



19 February 2019

ASX: IGE

Amsterdam: Production of Fuel on Track

White Paper: IGES Produces Cleaner Fuel

The Directors of Integrated Green Energy Solutions Ltd ("IGES" or "the Company") are pleased to provide the following update.

Amsterdam

Status Update: Site Works on Track for Installation of Plastic to Fuel Modules

- Weather delays utilised to allow electrical equipment to be delivered and installed.
- The first set of IGES patented plastic to fuel processing modules are on the water and on track to be delivered in March.
- Site works in Amsterdam are being undertaken to allow installation of the modules.
- Training of staff scheduled to commence with arrival of modules.

Weather conditions:

Weather in Amsterdam over December saw a cold snap where Amsterdam experienced uncharacteristic periods of snow fall. This snow caused actual delays to the construction process with onsite works needing to cease. The month of January is also not for the faint of heart with January ranking, on average, as the coldest month of the year in Amsterdam with an average high temperature of 4.5°C (40°F) and an average low temperature of 1°C (33°F) with most days around 2.5°C (36°F). This is coupled with an average day's sunshine being approximately 2 hours per day. Weather in February is not much warmer than January. The average high temperature in Amsterdam for the month of February is 8° C (46°F) with an average low temperature of 0°C (32°F). While February was drier than January there were more rainy days across the month causing further obstacles to completing site works.

Site Works:

With bad weather conditions over the Christmas period making it difficult to finalise the laying of the concrete slab in the production area, IGES focussed its efforts in January and February on having its power requirements successfully delivered to site. The electrical switch room building has been constructed and all major electrical equipment now installed. The building and its related components are due to be inspected by the Dutch supply authority and approved for connection in early March. This will provide the site with 2 megawatts, which will allow the site to operate at a capacity of 100 tonnes per day ("TPD").

With weather conditions improving, IGES is now continuing with civil work, with work to be finalised in the next 10 days to install steel mesh and concrete reinforcement bars, with the concrete slab to be finalised in the first week of March. This is on track with the expected delivery of the modules on site in March. The work done over January and February will allow for the immediate installation of the first set of modules in time for this delivery. In addition to

this, the Company will be air freighting the final components for this first module in the second week of March to ensure they arrive at the same time as the modules.

Training:

The start-up plan at Amsterdam requires an onsite module to be used in a real world operating environment. The delivery of the first module will provide the site with a processing capacity of 50 TPD of end of life plastic feedstock. The installation of the first stage of the facility will allow the training of operators and management staff. Further equipment is scheduled to arrive on site over the following 3 months which will see operating capacity increased to 100 TPD capacity.

Fuel Production:

Whilst construction progresses, IGES continues to liaise with the Dutch Competent Authority and other permitting authorities to ensure that the site complies with all relevant regulations and requirements prior to operations commencing.

White Paper: Lower Emissions Vs Traditional Fuel

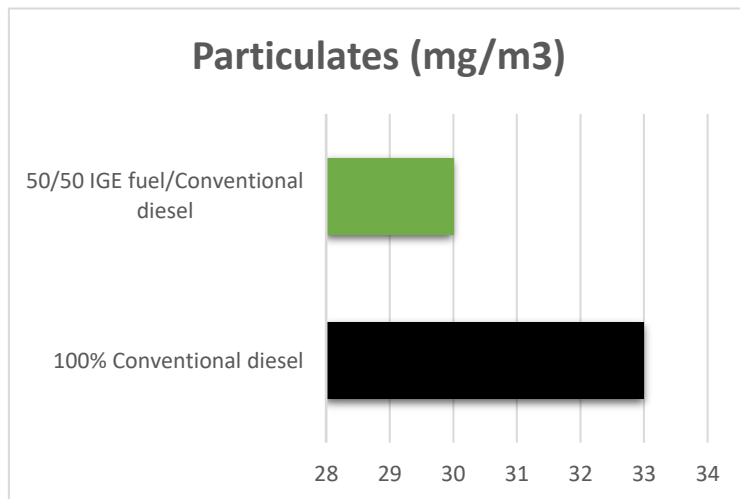
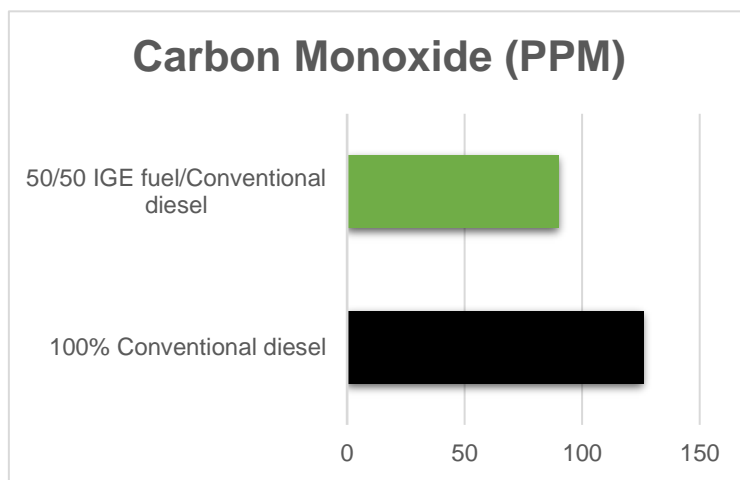
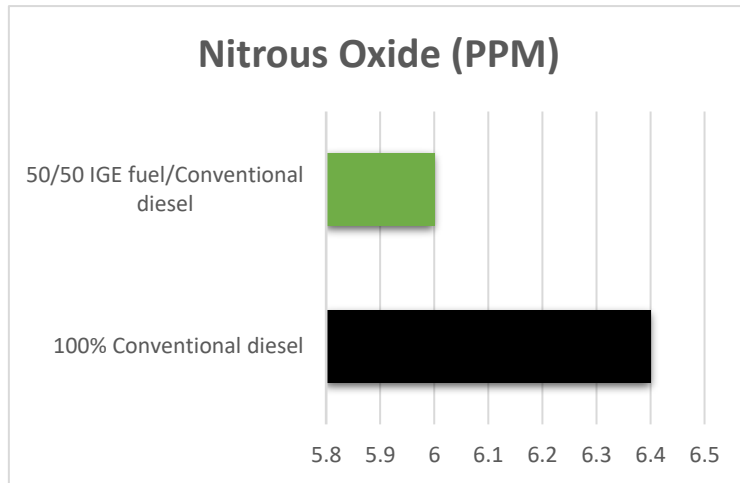
Results of Independent Testing of IGES Fuel: Lower Nitrous Oxide, Lower Carbon Monoxide, Lower Particulates

