

REDUCING GREENHOUSE GAS EMISSIONS WITH THE BIOECONOMY

Today's economy relies heavily on fossil carbon. We burn oil and gas to power homes, industry and transport – and rely on more than 100,000 fossil fuel based chemicals to make everyday products.

The bioeconomy will reduce our dependency on fossil resources by using renewable resources to make our chemicals, materials, energy and fuel. While renewable energy sources (such as wind and solar power) can help reduce the amount of fossil resources we burn, only the shift to a bioeconomy can replace fossil-resource derived chemicals. Switching to biobased resources will reduce greenhouse gas emissions throughout the value chain.



5 facts that demonstrate how biotechnology is enabling us to replace some of the most essential fossil-based chemicals with alternatives created from renewable resources



Coca Cola is already using bottles derived from 30% renewable resources. A 100% biobased bottle is also being introduced.¹

Forward thinking packaging companies are replacing expanded polystyrene with a bio form based on polylactic acid.



Creating new products from waste could recover almost 3 billion tonnes of renewable carbon by 2040.²

Existing biotechnology solutions in the food industry today could save between 114 and 166 million tonnes of GHG emissions every year.²



Existing biotech solutions in the detergent, textile, and pulp and paper industries could reduce GHG emissions by up to 52 million tonnes per year.²

1. Recycling International, June 2015
2. WWF Denmark, 2009

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MILLION TONNES
CO₂ a year currently saved as a
result of industrial biotechnology¹

30%

less electricity used in laundry
by washing at 30°C
instead of 40°C²



2.5 BILLION TONNES:
POTENTIAL

CO₂ SAVING, PER YEAR
FROM INDUSTRIAL BIOTECH³



POTENTIAL SAVINGS

EQUIVALENT TO EMISSIONS FROM

490_m
CARS

or



68%
OF THE EU-
28'S TOTAL
CO₂ EMISSIONS
IN 2013⁴

"Climate technologies have an essential role to play in meeting the globally agreed below 2 degrees objective and avoiding dangerous climate change. As well as helping to reduce emissions and adapt to the adverse effects of climate change, these technologies will also contribute to job creation and sustainable economic growth in Europe and across the globe"

Miguel Arias Cañete, European Commissioner for Climate Action and Energy

References:

1. Annual global impact. WWF Denmark 2009
2. Life Cycle Assessment Supports Cold-Wash Enzymes, International Journal of Applied Science, 2005
3. Annual global impact. WWF Denmark 2009
4. Netherlands Environmental Assessment Agency, 2014