

SELECT FUEL

Advanced Plastic-to-Fuel Technology

October 2022

INTRODUCTION

In the late 1800s, the speed of human manufacturing became constrained by the limited amounts of metal, wood, bone, tusk, and horn. As a result, plastics were invented to replace natural materials as they are cheaper, lighter, safer, and stronger.

The main problem with plastic is that it can last forever. Innovators are always searching for ways to make recycling better and more efficient, but the amount of plastic in our landfills and water is so large that there needs to be a more immediate and long-term solution.



WE ARE SELECT FUEL

Select Fuel is committed to developing technologies to help solve the global problem of plastic waste. Through our advanced **Advanced Plastic to Fuel Technology**, we convert plastic waste into a Renewable Fuel.

What is Sustainable Aviation Fuel (SAF)?

Renewable Fuel

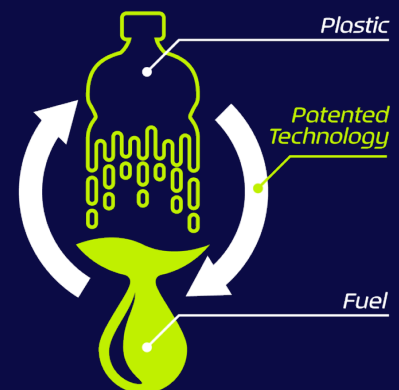
Produced from sustainable feedstocks such as Inedible waste fats and oils, high lipid oil crops, municipal green bin waste or **plastic waste**.

vs.

Existing Fuel

Produced by refining fossil fuels extracted from the earth resulting in a negative effect on the environment as **they release carbon from the past**.

Value Chain



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PROBLEM: PLASTIC WASTE

- It takes moments to create a plastic bottle, **but it never truly decomposes**, and only “breaks down” into smaller and smaller fragments.
- Plastic waste congests landfills, clogs waterways and has formed an **oceanic plastic island three times the size of France**.*
- By 2015, **8.3 billion tons of plastic had been generated**, and **6.3 billion tons had become waste in landfills and waterways**.**
- If current trends continue, **12 billion tonnes of plastic waste** will be in landfills and **polluting waterways and oceans by 2050**.**

PLASTICS: A CLEARER PICTURE

- Despite society now focused on reducing current usage, the **pace of plastic production shows no signs of slowing**.
- Recycling is only addressing 9% of total production.**
- Incinerating or landfilling only compounds the problem releasing harmful toxics into the air & leaching into groundwater.
- Studies are showing that microplastics are showing up in our food chain (i.e. animal tissues, sea salt).
- Available landfill capacity is diminishing <25 years.**
- Legislation globally is trending towards bans on plastics in landfills, but only in developed countries.
- Global markets for recycled plastics are shrinking or shutting down due to over supply and low demand.

SOURCES OF RENEWABLE FUEL

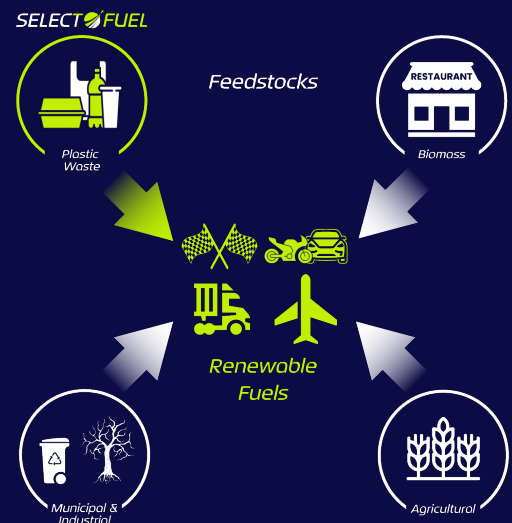
Millions of Internal Combustion Engine (ICE) vehicles will still be around for the foreseeable future.

Therefore utilizing Renewable Fuels is one of the only viable options for reducing emissions in the short term.

Renewable Fuels can be made from various feedstocks such as:

- **Biomass** – Inedible waste fats and oils
- **Agricultural** – High lipid oil energy crops like camelina or rapeseed
- **Municipal & Industrial** – Grass clippings, food scraps, Excess wood, agricultural, and forestry residues
- **Plastic Waste**

Sources:
*<https://earthsky.org/earth/great-pacific-garbage-patch-bigger-than-thought>
**<https://cleantechnica.com/>
1 - <https://www.cnn.com/2022/02/11/sustainable-aviation-fuel-costs-more-but-consumers-willing-to-pay-iaa.html>
2 - <https://www.eesi.org/articles/view/sustainable-aviation-fuel-on-the-global-climate-agenda>



OUR SOLUTION?

Contact us to learn more about how Select Fuel is solving the issue of plastic waste.

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