



Office for Product
Safety & Standards

2050: Appliances of the Future

The Road to Net Zero

September 21, 2022

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AMDEA

Appliances of the Future

A Road to Net Zero

Understand the Appliance Industry's Carbon Emissions footprint



Sustainability Practices – Arçelik Group



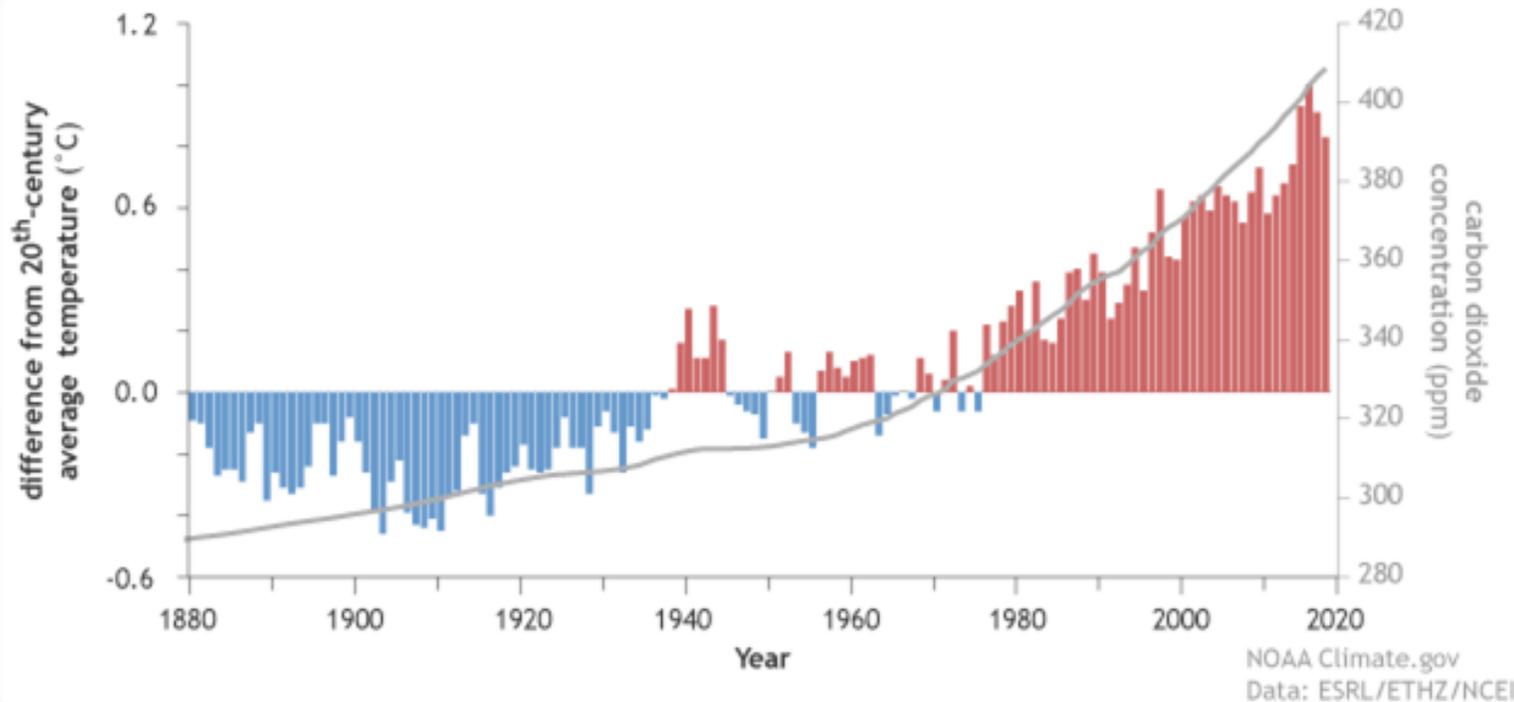
Carbon Literacy at a UK Level – Beko Plc



How do we create Industry impact together?



