



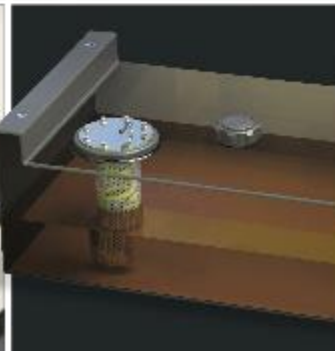
# **Reducing Emissions and Working Towards a Zero Carbon Future**

21<sup>st</sup> January 2021

[www.cpa.uk.net](http://www.cpa.uk.net)



# Reducing Emissions and Working Towards a **Zero Carbon Future**



ROBUST AND EASY-TO-USE ANTI-VANDAL

# ECO HYBRID FUSION PULSE RANGE from *groundhog*

Reducing Emissions  
and Working Towards a  
Zero Carbon Future



Cost effective and environmentally friendly  
mobile, static & toilet units.

Groundhog **solar hybrid technology** gives owners and end users  
improved chances of winning contracts through **greater sustainability**  
by way of **reduced fuel usage** leading to **lower CO<sub>2</sub> emissions**.

**FUSION PULSE** INNOVATION THAT WORKS.

## ECO FEATURES

- Warm water on-board heating system
- Air blown heating system
- 12V LED lighting with PIR
- Battery powered sockets with USB connection
- Recycled flooring
- Up to 80% reductions in generator run time
- Waterless urinal
- Low flush eco toilet
- Heat insulation and double glazed windows
- Fuel Active® System
- Rain harvester tank
- Telemetry remote monitoring

## MOBILE, STATIC & TOILET UNITS

# Eco Features

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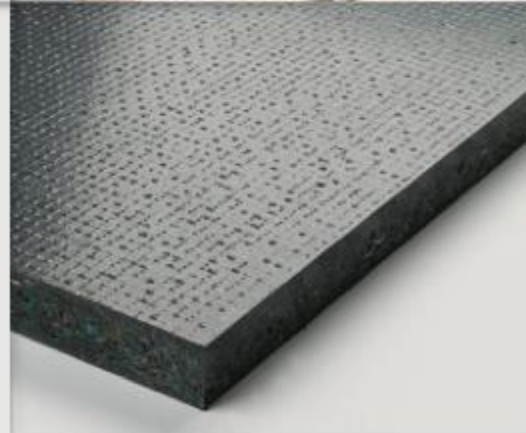
- Compact mobile units are **towable using smaller vehicles**, reducing fuel consumption



- 12V LED lighting with PIR



- **Battery powered sockets** with USB connection



- Non-slip plastic flooring made from recycled products



## MOBILE, STATIC & TOILET UNITS

# Eco Features

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- Up to 80% reductions in generator run time



- Heat insulation and double glazed windows – more efficient heating, less power used



- Low flush eco toilet – reduces water usage

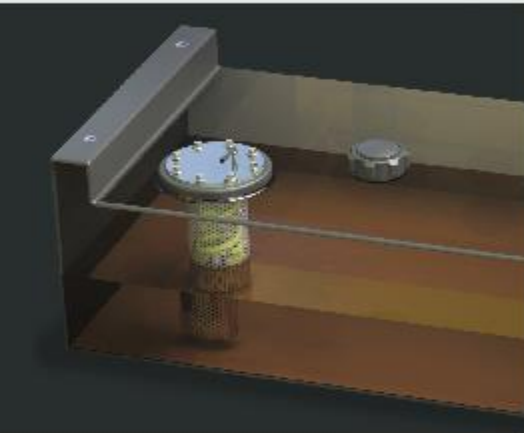


- Waterless urinal – 100% reduction in water usage

## MOBILE, STATIC & TOILET UNITS

# Eco Features

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- **Fuel Active®**  
– only burning clean fuel reduces emissions



- **Rain harvester tank** for toilet flush (Solar Hybrid Toilets)



- **1,000 litre waste tank** (Solar Hybrid Toilets)  
– less site visits, reducing fuel usage



