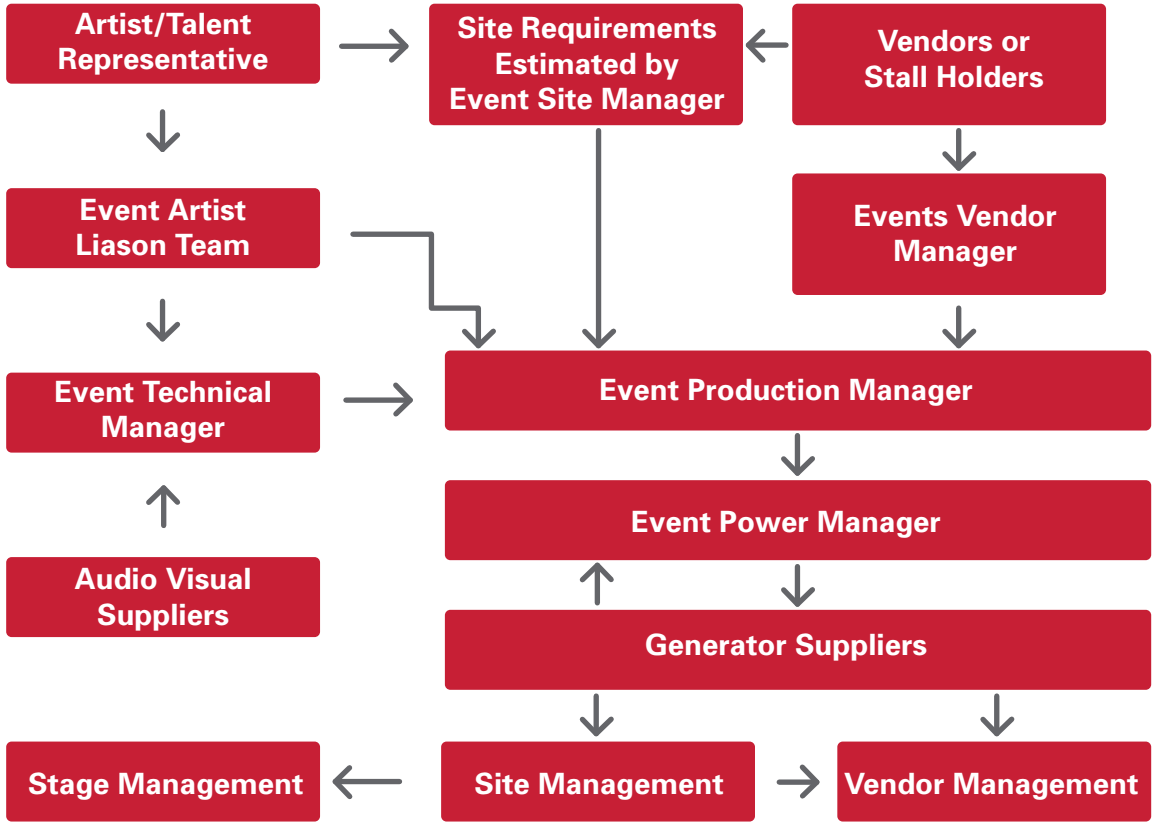
As discussed in other resources, understanding likely power demand is a critical component in designing-in energy efficiencies to power planning.

Power estimates will go through several pairs of hands before landing on the site manager or generator supplier's desks. Artists, their lighting designers, sound techs and management will likely provide 'tech specs'. This may then be passed to the event's technical production manager, who may round up the collated power figures. Then it may go via the Site and Event Manager and eventually to the electrician or generator supplier.

It will be the production team, electrician and generator supplier will make the final decision of generator sizing and siting. But those closest to performers, the AV designers/suppliers and catering manager will truly understand the ebb and flow of the performance and event activities and where peaks and troughs in power demand may occur.

Figure 1 illustrates just how complex this could be:

Power Demand Planning Communications Map – Outdoor Events



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Efficiency = Cost Savings?

Having energy efficiency efforts translate to reduced energy costs is a fairly simple equation when on mains power supply at outdoor events. There is a direct cost saving possible by reducing the kWh of power consumption. This is of course assuming that power is charged back to you from the site owners, rather than being bundled in with site hire.

Power demand on temporary power generators is also measured in kWh, but the only way to achieve cost reductions through demand reduction is if the kWh reduction also means a fuel consumption reduction.

To achieve a fuel consumption reduction, the most efficient generator configuration for the job must be planned for in advance. To achieve fuel efficiency in real time, generators must be capable of adjusting their power output to demand, essentially producing less power and therefore using less fuel. Not all generators are able to do so.

A common situation in outdoor music events is over-sizing of generators and the potential fuel waste that comes with this. This is a symptom of;

- not enough power demand information being supplied in advance or effectively analysed,
- poor planning,
- disinterest by the event in achieving efficiencies, or
- generator suppliers not being adequately engaged with or briefed on the energy efficiency ambitions of the organiser.

And so key to achieving efficiency is accurate power demand forecast information and smart analysis to lead to efficient generator placement and operating.

Another complicating factor is that temporary power supply can be invoiced in different ways. So when looking to have your power reduction and efficiencies translate to cost saving you must also include in the equation the way this is billed. Examples of costing models include:

- Direct hire cost for power generators, including transport/delivery fees
- Being charged for total running hours, rather than days on-site
- Cost for fuel use is included with generator hire
- Fuel consumption is charged separately to generator hire cost
- Fuel consumption is sourced through a separate fuel supplier
- Distribution boards and cabling hire included in total generator hire fee
- Distribution boards and cabling hired through a separate company
- Electricians and technicians hired separately (e.g. in house staff)
- Electricians and technician supplied by the generator hire as bundled in or on-cost
- Achieving reduced costs AND energy efficiency therefore is a balancing act between several components

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Incentivising Efficiencies

Engaging players on the Power Planning Pathway to tackle energy efficiency will need to be incentivised.

A major power user group are bars and catering outlets on outdoor event sites, and unless power costs are tied to consumption, energy efficient behaviour is unlikely to occur. Establish a process for monitoring and metering usage, in order to charge-back power consumption. Your electrician can set this metering up.

Event production teams in charge of various precincts and stages could also be set energy consumption reduction goals. You could offer rewards for achieving them. Pit various precincts, stages or teams against each other to achieve the biggest energy savings.

Generator Suppliers

Your generator suppliers are experts in power provision and if you engage them in your energy efficiency ambitions, reputable suppliers will rise to the challenge.

The supplier may have a financial motivation to provide as many generators and as much fuel as possible, but as the cheapest invoice often wins the work, energy efficiency as a pathway to being contracted may be the answer.

If working with an existing supplier, who knows your event and site well, perhaps include a bonus into their contract to reduce kVA (generator sizes), number of generators, or fuel volume, to incentivise their involvement.

Using an event power distribution contractor who is not the owner of the generators but hires them from multiple sources may be a solution. Their profit will be tied to labour rather than profit margins on generator hire. Also, consider striking a deal that includes you paying for the fuel bill separately, so that generator suppliers are not getting a kick-back for every litre of fuel that goes through the generators and therefore their profit margin being tied to fuel consumption.

Be aware that sometimes the supplier may supply generators that are well above the size needed for the specific job due to unavailability in their fleet or other administrative reasons. Get an assurance that the requested kVA for the generators ordered will be supplied.

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