

Affordable sustainability: A furniture retailer reducing the carbon dioxide footprint of wooden furniture

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1. Introduction

The outcome of the UN climate conference COP26 in Glasgow showed that the world is heading towards a global temperature increase of 2.7°C.¹ Based on the latest IPCC report (AR6), the world will inevitably reach an increase of at least 1.5°C during the 2030s. As a global brand, the IKEA business is part of both the problem and the solution. Within our climate positive commitment, we have set ambitious goals to drastically reduce greenhouse gas (GHG) emissions across the IKEA value chain. The largest portion of the IKEA climate footprint comes from the materials used in the IKEA range (52%) and from the use of IKEA products in customers' homes (17%), which includes the energy consumption of lighting and appliances over the lifetime of a product.

During FY21, it's encouraging to see that we have managed to reduce the IKEA climate footprint by 1.6 million tonnes of CO₂ eq in absolute terms compared to the baseline FY16 – a reduction of 5.8% while IKEA sales surpassed previous highs. This means that we're on track towards our 2030 goal of a reduction of at least 15% compared to the baseline FY16.

We have reached one-third of the goal with two thirds of the time remaining. This is the result of a lot of hard work by co-workers across the IKEA business committed to address every part of the IKEA footprint. Together, we have realized many short- and medium-term movements like significantly improving the energy efficiency of our already energy efficient LED bulbs and developing and increasing the sales of our plant-based food options, such as the plant ball and veggie hot dog.

All in all, these support our commitment to make sustainable solutions available to many more people with thin wallets.

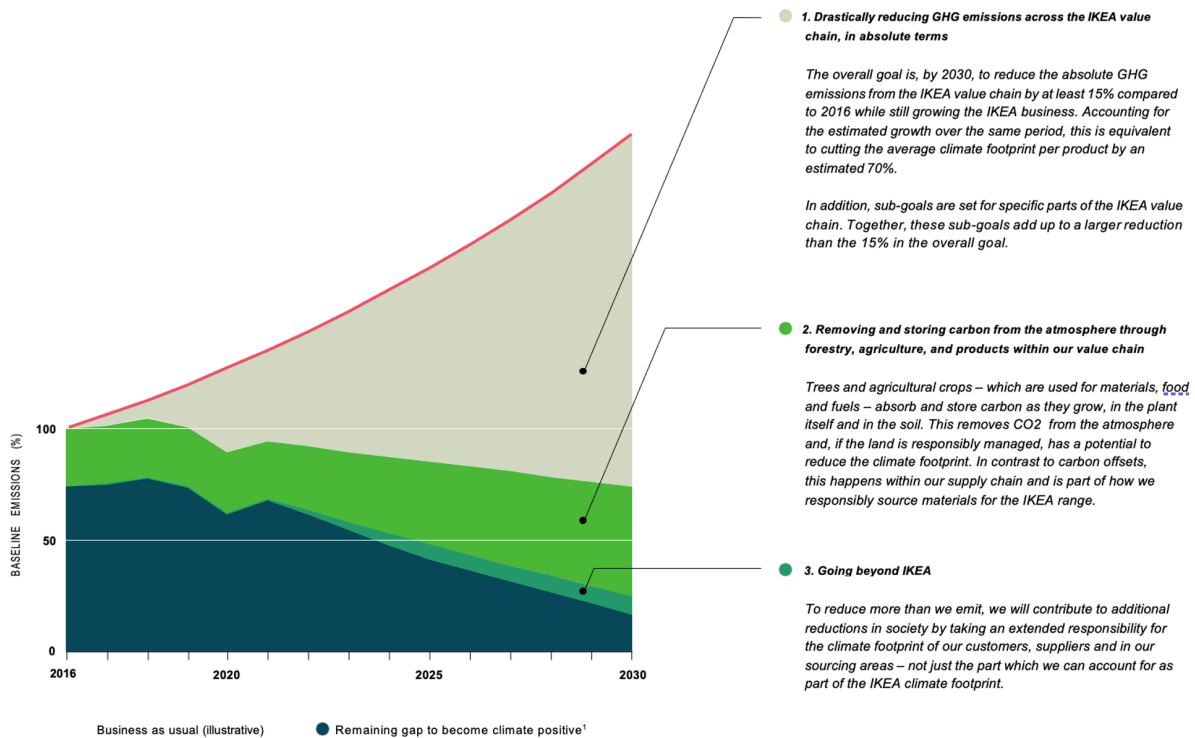
2. Becoming climate positive

By 2030, IKEA is committed to becoming climate positive by reducing more greenhouse gas (GHG) emissions than the IKEA value chain emits, while growing the IKEA business. This is how we contribute to limiting the global temperature increase to 1.5°C by the end of the century.

