

A nighttime photograph of an outdoor event, likely a festival or concert. The scene is dominated by tall, dark trees with green foliage. In the background, a stage is illuminated with bright blue and white lights, creating a hazy atmosphere. A crowd of people is visible in the lower right corner, and various stage equipment like scaffolding and lights are scattered throughout the scene.

SUSTAINABLE ENERGY MANAGEMENT AT OUTDOOR EVENTS

THE VISION

- 50% REDUCTION EMISSIONS by 2025
- The UK's Outdoor Events Environmental Steering Group
- Over 100 major festivals signed the Vision: 2025 Pledge
- Knowledge Hub: reports, case Studies, news





Why are
we talking
about event
energy?



1.IT'S WARMING

2.IT'S US

3.WE'RE SURE

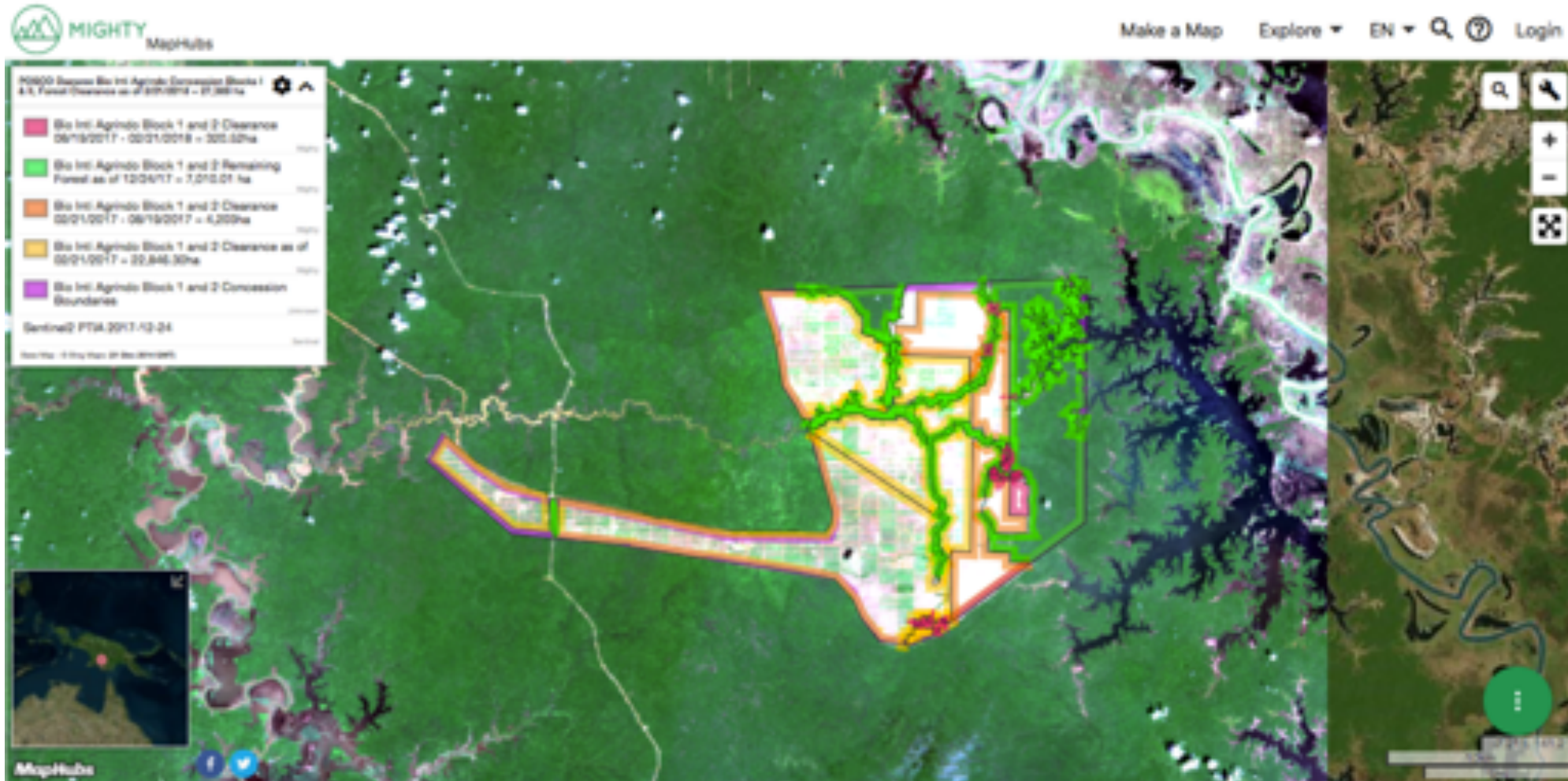
4.IT'S BAD

5.WE CAN FIX IT

Dr. Kimberly Nicholas, Lund University Centre
for Sustainability Studies.

IMPACTS OF ENERGY USE

- Green House Gasses (GHG's) emissions - generators
- Air quality
- Transport emissions from deliveries of gensets etc.
- Cost to event organiser – fuel & equipment
- Audience experience onsite – noise & fumes







At least:

**7m
litres**

of diesel are
consumed by
by UK music
festivals every
year.²³

**380m
litres**

of diesel are
consumed by the
entire UK events
industry every
year.²⁴

**0.5
litres**

of diesel is the
average litres
used per person
per day at music
festivals.

20%

of UK festivals use a proportion of
biofuel to power their events

AVERAGE ONSITE CARBON FOOTPRINT BREAKDOWN (CO₂e) UK CAMPING FESTIVAL



An aerial photograph of a festival site. In the foreground, a large, bright red, multi-lobed tent is set up on a grassy hillside. The tent has several arched openings at its base. To the left of the tent, there are some smaller structures and equipment. The hillside is dotted with green trees and bushes. In the background, a large, calm lake stretches across the middle ground, reflecting the sky. Beyond the lake, there are rolling green hills and mountains under a cloudy, overcast sky. The overall scene is a scenic outdoor event location.