IGES is pleased to update the market on the results of independent testing of its diesel product produced using the companies patented waste plastic to liquid fuels product.

IGES has successfully tested blends of petroleum based commercial diesel and diesel derived from waste plastic produced using IGES in-house patented technology. Blends of up to 50% IGES fuel and regular bowser fuel were tested. The Company choose this percentage to give a real world operating environment that may be representative of the highest blends that would be seen in a wholesale market where the IGES product may necessarily be added to a customer's existing fuel inventories. It must be noted that the Company has a patented plastic to fuels process that results in a range of fuels and products that meet all standards, including EN590 (Road Ready Diesel), EN228 (Road Ready Petrol), Naphtha, Marine fuel and Marine Diesel Oil (MDO) requiring no further blending or refining before being used in a vehicle, ship, or equipment.

The tests were performed by ERP Engineering Pty Ltd ("**ERP**"), an independent engineering firm based in the Illawarra region. ERP was selected as it is an Australian owned and operated company that has 20 years' experience in diesel emissions measurement. They have previously collaborated on published papers and are currently collaborating with researchers from the University of Wollongong regarding further research into the measurement of diesel emissions. ERP also provides mobile diesel emissions measurement services for the management of health and safety in the underground mining industry.

The results from ERP of the IGES fuels show a marked **decrease** in pollutants across the board in the tested blends as shown graphically below.



The results show a significant reduction of emissions for a 50/50 blend with a 10% reduction in particulates (smoke), a 6.7% reduction in nitrous oxides and a 28.6% reduction in poisonous carbon monoxide emissions.

While IGES appreciates that the data points of the White Paper need to be expanded to provide a more comprehensive analysis these results show a strong relationship that the IGES chemical recycling of waste plastic into liquid fuels has a significant and material positive benefit to the environment.

This benefit of a reduction in emissions upon utilisation of the IGES fuel can be viewed in addition to the significant and independently verified reduction in the carbon foot print associated with the manufacturing of the IGES fuels when compared to traditional fuels. IGES commissioned SCS Global Services, (“**SCS**”) to produce a Carbon Footprint Certification of the IGES fuel. Carbon Footprint Certification assures investors and stakeholders that your carbon footprint is accurate, credible and aligns with leading reporting standards. SCS was selected as it is viewed as an independent professional expert in the field of carbon footprinting measurement and validation. SCS is an accredited verification body for The Climate Registry, PAS 2060, CDP, the Global Reporting Initiative and the World Resources Institute’s Scope 1, 2 & 3. The SCS website address is www.scsglobalservices.com.

SCS performed a carbon footprint lifecycle analysis report comparing the IGES fuel to traditional fossil fuels. The SCS report shows that the IGES waste plastic to fuel process offers a 38% reduction in greenhouse gas emissions throughout the production cycle over petroleum based diesel and 31% over petroleum based gasoline.



38% Reduced Carbon Footprint when compared to conventional diesel, based on use of 100% post-consumer plastic material as feedstock for diesel production



31% Reduced Carbon Footprint when compared to conventional petrol, based on use of 100% post-consumer plastic material as feedstock for petrol production

A white paper “Emissions Comparison between ‘Plastic Waste to Liquid’ Fuel and Conventional Diesel detailing the findings and results of the test can be found on the link here: <https://www.igesolutions.org/resources>

About IGES

IGES is focused on creating a cleaner planet for the next generation through the conversion of end of life plastic into valuable fuels. Plastic used in the process would otherwise be sent to landfill or be discarded into the environment. The Company has a patented plastic to fuels process that results in a range of fuels and products, including EN590 (Road Ready Diesel), EN228 (Road Ready Petrol), Naphtha, Marine fuel and Marine Diesel Oil (MDO). The specific products we provide from our range are determined by the territory requirements for each individual site location. The Company believes that utilising its technology will inevitably reduce the amount of plastic entering the environment. It will also help to develop circular economies, thereby creating a cleaner planet for the next generation, while bringing value to shareholders.

FOR FURTHER INFORMATION CONTACT:

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