We will achieve our climate positive commitment without using carbon offsets, as we firmly believe that we need to address the root causes of our climate footprint within our own value chain or in connection to our customers, suppliers and sourcing areas. Only by doing so can we transform into a sustainable business.

The overall goal is, by 2030, to reduce the absolute GHG emissions from the IKEA value chain by at least 15% compared to 2016 while still growing the IKEA business. Accounting for the estimated growth over the same period, this is equivalent to cutting the average climate footprint per product by an estimated 70%.

In addition, sub-goals are set for specific parts of the IKEA value chain. Together, these sub-goals add up to a larger reduction than the 15% in the overall goal.



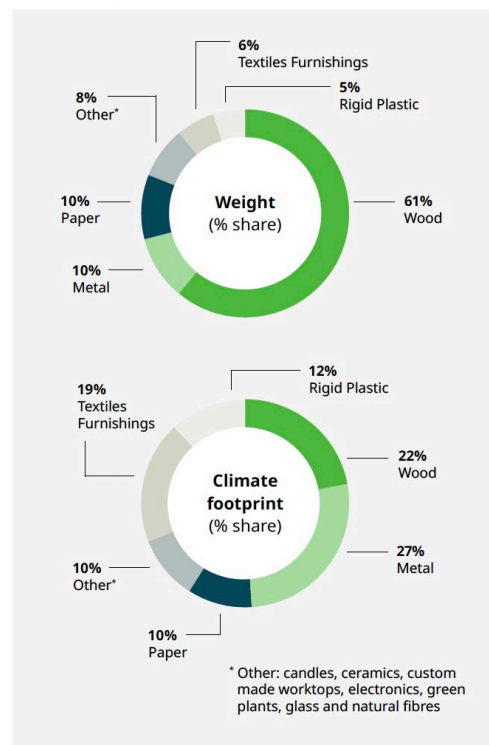
3. Reduction of carbon footprint in wooden furniture

There are many types of materials used in IKEA products. Altogether, they contribute the most to our climate footprint. That's why, to reduce our climate footprint, it's important to focus on the materials with the largest climate footprint: wood, metals, paper, textile furnishings and plastics. Combined, they represent about 90% of our material needs, with wood-based materials the largest by weight at 61%.

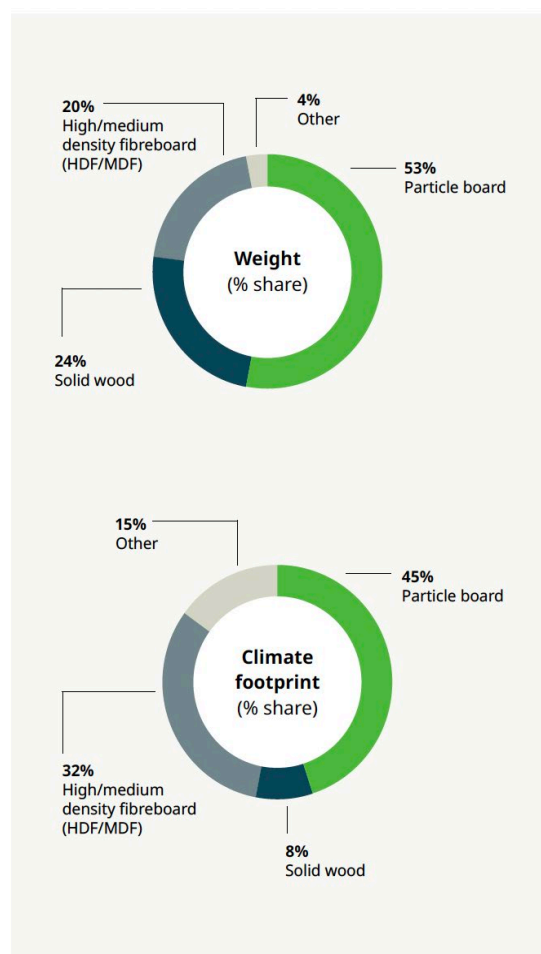
Reducing the climate footprint of materials is a long-term development agenda. Climate roadmaps are integrated into every IKEA material direction. These roadmaps have so far helped us to identify actions that will enable us to reach at least half of the needed footprint reduction by FY30.

Wood is the most used material in the IKEA range. It's part of our identity and Swedish heritage and includes particleboard, fibreboard and solid wood. Today, 99.5% of all wood and paper we use comes from more sustainable sources such as Forest Stewardship Council® (FSC®) certified or recycled.