**A TYPICAL OUTDOOR
EVENT IN THE UK CAN
REDUCE FUEL BY 40%
WITH EASY CHANGES**

GENERATORS ARE TOO BIG

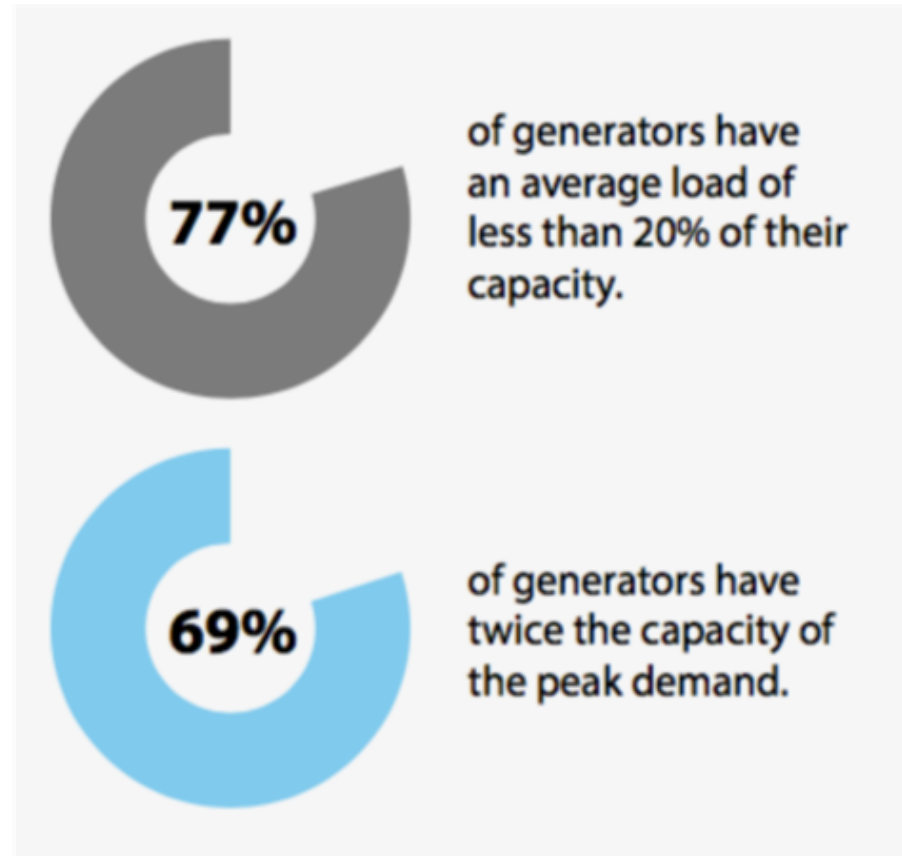
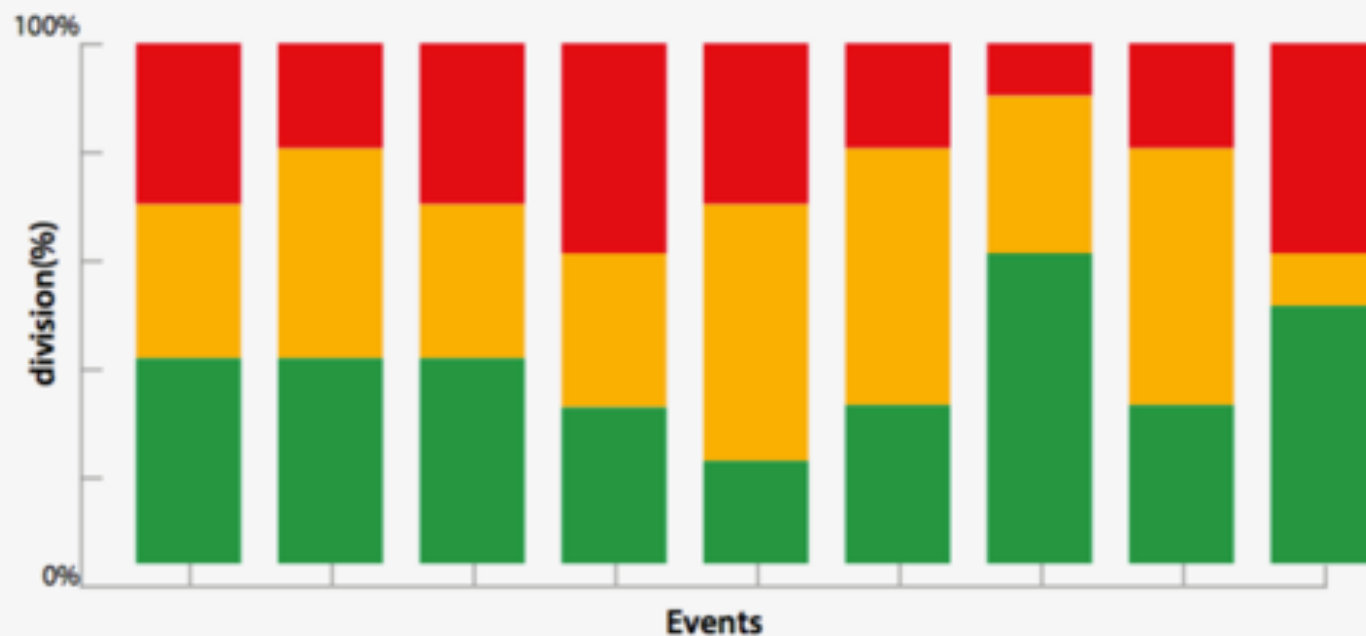


Figure 1. Results of Generator Monitoring 2014–15
(Watt-Now, Holland)

GENERATORS RUNNING WHEN NOT NEEDED

Reasons for Diesel Use at Different Events



Reasons

- Unnecessary diesel use due to running hours
- Unnecessary diesel use due to generator size
- "Necessary" diesel use

THE MAIN FACTORS THAT LEAD TO INEFFICIENCY

1. Inaccurate or absent power specifications in advance.
2. Lack of detailed scheduling i.e. generators being run unnecessarily.
3. Inefficient and old equipment that uses a lot of power.
4. Behaviour e.g. leaving lights or equipment on when not needed.
5. Power demands e.g. sponsors and headline act contracts.