Atmospheric carbon dioxide and Earth's surface temperature (1880-2018)



Appliances account for 13-15% of emissions in consumers' homes

Arçelik

Full-Range, Lifestyle Solutions provider



Founded in 1955

12

Brands

81 - 52

Subsidiaries in Countries

30

Production Facilities

29

R&D and Design Centers & Offices

45,000

of Employees

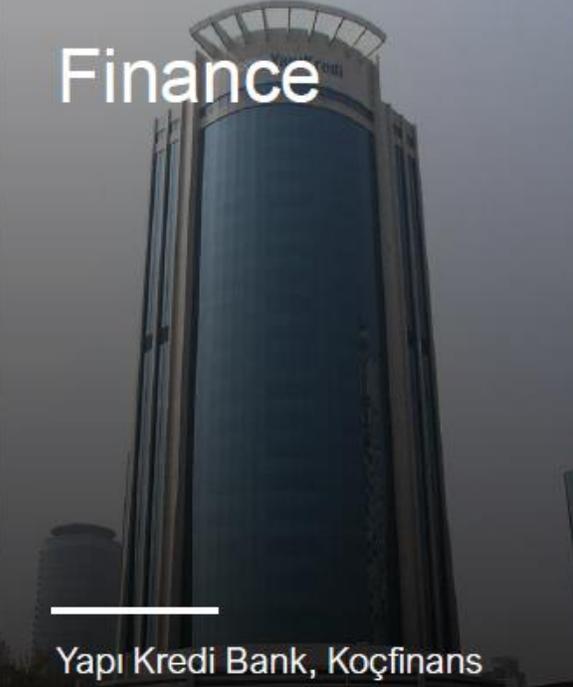


