

## Petrobras concludes renewable diesel tests

Rio de Janeiro, July 14, 2020 – Petróleo Brasileiro S.A. – Petrobras informs that, on July 11<sup>th</sup>, it successfully concluded tests on an industrial scale for the production of renewable diesel. The tests were conducted at the Presidente Getúlio Vargas Refinery (Repar), in Araucária, Paraná, where 2 million liters of soybean oil were processed, which resulted in the production of about 40 million liters of diesel oil with renewable content. The new fuel brings environmental benefits, as it reduces greenhouse gas emissions and improves the performance of engines compared to biodiesel.

According APROBIO studies, Biodesel Producers Association, the renewable diesel reduces greenhouse gas emissions by about 70 % compared to mineral diesel (oil product) and 15 % compared to biodiesel for the same vegetable oil of origin. Compared to biodiesel, the use of renewable diesel also improves engine performance, avoiding problems such as clogging of filters, pumps and injector nozzles. The renewable diesel produced by Petrobras does not contain glycerin or metal contaminants, and its molecules are the same as those of mineral diesel. In other words, it is a fuel that can be mixed with diesel oil without any restrictions.

Renewable diesel still depends on regulation by the National Agency of Petroleum, Natural Gas and Biofuels (ANP) to be traded in Brazil. The results will be informed to the ANP to contribute to the approval of the product regulation. The objective is to meet, together with the existing biodiesel, the portion of biofuel that must be mixed with the diesel sold at the stations. Currently, biodiesel is mixed with mineral diesel in a proportion of at least 12% by the fuel distributors, and will reach 15% by 2023.

### Renewable diesel production

Renewable diesel is produced by processing renewable raw materials, such as vegetable oil or animal fats, together with mineral diesel in processing units within oil refineries. The process results in a product that is chemically identical to mineral diesel, with renewable origin, which is internationally known as Green Diesel, Renewable Diesel, Hydrotreated Vegetable Oil (HVO) or Paraffinic Diesel (renewable paraffinic diesel).

Petrobras has a technology patented since 2006 for the co-processing of vegetable oils using the process called "HBIO". This technology results in a more stable fuel than biodiesel. Although it is not yet used in the diesel blend in Brazil, renewable diesel has wide use in other countries in Europe and the United States. The new fuel is suitable for the most modern engine technologies being introduced in Brazil.