- **Telemetry remote monitoring**  
– less site visits, reducing fuel usage

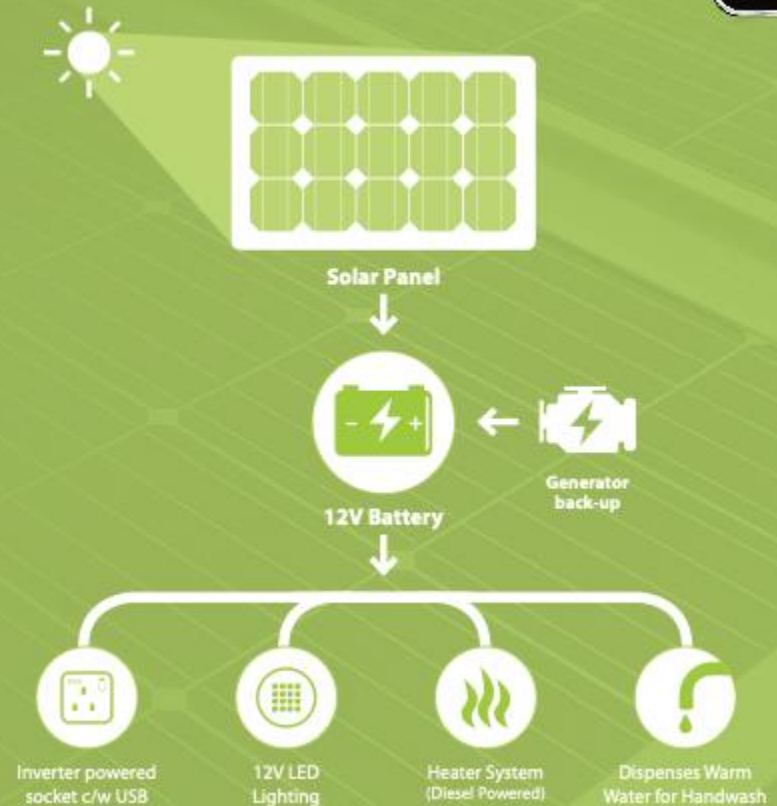
## POWER OPTIONS

# Intelligent Solar Technology

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Highly efficient 130amp power AGM battery is charged via **intelligent solar power system** built in controller and backed up by an **on-board power silenced generator** – **ensures optimum performance is maintained when in use and unmanned.**





POWER OPTIONS

# Intelligent Solar Technology

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The generator charges the **battery**, allowing the **LED lighting**, diesel powered **heating system** and inverter powered **electrical sockets** to be operational **without the need for the generator to be running**.

## Generator NOT needed to run the following



LED lights



Heating system



Inverter powered socket



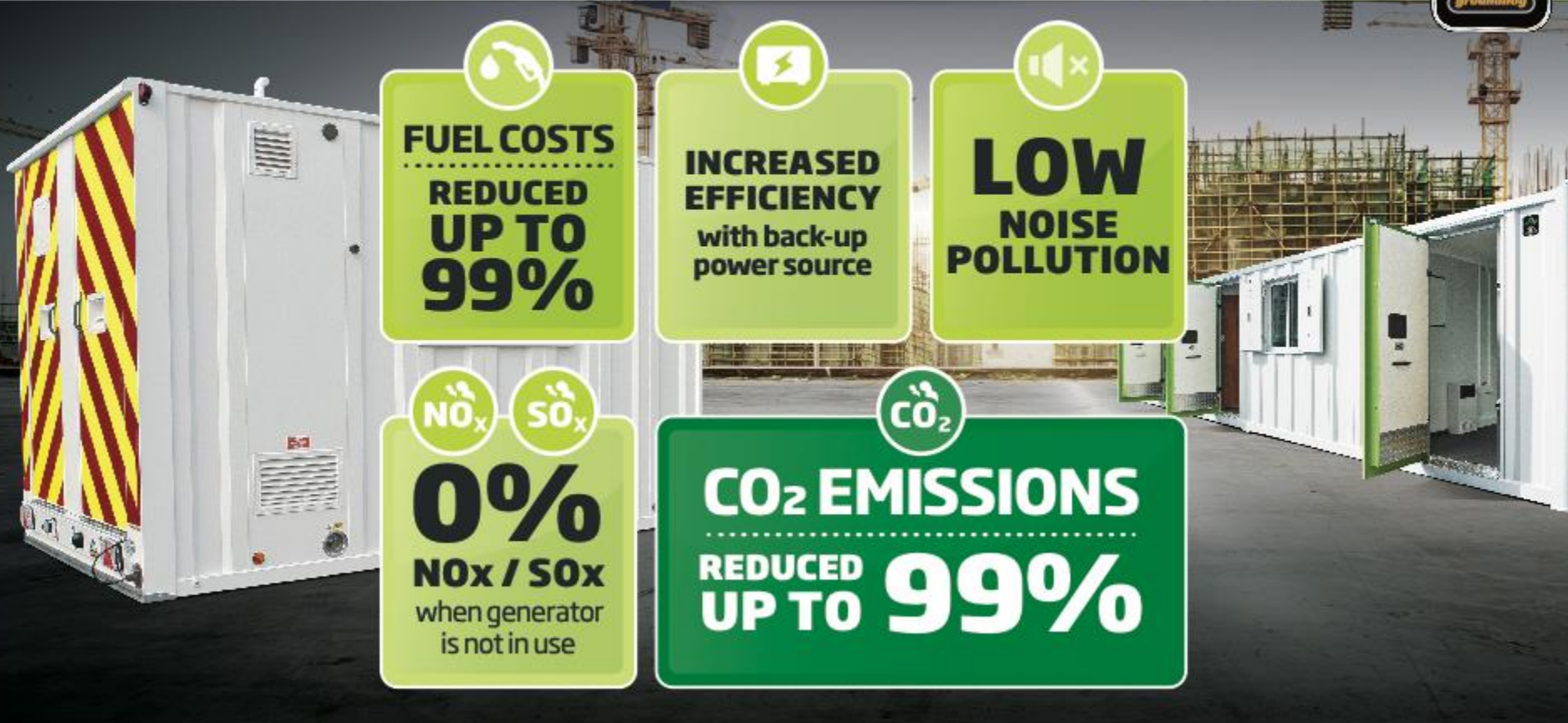
The generator is needed to heat the water. When it reaches its temperature then the generator does not need to run.