Consumer Durables



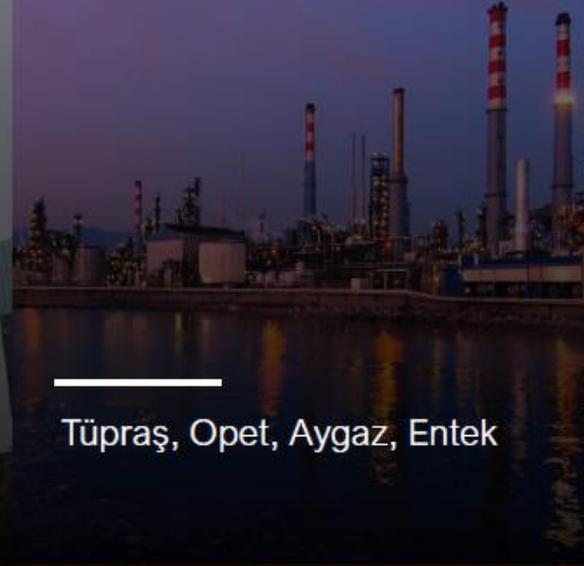
Arçelik, Arçelik-LG,
Bilkom

Finance



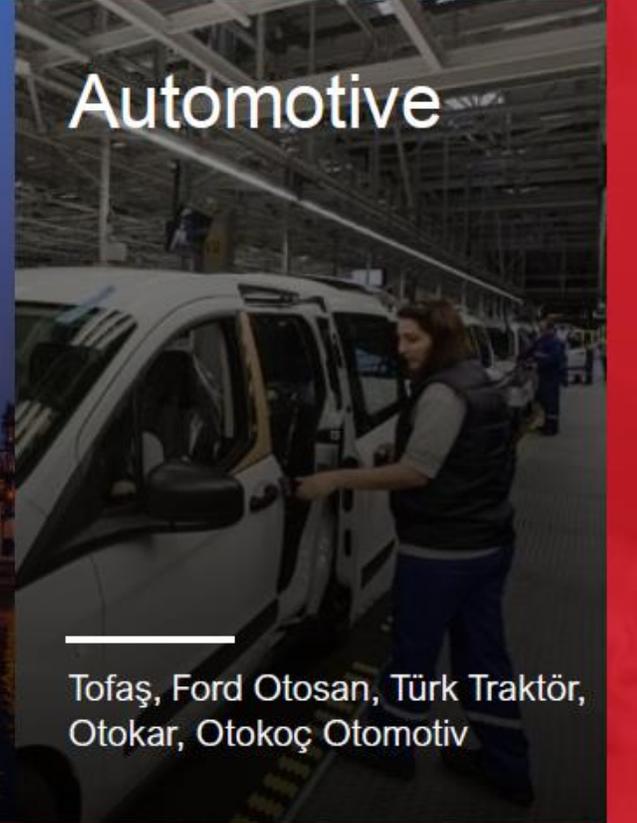
Yapı Kredi Bank, Koçfinans

Energy



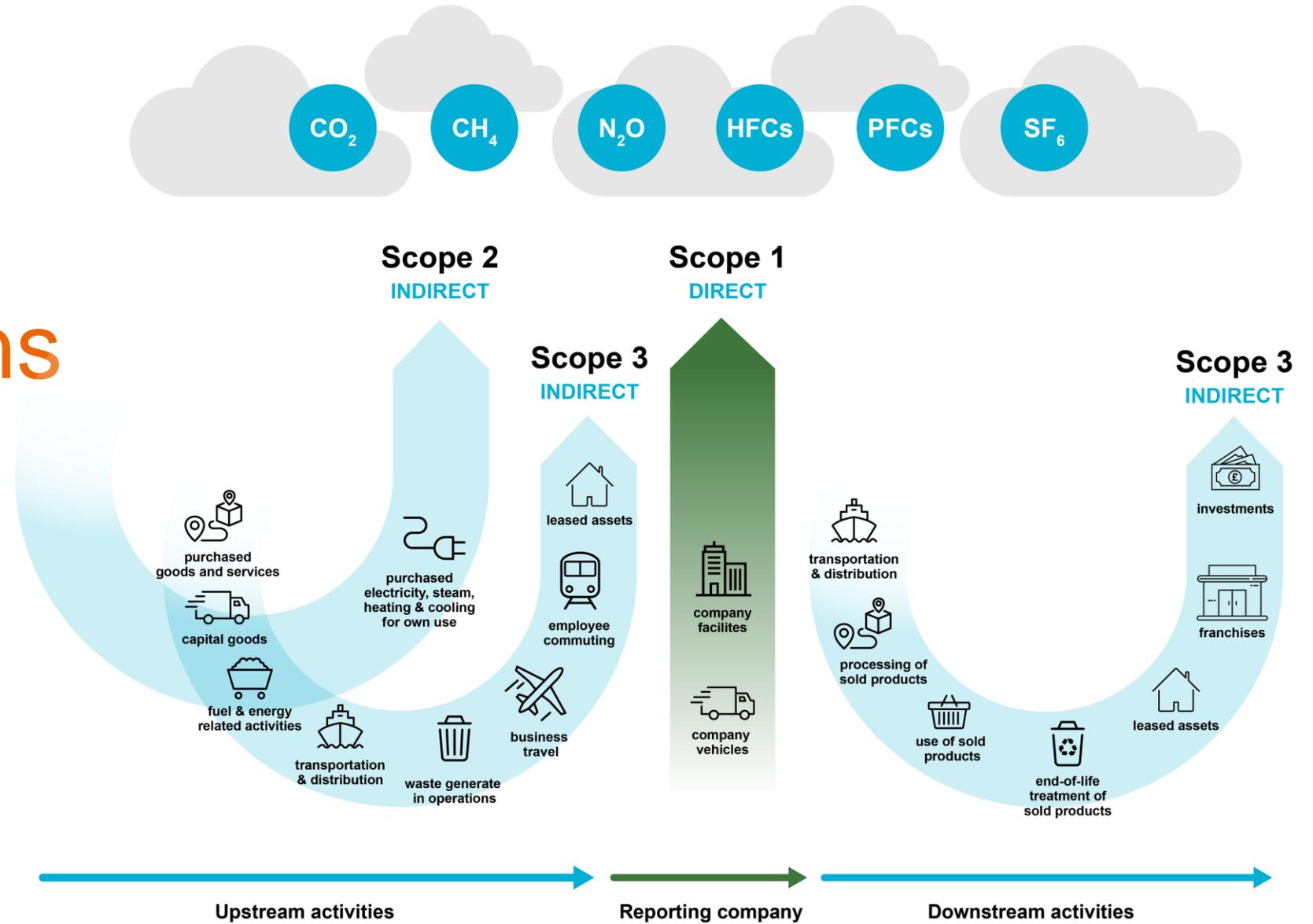
Tüpraş, Opet, Aygaz, Entek

Automotive



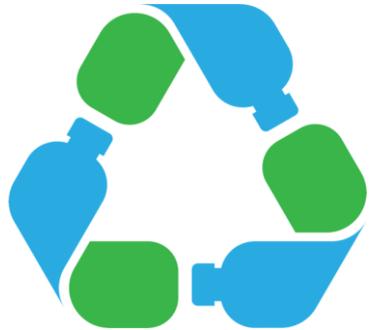
Tofaş, Ford Otosan, Türk Traktör,
Otokar, Otokoç Otomotiv

