

# THE GENERATOR PROJECT

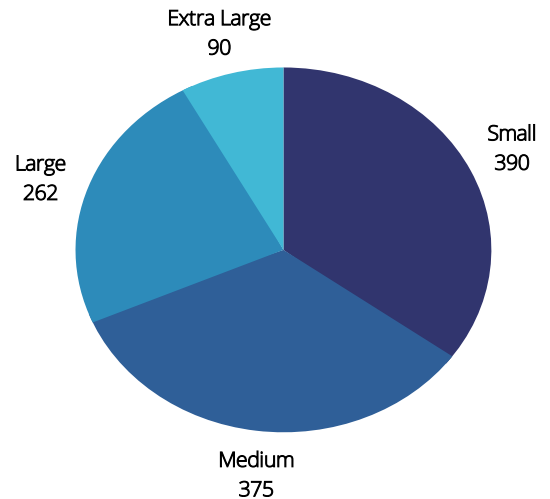
December 2021  
Newsletter 1

## First Quarter Report

Welcome to the first report from The Generator Project. This quarter we have seen a steady increase in the number of people using the app since the time of our launch. We continue to collect data through the Film App process but still need more Locations and Electrical departments to be inputting this vital information onto the app.

By building a clearer picture of what power is currently being used for filming, our suppliers can make more informed decisions when looking at future investments in clean technology.

Please download our app if you haven't already done so!



The data from our first quarter has been provided from 70% of London's boroughs. 271 generators in these boroughs used over the past 3 months are Stage 5. Whilst generators in the small (less than 37kW) and medium (37-75kW) categories make up over 60% of all generator use.

This data is from the questions asked at the point of booking so we still need more people to be downloading the app and inputting whilst they're on site as things often change after applications have been made.

## Stage 5 Generators

If you are filming at a location where generators are your only option, then please request the latest models possible from your suppliers as the newer 'Stage 5' machines are much more fuel efficient than older machines.

How to tell if you have a Stage 5 Generator:

Look for the 'PA' in the approval number, which will look something like this:

e1\*97/68**PA**\*2012/46\*0699\*04



The first letter refers to the emission stage:  
Engine Category Letter EU Emissions Stage  
A-C EU Stage I  
D-G EU Stage II  
H-K EU Stage IIIA  
L-P EU Stage IIIB  
Q-R EU Stage IV

And the second letter to the engine's designation:

A = variable speed.

B = constant speed

Industry Supplier On Location Hire have currently got 8 x Stage 5 20K's available to hire and they'll have 2 x 40K's available from January.

## In Conversation...with Robert Long from Zenobe

In 2021, Zenobe provided a battery pack that powered the paddock and broadcast unit for [Extreme E](#). This battery pack followed the Extreme E team as they circled the world. It works with a generator, but because of the automated and optimised switching system, the generator is only used for short time, dramatically reducing the pollution, noise and fuel needed.

### Is the Battery Pack powerful enough to power a unit base all day?

The pack is rated at 120kW, producing 160kWh. Our research shows that most unit bases have peaks when everything is on at once, and quieter periods when most of the crew are on set. The benefit of the battery is that you can use a much smaller generator that is running less of the time to trickle charge at full load as the battery catches all the peaks. The battery can also handle in-rush currents from start-up a lot better.

We hope film units will use our battery packs in conjunction with generators running on renewable diesel, at least for the next few years. The battery will allow the generator to be switched off for much of the time, keeping air pollution to a minimum. We will be doing some "real world" tests on film sets in 2022, so hopefully we will have some accurate data on actual cases soon. However we have got data from the broadcast at Xtreme E, some smaller events and construction sites, where we can see that in many cases the actual energy consumption is a lot lower than anticipated.

### What sort of output connections are there on the Battery Pack? How long does it take to charge?

1 x 125A/3ph, 1 x 63A/3ph, 1 x 32A/3ph, 2 x 16A  
Charging can be done using a 125A input Powerlock and it takes around 1.5 to 2 hours. We can also add bespoke connections as we have done in the past with Type 2 charging and CCS connections to charge on-site EVs. One of the most useful functions is that our power packs produce real time data on power use, so we can carefully monitor the power requirements. This means we can get more efficient and use less generator power as we learn more about the power requirements of the film industry.

## We've been nominated!

We're really pleased to share that we've been nominated in the Sustainability Category at this year's Makers and Shakers Award. We'll also have a stand in The Green Zone at Focus so please come along and say hi.



### How big is it and how does it arrive on set or at Unit Base?

The current power pack is 2.4M long x 1.2M wide x 1.65M tall and weighs 2.5 tonnes. It will fit on the back of a flatbed, however we are currently looking into a trailer option. The next version will be smaller and lighter.

### How much does it cost?

As we are still working on our partnerships, we cannot put a price on the daily hire fees just yet, however, you should know that Extreme E saved around £250 per day on fuel costs alone. When the fuel costs go up in April the saving will be around £480 per day. Obviously, the savings of hiring smaller generators, reduced air pollution, reduced noise and a reduced carbon footprint should be mentioned here too!