VALUE PROPOSITION

# Eco Benefits of the Fusion Pulse System



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**FUEL COSTS**  
.....  
**REDUCED**  
**UP TO**  
**99%**

  
**INCREASED**  
**EFFICIENCY**  
with back-up  
power source

  
**LOW**  
**NOISE**  
**POLLUTION**

   
**0%**  
**NOx / SOx**  
when generator  
is not in use

  
**CO<sub>2</sub> EMISSIONS**  
.....  
**REDUCED**  
**UP TO** **99%**

## POWER OPTIONS

# HVO Fuel (Hydrotreated Vegetable Oil)

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# Reducing Emissions and Working Towards a Zero Carbon Future



**INNOVATION THAT WORKS.**



6kVA Generator

9.8kVA Generator

## Generators

HVO is compatible with the Groundhog 6kVA and 9.8kVA generators.



## Webasto Heating

HVO is compatible with Webasto water and air heating systems.



## Fuel Active System

- HVO is compatible with Fuel Active System
- Ensures the fuel pickup point delivers clean fuel.
- Emits fewer toxic emissions.
- Reduces servicing costs and fuel related downtime.



## FUTURE POWER OPTIONS

# Fuel Cell | Lithium Ion Battery | Gas

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- ✔ **Clean energy**
  - Reduced CO<sub>2</sub>, Nitrogen Oxide and particulates compared with fossil fuels
- ✔ **Low noise pollution**
  - Low-vibration and quiet operation
- ✔ **Long operating life, maintenance free**
- ✔ **Can be produced from renewable sources**
  - Biomass, landfill gas and power plant or industrial emissions
- ✔ **Lithium ion batteries**
- ✔ **Bio gas**
- ✔ **Reduced Operating Costs**
  - Minimised downtimes and service intervals



Intelligent solar technology with generator back-up

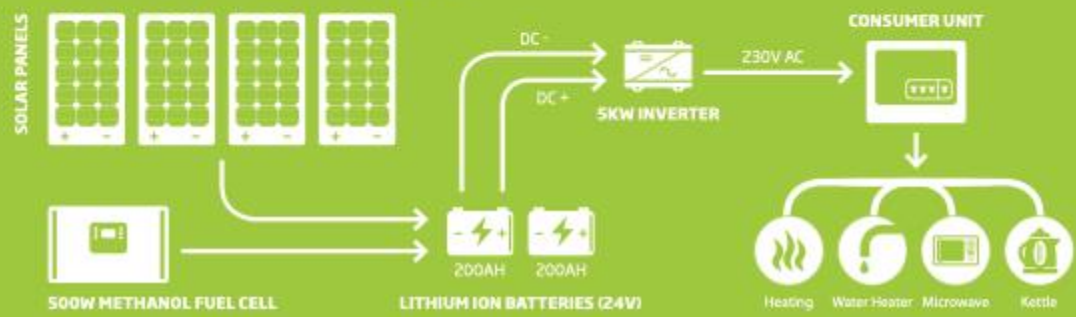


Battery 24 volt technology



Fuel cell technology

## How the system works





Any questions?