Greenhouse Gas Emissions



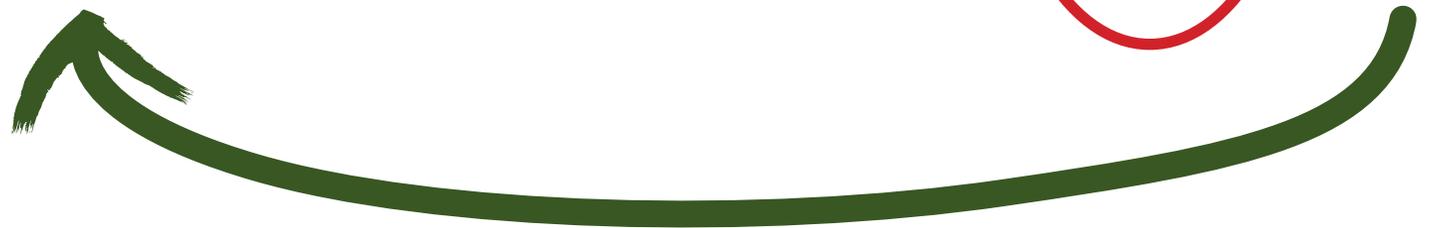
Carbon Emissions Full Life Cycle Analysis – Major Domestic Appliances

Life Cycle Assessment Phases – Global Warming Potential (GWP) Results



Using recycled materials in production can lead to a dramatic reduction in emissions, compared to virgin materials

Product	Raw Material Extraction and Transportation	Manufacturing	Product Transportation	Use Phase	End of Life
Washing Machine	12%	0.21%	0.17%	87%	0.9%
Refrigerator	19%	0.07%	0.18%	80%	0.9%
Dishwasher	7%	0.07%	0.13%	92%	0.7%
Oven	21%	0.44%	0.25%	77%	1.3%
Tumble Dryer	13%	0.10%	0.08%	86%	0.7%



“Our priority is the production of goods in a manner that respects both human life and the environment.”



Respects
THE GLOBE
Respected
GLOBALLY

Our success

is recognized as we are among the top performing companies in global indices



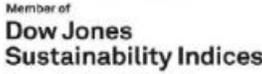
CDP
DRIVING SUSTAINABLE ECONOMIES

Since 2012
In 2021, received A- in Climate Change and Water Security Programs, and A in Supplier Engagement Rating List by reporting operations in Turkey



MSCI
ESG RATINGS
AAA

Since 2015
Rated AAA on the Sustainability Index since 2016 and AA in 2015.



Member of
Dow Jones
Sustainability Indices
Powered by the S&P Global CSA

Since 2017
Achieved highest score in DHP Household Durables Industry in 2019, 2020 & 2021. Recognized as an Industry Mover in the Sustainability Yearbook'22, received a Gold Class Award.



WORLD
ECONOMIC
FORUM

Since 2018
Included WEF Global Lighthouse Network with Washing Machine Plant in Ulmi, Romania in 2018 and Eskişehir Refrigerator Plant in 2021.



TERRA
CARTA

In 2021
The first and only company from household appliances industry and Turkey to receive Terra Carta Seal by HRH The Prince of Wales



Corporate Knights
AS YOU SOW

In 2021
Ranked 57th on 2022 Global 100 Most Sustainable Corporations in the World.

Included in the 2021 Clean200 and As You Sow list



Real Leaders
TOP 200 AWARDS
2021

In 2021
Ranked 19th on the Real Leaders Top 200 Impact Companies of 2022 list



V.E

In 2021
Received an overall score of 50/100 and was ranked #1 in the Technology-Hardware Emerging Market



Laureus | SPORT FOR GOOD
INDEX

In 2021
Beko's commitment to sustainability has been recognized.



SUSTAINALYTICS
a Morgan Stanley company
RATED

In 2021
Received an ESG Risk Rating of 12,1 and was assessed to be at low level risk of experiencing material financial impacts from ESG factors



REFINITIV
An LSEG Business

In 2021
Ranked 17th in the 2021 Refinitiv's Diversity and Inclusion Index with a score of 76 and became the only company from Turkey and the industry



ecovadis
2021
Sustainability
Rating

In 2022
Obtained a score higher than 66/100 and was awarded a Gold EcoVadis Medal, placing Arçelik among the top 5 percent of companies assessed



BORSA İSTANBUL
SUSTAINABILITY

Listed in BIST since 2014



FTSE4Good

Since 2016
Listed as a company with strong ESG performance



Corporate ESG
Performance
RATED BY
ISS ESG
Prime

Since 2020
Granted the "Prime" degree



S&P Global
Ratings

In 2021
Received a score of 76/100

Key Awards



Arçelik Science-Based Targets

We are committed to reach Net-Zero by 2050

Revised*, more ambitious targets for 2030:

