



BASF Biomass balance method

BUSINESS MODEL: **Circular supplies**

SITUATION

- Recently, there's been significant interest from customers for products that are produced from renewable raw materials. These products are perceived to be more natural and have a positive environmental impact compared to conventional products derived from fossil-based raw materials.
- BASF has developed an innovative and independently certified concept with TÜV SÜD known as the "biomass balance method." In this method, renewable raw materials can be used as feedstock in existing Production Verbund and then allocated to the respective sales products, thereby using less fossil-based resources and reducing greenhouse gas emissions. If a customer buys one metric ton of a biomass balance product, BASF replaces the corresponding volume of fossil feedstock with renewable raw materials.
- The amount of bio-based feedstock used is allocated mathematically to specific products using a novel certification method.
- The amount of the certified renewable feedstock could be 25% to 100%, depending on the requirements of the customer.
- An independent certification verified that BASF replaced sufficient fossil feedstock with renewable feedstock in the production site.

KEY BENEFITS

- Products that use bio-based raw materials do not need to compromise quality, properties and functionality – they're the same as their counterparts.
- The approach drives the use of sustainably produced renewable resources.
- Independent certification substantiates the process, provides transparency and enhances customer trust.
- Such products save fossil based resources and reduce greenhouse gas emissions.

CHALLENGE

- Replacing fossil feedstocks with renewable resources often requires developing new processes and constructing new plants. It takes time to accomplish such feats, and high investments are necessary.
- Maintain product performance and quality with renewable resources.
- Another challenge is the cost of biomass. In some cases, biomass can be twice as expensive as the conventional material sources. Value chain partners have to bear the expenses.

SOLUTION

- In the BASF biomass balance method, fossil resources in the current Production Verbund are replaced by renewable resources, such as bio-naphtha or biogas, derived from organic waste or vegetable oils. The renewable raw materials are then used as feedstock in manufacturing basic chemicals that are then allocated to different sales products.