

Biodiesel B40 in Indonesia: Solution Steps Full of Challenges

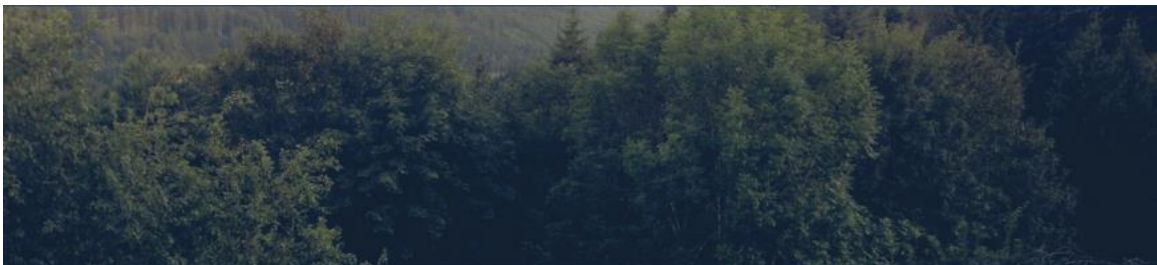
By: Marketing TeknoFluida

Indonesia, as one of the largest palm oil producers in the world, has taken significant steps in developing renewable energy through the B40 Biodiesel program which was recently launched by the Ministry of Energy and Mineral Resources in January 2025. B40 Biodiesel is a mixture of CPO or palm oil-based biofuels, namely Fatty Acid Methyl Esther (FAME) with a content of 40% which is mixed with Fuel Oil (BBM) or Diesel with a content of 60% and becomes B40 Biodiesel.



The Biodiesel program in Indonesia has been initiated since several years ago, starting from the implementation of B20 (a mixture of 20% biodiesel) in 2016, which was then increased to B30 in 2020. This increase aims to reduce dependence on fossil fuels and reduce greenhouse gas emissions. Then, in 2023, the Indonesian government announced plans to implement B40 as a follow-up step in the national Biodiesel program and B50 as a target for 2025. B40 Biodiesel has various benefits, including:

1. **Reduce Greenhouse Gas Emissions:** One of the main benefits of using B40 Biodiesel is to reduce greenhouse gas emissions. Biodiesel made from palm oil has a lower carbon footprint compared to fossil fuels, so it can help reduce the impact of climate change.



2. **Energy Diversification:** By developing B40 Biodiesel, Indonesia can reduce its dependence on fossil fuel imports, considering that so far, Indonesia still imports

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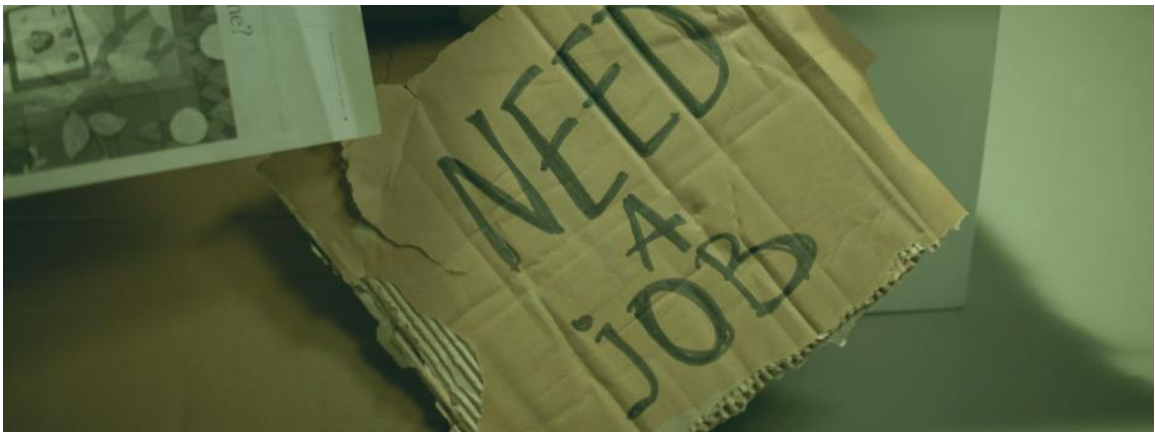
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Fuel Oil (BBM), especially Solar, worth IDR 318.8 trillion per year, so diversifying energy sources is important to increase national energy security.

3. **Increasing the Added Value of Palm Oil:** The biodiesel program provides added value to the palm oil industry in Indonesia. With the increasing demand for Biodiesel, the country, palm oil entrepreneurs and workers can gain greater economic benefits.



4. **Job Creation:** The development of the biodiesel industry can also help reduce unemployment rates by creating new jobs, both in the agricultural and processing sectors.



In its application, although the use of Biodiesel B40 has various benefits, there are several challenges that need to be considered, including:

1. **Availability of Raw Materials:** One of the main challenges in the implementation of B40 Biodiesel is the availability of sufficient raw materials. Palm oil production must be increased sustainably to meet biodiesel needs

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without sacrificing food needs because if it is not prepared properly it will cause new problems.



2. **Infrastructure and Technology:** The development of adequate infrastructure and technology is very important to support the production and distribution of B40 biodiesel considering the increase in the biodiesel quota to 20% in 2025 from 12.98 million kl when B35 to 15.6 million kl for B40.



3. **Price and Subsidy:** The price of biodiesel is often higher than fossil fuels. Therefore, a proper subsidy policy is needed to ensure that the price of biodiesel remains competitive and affordable for consumers.
4. **Environmental Impact:** Although biodiesel is considered more environmentally friendly, palm oil production is often criticized for causing deforestation and ecosystem damage. Therefore, sustainable agricultural practices must be implemented to minimize negative impacts on the environment.

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Implementasi Biodiesel B40 di Indonesia merupakan langkah penting dalam upaya mengembangkan energi terbarukan dan mengurangi ketergantungan pada bahan bakar fosil. Meskipun menghadapi berbagai tantangan, manfaat yang ditawarkan oleh biodiesel B40, seperti pengurangan emisi gas rumah kaca dan peningkatan nilai tambah kelapa sawit, menjadikannya sebagai solusi yang menjanjikan untuk masa depan energi Indonesia.