

Production of goods and materials - 31% GHG

All the goods and materials we use: from the cement found in buildings, the materials our phone is made of, to the clothes we wear, emit large amounts of greenhouse gases (GHG) during production. It is estimated that the production of goods participates with 31% in the total GHG emissions, mostly because the production process uses energy obtained from fossil fuels. In order to stop climate change, it will be necessary to completely transform production. Wherever possible, electricity from renewable sources should be used, and the production process itself should be improved so as to reduce greenhouse gas emissions. Where it is not possible to completely eliminate the use of fossil fuels and CO₂ emissions, it will be necessary to develop carbon capture and storage systems to prevent its emission into the atmosphere. Heavy industry, such as steel and cement production, is the area where it will be most difficult to eliminate GHG emissions, it is certain that these industries will have to completely change their functioning in the future.

Electricity production - 27% GHG

The world as it exists today is impossible to imagine without electricity and electrical devices, but electricity in the world is still predominantly obtained by burning fossil fuels, which is why it is the second largest source of greenhouse gas emissions with 27%. The good news is that renewable energy sources are becoming more common in electricity production, in the European Union in 2020 renewable sources with a share of 38% generated more electricity than fossil fuels for the first time, and a similar trend is observed in many other countries. The reason for that is the huge drop in the price of electricity produced by solar and wind energy. This development of the situation is certainly encouraging, but we should not lose sight of the fact that there are still challenges ahead. The first is that solar and wind energy are intermittent (non-permanent) energy sources and that it is necessary to find a solution for energy storage or the development of permanent renewable sources such as geothermal energy. Another challenge is the growing demand for electricity, which is expected to increase by 50% in the next 30 years.

Food production - 19% GHG

In addition to major changes in the production of energy and goods, the world expects a transformation in the way we produce food in the next 30 years. Food production is the third largest source of greenhouse gases and accounts for 19% of total emissions. While in other sectors we talk mostly about carbon dioxide emissions, when it comes to food production, other greenhouse gases such as methane and nitrogen oxides have priority. In order to stop climate change, we will need to change the way we grow food, but also to

change our diet. Among other things, it is necessary to reduce the use of fertilizers and adopt more sustainable agricultural practices, in addition, it is necessary to reduce the intake of meat and dairy products worldwide, while at the same time developing alternatives based on plants or meat produced in the laboratory.

Transport - 16%

Many call the world a global village today and it has really never been easier to get from point A to point B. Transport of people and goods is the fourth largest source of greenhouse gas emissions with a share of 16%, and in many underdeveloped countries this sector is still in its infancy. and with economic development it will grow even more. In order to get rid of these shows, we will need to completely redesign the way we travel. Road traffic makes up the largest part of emissions from transport, so switching to electric vehicles is a very important part of this puzzle, but at the same time changing the arrangement of cities will play a role so as to stimulate the use of electrified public transport or bicycles. In addition, it will be necessary to develop low-carbon fuels in order to effectively replace fossil fuels where it is not possible to use electricity alone. Such fuels will most likely find their use in aviation and maritime transport.

Building sector - 7%

When we talk about emissions that come from the building sector, we usually mean two activities: construction of buildings and their heating. The building materials used are responsible for a significant amount of emissions, and the electricity needed to heat and cool them also plays a big role. At the moment, construction is in great expansion and it is expected that in the next 40 years, the total built-up area in the world will double. This means that every month for the next 40 years, a quantity of square meters will be built in the world that corresponds to New York! For this reason, it is necessary to improve the construction process so that it uses as many materials that do not contribute to climate change and at the same time prescribe strict energy efficiency standards in order to use as little energy as possible for heating and cooling these buildings.

Source: klima101.rs