↓ **50.4%**
from a 2018 base year

Arçelik 2021 Highlights

Committed to
Science Based
Targets Initiative -
Net Zero Standard

Attended COP26 to
present the Arçelik
Climate Strategy

Eskişehir Turkey
Refrigeration Facility
became our 2nd plant
in the World
Economic Forum
Lighthouse factory
network – joins Ulmi
our 1st Lighthouse
factory in Romania

Launched the
World's first Washing
Machine with an
integrated Microfibre
filtre

Signed the World
Economic Forum
Alliance of CEO
Climate Leaders
2021

What about closer to home?



Local commitments which make
a difference... why do it?

Carbon Literacy Project

Carbon Literacy for Business

Doing Business More Sustainably

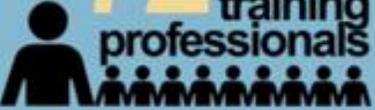


Lighthouse Sustainability

34,743
citizens
certified



72 certified
training
professionals



3,166
organisations
engaged



69,486
actions
pledged



352
courses
designed



98
Carbon
Literate
Organisations

125,179t^{CO₂e}
carbon
saved



12 Sectors



17
nations
delivering

9 Toolkits



5-15% carbon
savings
per-person



What is the Carbon Literacy Project?

Carbon Literacy
Project



▪ An awareness of the carbon dioxide costs and impacts of everyday activities and the ability and motivation to reduce emissions on an individual, community and organisational basis.▪



What is the Carbon Literacy Project?

- Understanding what I need to do
- Where to get help to do it
- Actually doing it
- Seeing the impact I've made

SIEMENS

THE **PEEL** GROUP

NHS

patagonia

 **Manchester
Metropolitan
University**

itv

I.C.L.E.I
Local
Governments
for Sustainability

 **Keep Scotland
Beautiful**

beko

GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY

JACOBS

B B C

 **BAFTA**

 **Anthesis**

 **GallifordTry**

 **Department for
Business, Energy
& Industrial Strategy**

BASF
We create chemistry



What is it we are responding to?

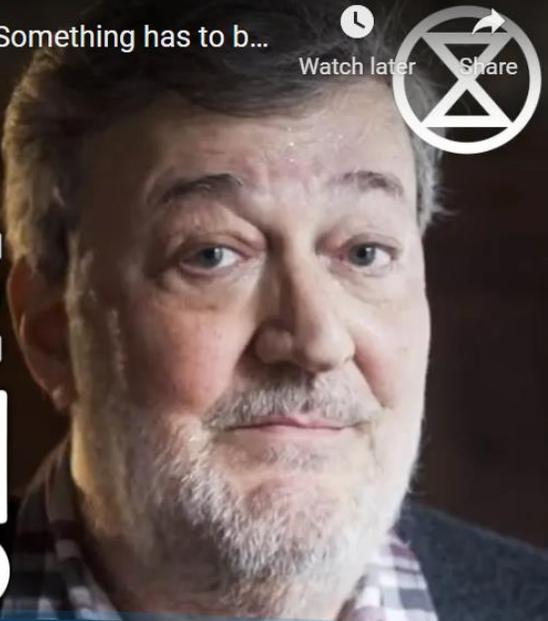
Our climate is changing rapidly, risking our wellbeing and survival and placing a huge burden on the next generation.



 Stephen Fry in support of Extinction Rebellion: 'Something has to b...

[Watch later](#) [Share](#)

SOMETHING HAS TO BE DONE!



Atmospheric carbon dioxide and Earth's surface temperature (1880-2018)