HOW CAN WE
MANAGE
ENERGY AT
EVENTS
MORE
EFFICIENTLY?



THE POWER MANAGEMENT HIERARCHY



Prevention - Do you actually need power in this location or for this application?

Efficiency - Use less power & use it in a more fuel efficient way

Sourcing - Can you use mains instead of generators? Can you use renewables?

Hybrids - Can the system be backed up or bolstered by battery technology?

Alternative fuels - Can you use HVO or other sustainable fuels?

Diesel-fueled generators - only where nothing else can be used

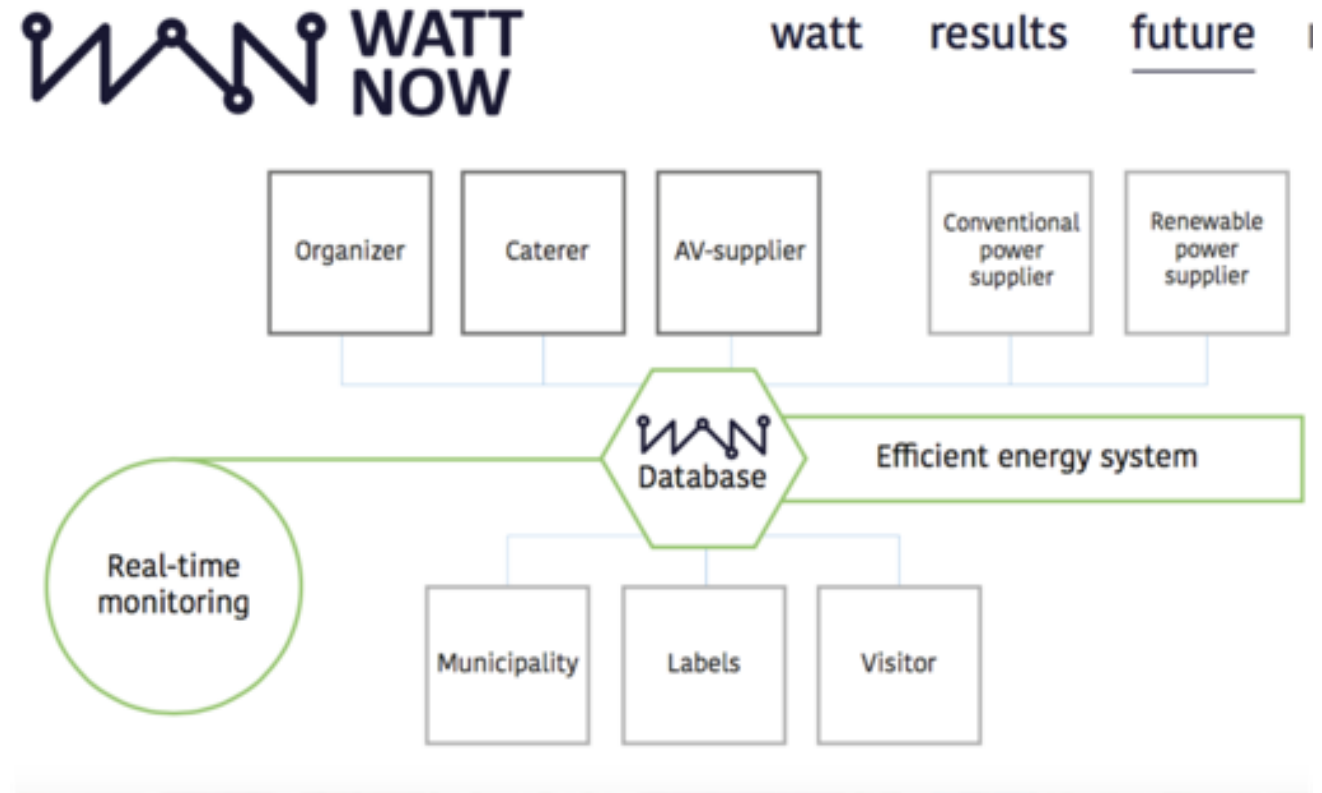
REDUCE DEMAND

- LED stage lighting
- Auto daylight switch-on /off sensors on lighting
- Removing fuses from cabin heaters (if they are not required)
- Supply only 16A to tour buses
- Charging power feeds to concessions
- ' Switch-off ' campaigns for all stalls and contractors