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# **Reducing Emissions and Working Towards a Zero Carbon Future**

Chris Cassley, Policy Manager

[www.cpa.uk.net](http://www.cpa.uk.net)

It is a stated policy aim of the UK Government, to become the ‘Greenest ever’. A raft of policies and measures are being introduced over the coming years, to boost the government’s green credentials. These include:

## **Energy White Paper – Powering our net zero future (published December 2020)**

- The paper provides context and the structures needed to meet the government’s net zero future by 2050. This includes plans to ban the sale of new petrol and diesel cars and vans by 2030

## **Ten points for a Green Industrial Revolution (November 2020)**

- Signals the Prime Minister’s ambitions for a range of low-carbon technologies, with the financial support to help accelerate progress towards net-zero emissions. The plan aims to support up to 250,000 UK jobs, and to mobilise £12bn of public funding that could leverage more than three times that amount from the private sector

## **UK hosting COP26**

- United Nations Climate Change conference. Being hosted in Glasgow in November, with heads of state, leading experts and climate change scientists



- Budget 2020 - plans to remove the rebate for red diesel on construction equipment by April 2022
- European Rental Association launch the ERA Equipment CO2 Calculator (January 2021)
- CITB Net Zero report published later this year
- Government Green Paper on the future of Public Procurement will contain details on how public infrastructure projects will reduce carbon emissions

Construction has taken steps in reducing engine emissions. The UK government, working with the EU, since 1999, has seen the following reductions in engine emissions from NRMM;

- 97% reduction of particulate emissions
  - 96% reduction in nitrogen oxides
  - 85% reduction of hydrocarbons
- The Construction Equipment Association estimate that to meet these targets, manufacturers of plant materials and machinery have spent around 70% of their research and development (R&D) investment to achieve these reductions. Hybrid engines and electric powered equipment are already on the market – with more to come

- Government to work with industry in developing sensible targets and plans to reduce emissions
- Removing the red diesel rebate will only raise a limited amount for the Treasury – but might put back investment plans in new equipment for some companies
- Help the plant-hire industry make the switch away from diesel and fossil fuels to viable alternatives
- Current economic climate and impact of the pandemic means the situation is delicate. Government wants construction to drive economic growth – but it also has to recognise the challenge and economies of scale many companies are facing
- But – change is coming – the government is determined to push through its climate agenda

**FLANNERY**

PLANT HIRE



“ We innovate by challenging the norms, which means our customers work more efficiently and responsibly. ”

Chris Matthew – *Strategic Manager*

Flannery Plant Hire

**Innovation & Sustainability**



# Delivering our Green Agenda



## Data That Will Drive a Green Agenda



### Data that can drive and support

Flannery have invested in the latest telematics dashboard, first version launched in 2019, allows our clients to access product type, Analyse production management to recognise training gaps. Read the Flannery Telematics report.



## Getting to Site, Greener and Cleaner

### Flannery have new delivery vehicles

The Flannery transport fleet to take control of our fleet, choose the most efficient routes, fuel manage and improve driver performance. Transport to and from site with a greener and cleaner vehicle.



## Flannery Environmental Training: Driving Behavioural Change

### This year (2020) Flannery launched, internally developed and delivered an ECO-Operator module.

This training is delivered by our Plant Trainers and focuses on safe and behaviour, often utilising of simulators. Available to Flannery and customers this course promotes use of machines and technology, reduction in fuel consumption and reduction in emissions. Further to this Flannery training courses that deliver additional in-depth understanding on GPS machine control, which support and allow the operator to monitor

## Innovative Machinery

### Continuous investment in EU Stage IV & V compliant equipment allows us to follow the latest EU environmental regulations.

The Flannery fleet provides the cleanest and most efficient solution, reducing fuel use and minimising your emissions on site. Flannery is proud to be a Partner and Gold Member of the Supply Chain Sustainability School (SCSS) as well as a founding signatory to the Plant Charter. Following the declaration of a climate emergency, the industry working group was set up and has been focused on a roadmap for plant

specification that is both achievable and sufficiently robust to deliver meaningful improvements. The aim is to develop a unified approach to reduce emissions and improve air quality by adhering to five values: engagement, awareness raising and education, measurement and reporting, innovation investment and minimum standards in procurement.



### Flannery leading the transition from Stage IIIB to Stage V

EU Stage IIIB				
From 1st January 2011				
Power: 130kW - 560kW				
CO <sub>2</sub>	HC	NOx	PM	
3.5	0.19	2.0	0.025	

EU Stage IV				
From 1st January 2014				
Power: 130kW - 560kW				
CO <sub>2</sub>	HC	NOx	PM	
3.5	0.19	0.4	0.025	

EU Stage V				
From 1st January 2019				
Power: 130kW - 560kW				
CO <sub>2</sub>	HC	NOx	PM	
3.5	0.19	0.4	0.015	

Cleaner Burn  
Lower PM Emissions

"Flannery continue to be a valued, key Partner in the Supply Chain School. Their input and support has been crucial in developing the Group's Commitment Charter - a collaboration to improve on site air quality to improve on site air quality and carbon emissions - and the underlying drive for the plant hire sector to become more sustainable."

James Cadman,  
Lead Consultant at Action Sustainability and Plant Group Lead in the School.

flanneryplanthire.com | 7