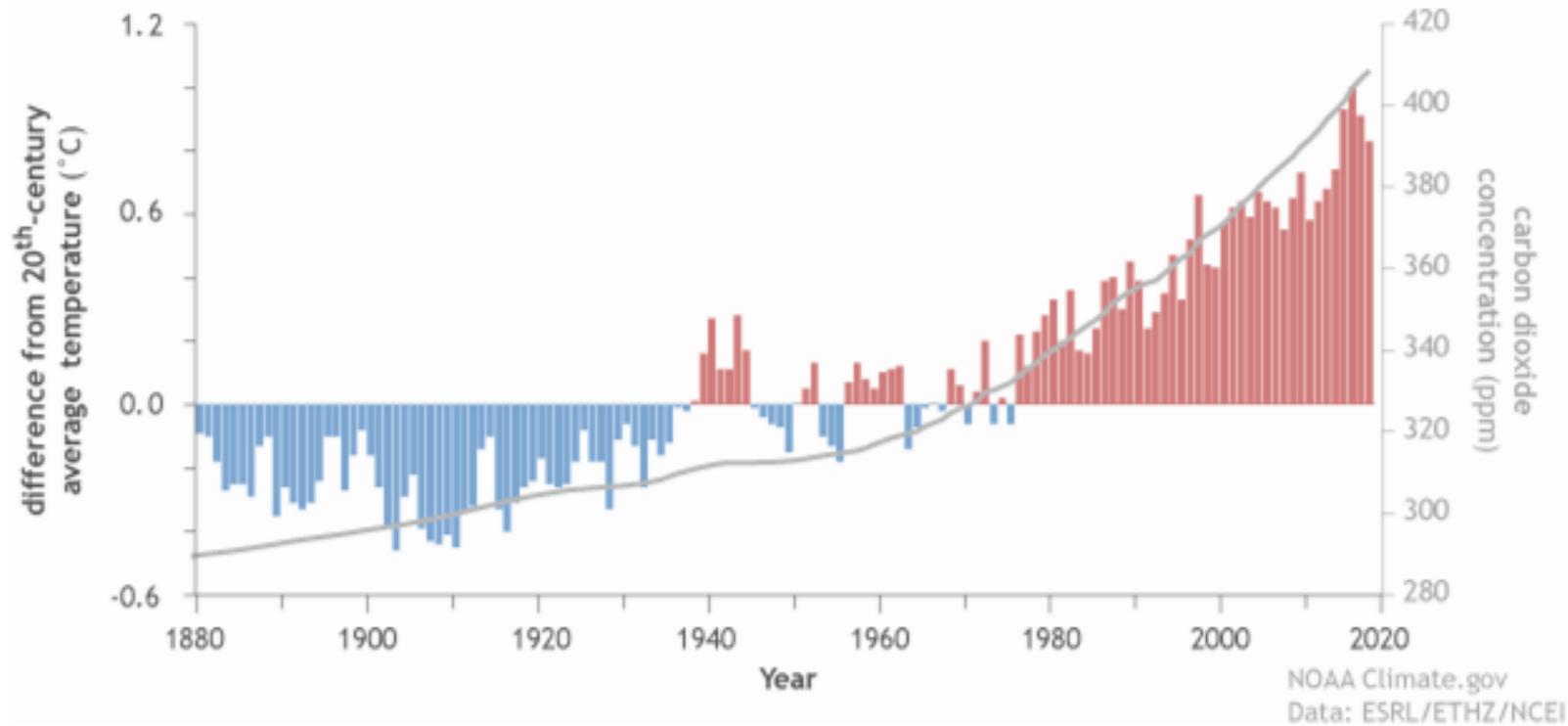
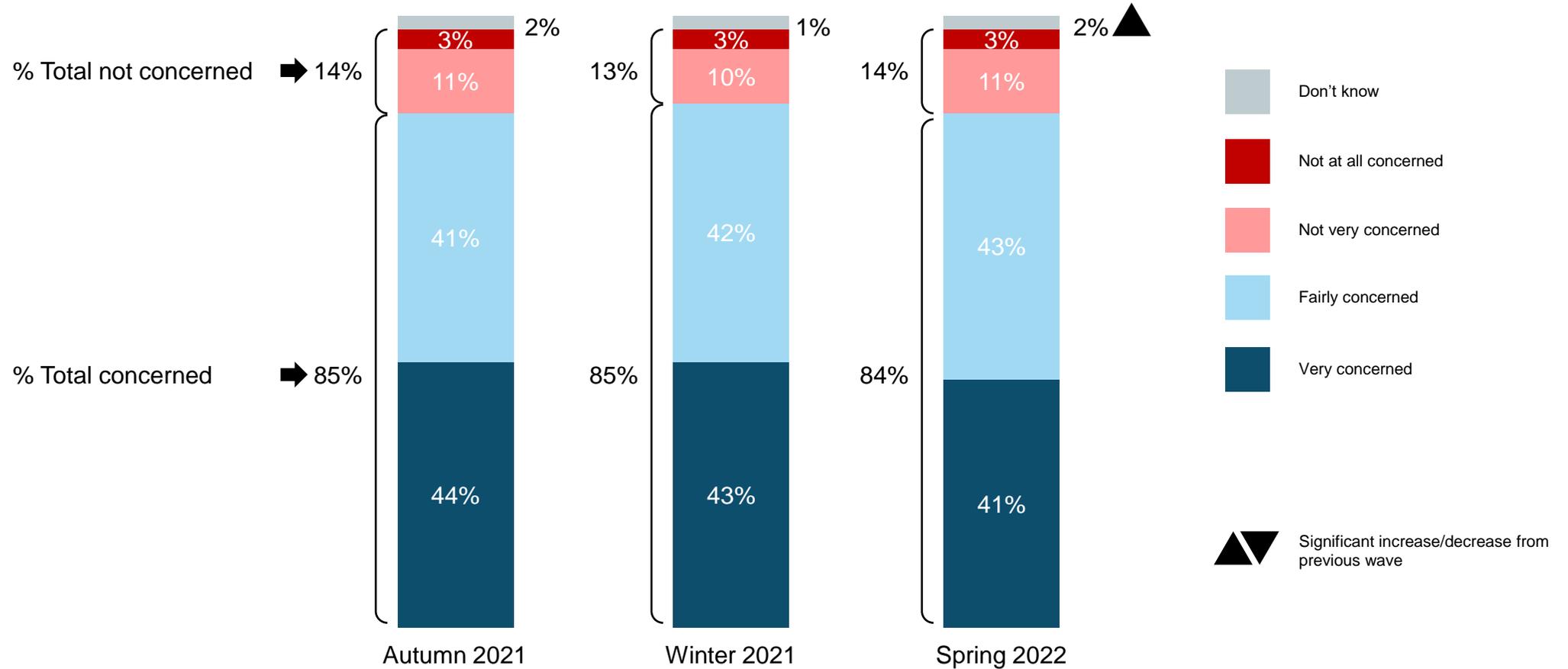


