Sustainable Aviation Fuel



https://aurisbioenergy.com/sustainable-aviation-fuel

The European Parliament has approved legislation that 70% of jet fuels at EU airports will have to be green ["sustainable"] by 2050.¹

IATA estimates that sustainable Aviation Fuel (SAF) could contribute around 65% of the reduction in emissions needed by

aviation to reach net zero by the same date.

Sustainable Aviation Fuel is a liquid fuel currently used in commercial aviation which reduces CO2 emissions by up to 80%. It can be produced from a number of sources (feedstock) including waste oil and fats, green and municipal waste and non-food crops. It can also be produced synthetically via a process that captures carbon dioxide directly from the air It is 'sustainable' because the raw feedstock does not compete with food crops or water supplies, or is responsible for forest degradation. Whereas fossil fuels add to the overall level of CO2 by emitting carbon that had been previously locked away.

As a group you have been selected to form a team. Within the team you will appoint a team members to fulfil the roles of business development executive¹, R&D manager² and technology analyst³. The team reports to the CEO.

Your team works for a UK based company with a patent portfolio covering DAC technology. However, you do not have access to hydrogen production technology. You wish to source the process technology capable of producing SAF from CO_2 and H_2 so you can manufacture them in your manufacturing plants. You begin a patent search looking for third parties owning patent applications for hydrogen production by electrolysis. Ideally the energy source should be renewable electricity (e.g. solar, wind).

Your CEO wants to partners with companies in the Middle East and/or North Africa to sell your SAF product in those regions.

- 1. The business development manager, you'll identify new business opportunities in order to generate revenue, improve profitability and help the business grow
- 2. The R&D manager is responsible for conducting research, developing new products, processes, and technologies, and improving existing products.
- 3. A competitive intelligence analyst performs market research to provide information to executives or management who use it to craft a new sales project or business strategy.

¹ <u>http://tinyurl.com/2tz7hnrp</u>

See further:

https://www.iata.org/en/programs/environment/sustainable-aviation-fuels/

Atmospheric CO₂ can be obtained via direct air capture technology DAC

https://carbonengineering.com/our-technology/

Carbon dioxide from DAC can be combined with hydrogen to form SAF. The hydrogen required is preferably obtained by electrolysis.

https://www.greenhydrogensystems.com/

https://apollo.engineer/markets/hydrogen-carbon-capture/

https://link.epo.org/web/patent insight report innovation trends for electrolysers i n hydrogen production en.pdf

https://www.patentstyret.no/globalassets/patent/filer/carbon-capture-technology.pdf