BETTER SYSTEM DESIGN

- Advance information
- Smart systems
- Less redundancy
- ‘Power Stations’



SUSTAINABLE POWER SOURCES

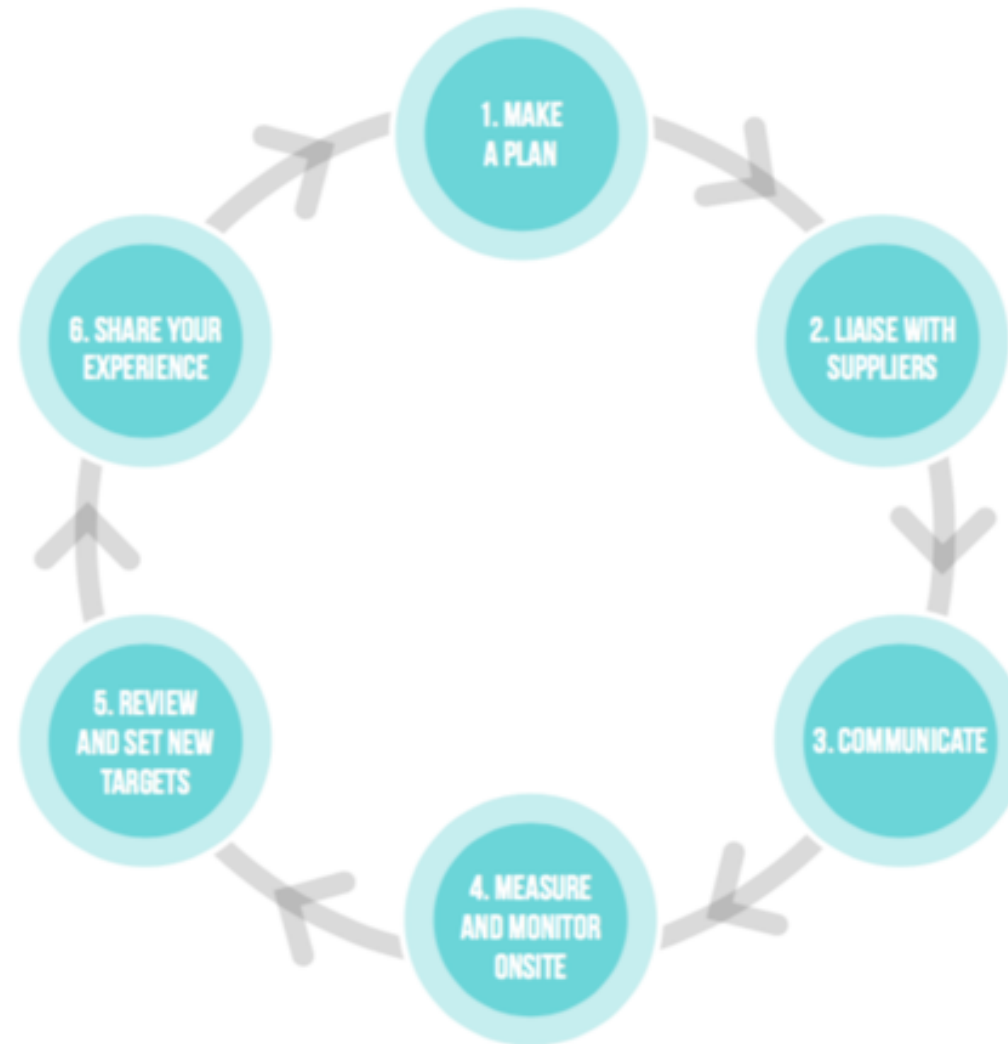
- Hybrid system/units
- Hydrogen Fuel Cell
- Solar
- Wind
- Pedal Power
- Grid Connection



IF YOU REMEMBER NOTHING ELSE...

1. Establish what power you really need
2. Use the Power Hierarchy to plan
3. Collect power data during event (contractor)

**JUST BE
SMART**



LEARN
MORE >



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