Figure 2.1: Concern about climate change (based on all people), Spring 2022



CLIMCONCERN. How concerned, if at all, are you about climate change, sometimes referred to as 'global warming'?

Base: All wave respondents – Autumn 2021 (5,557), Winter 2021 (3,701), Spring 2022 (4,375) (Asked Quarterly)

BEIS Public Attitudes Tracker (Spring 2022, UK)

No.1

in the UK large home appliances sector



1 in 4

large home appliances sold is produced by us

beko plc

3m

products distributed every year

94%

Reevo

Beko appliances are recommended by 94% of our customers.†

Trustpilot ★★★★★

4.2 out of 5 rating from over 11500 reviews

Going green on the ground

- **Repairing products in the field for over 5 years**
- **150,000 repairs annually - 70% NPS score**
- **Field Prevention Programme / Techsee delivers 27,000 prevented callouts**
- **Returns Reduction programme ensures highest resale value for 2nd hand product**



Caring for our consumers in troubled times



THE **TIMES** Today's sections Past six days Explore Times Radio Times+ My account Search

IMPROVE

40 ways to protect your home from the cost-of-living crisis

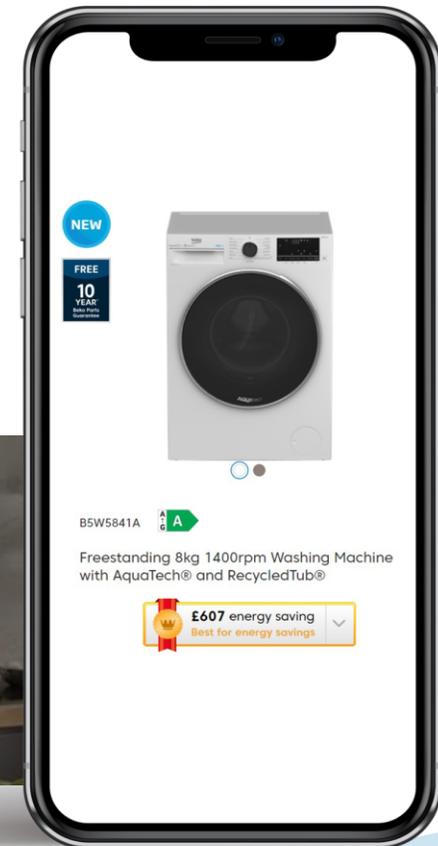
Forget spring cleaning: get your house in order now to save money and give you peace of mind



The Beko Pro AquaTech B5W5 washing machine. £399, currys.co.uk
BEKO

Beko introduces 10 Year Parts Guarantee

Beko has introduced a 10 Year Parts Guarantee for selected appliances, to promote product quality and reduce waste.