Materials represent **52.2%** of the total IKEA value chain climate footprint in FY21



Material footprint vs. material weight



Material footprint vs. material weight

We aim to improve the sustainability performance of wood even more through the IKEA Forest Positive Agenda 2030.

For many wood-based materials, we use a significant amount of glue to hold wood components or fibres together. Glue used in our boards represents

5% of the total IKEA climate footprint. That's why moving towards bio-based glues is a key enabler to meeting our overall climate goal. So far, we've mapped the existing and future alternatives in terms of performance, cost and climate footprint.

One bio-based system for particleboard is currently being prepared for implementation and another for fibreboard has advanced to smaller-scale production. Many more options are currently being explored, with IKEA Industry leading this development.

A big challenge with bio-based glues is that not all are compatible with our current conventional glue and application technology. A step-wise increase is therefore not possible. Instead, factories must switch entirely to bio-based glues and update their facilities and machinery/technology accordingly. There's a further challenge in keeping costs low, as most bio-based glues are still more expensive than fossil-based glues. One main reason is that fossil-based glues have been optimised for use in the board industry for over six decades.

Another way to reduce the climate footprint of wood-based materials is by securing that board materials are produced using 100% renewable energy. The wood-based board industry already has a high share of renewable energy. Now we're developing a quantified baseline to identify gaps and take the appropriate actions to secure 100% renewable energy.

4. Striving towards 100% renewable energy

Between FY20 and FY21, we saw significant steps in the use of renewable energy for the production of IKEA products – increasing from 47% to 48.5%.

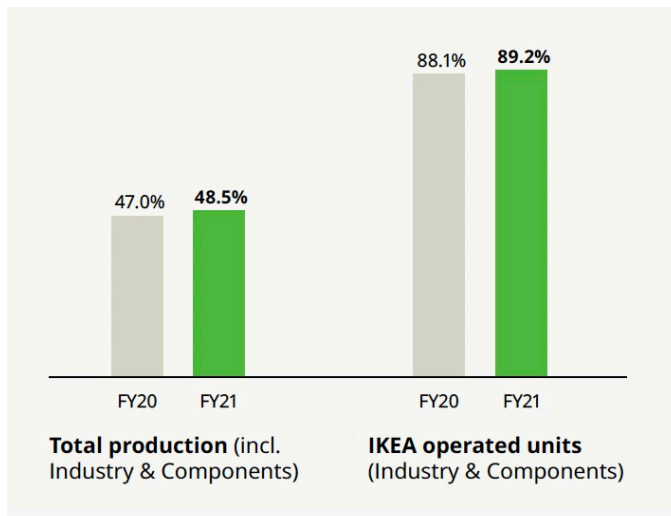
A main driver of this result has been our external wood-based furniture suppliers, where the share of renewable electricity increased from 52.9% in FY20 to 61.8% in FY21. Compared to last year, an additional 18 factories or suppliers have achieved 100% renewable electricity consumption, moving the total to 129. We still have a challenge within textile furnishing production, as the renewable energy share decreased to 15.2% in FY21 compared to 15.8% in FY20.

While more suppliers are achieving 100% renewable electricity, access to it remains a challenge for most. We hope to address this with the launch of our programme to enable the purchase of renewable electricity, starting with the countries where we face a large climate footprint and big challenges in accessing renewable electricity by purchasing it from the grid.

For our own factories operated by IKEA Industry, the share of renewable energy (electricity, heating and fuels) reached almost 90% in the calendar year 2020.

As of 1 January 2021, we have also secured 100% renewable electricity for IKEA Industry. But, consuming 100% renewable electricity is not enough. We want to make sure renewable electricity is also generated on-site at our units to make more renewable energy available to the many people.

To achieve this, there are a few big challenges: One challenge is linked to the legal permit process for solar panels in Poland, which is delaying the implementation of additional on-site installations.



Renewable energy share FY21 (%)¹

Another limitation is the applied tax for any installation above 0.5 MW in Sweden, which restricts the business case, especially when compared to other EU countries.

Accelerating suppliers' transition to 100% renewable electricity

In FY21, the IKEA business launched a new programme to accelerate suppliers' transition to 100% renewable electricity. The programme supports 1,600 direct suppliers and will first be introduced in three of the largest purchasing countries: Poland, China and India. Achieving 100% renewable electricity in these countries will save an estimated 451,000 tonnes of CO₂ emissions per year, equivalent to approximately 2% of the total climate footprint of the IKEA value chain.

5. References

- [1] This is an excerpt from the IKEA Climate Report FY21, the complete document is available at <https://about.ikea.com/en/newsroom/2022/01/17/sustainability-report-fy21-and-climate-report>