Beko Plc Commitments - 2022 & Beyond

**Raise awareness among employees & partners through
Carbon Literacy training**

Own operations

Green tariffs

Solar panels

Reduced plastics use / recycling

Planned Electric van fleet roll out

Support the move to electric cars

Supply Chain

Improve product energy efficiency

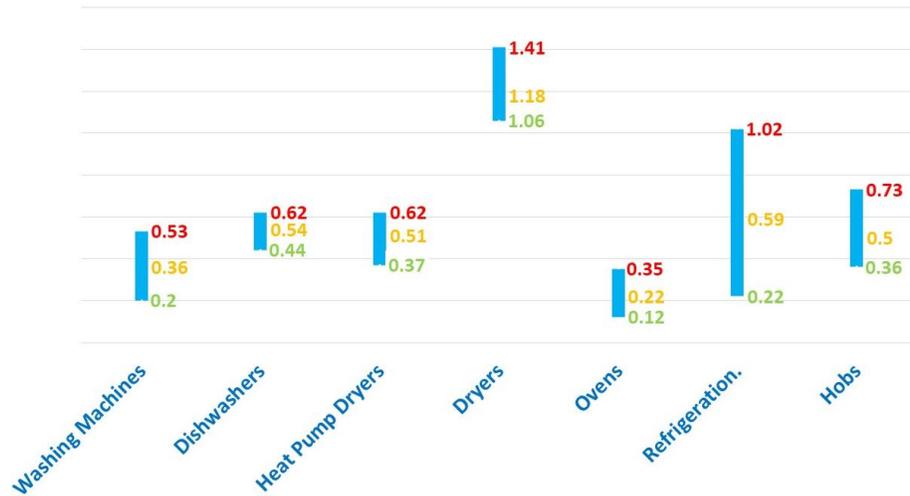
Optimised Logistics & Transportation

Increasing share of products using recycled materials

Circular Economy
Encouraging maintenance & repair

The Choices we Make do Make a Difference.....

Max, Min and Average Scope 3 emissions per product
(Tonnes CO₂)



*Calculated across a 10 year lifecycle



Necessity is the mother of invention



What more is Needed for a Circular Economy



beko

Every cycle saves a little and saves a lot.

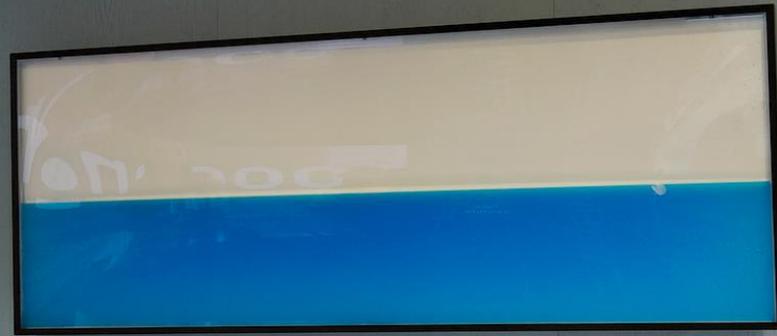
Beko SaveWater line gives back a total of up to 7.8 liters of water at every cycle, to you and the world.*

SaveWater

Continued Product and Packaging Innovation



10 Beko SaveWater Line
inside 10 homes



*Tumble dryer saves up to 5.2 liters of water per cycle for a full 10 kilogram load run through the Declaration program. Dishwasher saves 2.6 liters of water per cycle with the Eco program compared to similar Beko dishwashers without SaveWater Technology. Beko SaveWater line saves up to 7.8 liters of water at every cycle.



Continued Product and Packaging Innovation

Sustainable solutions

Microfiber Filtration System



The world's first and only washing machine with a built-in synthetic microfiber filtration system

Solar Panel Refrigerator



Refrigerator powered by solar energy developed for regions with poor access to stable electricity

Bio-Fridge



A unique bio-fridge that combines bio-plastics & bio-PU insulation

Upcycling Fishing Nets



Upcycling abandoned fishing nets in oven parts

PET Tub



Using recycled plastic PET bottles in the production of washing machine and washer dryer tubs

Sustainable Packaging

The first home appliance manufacturer worldwide to offer a full SDA line with EPS-free packaging



Arçelik

Level Playing Field

Working with Government to develop regulation and stakeholders that helps promote a sustainable agenda whilst maintaining a level playing field

ErP

WEEE
Guidance

Eco – Design

Packaging
Legislation

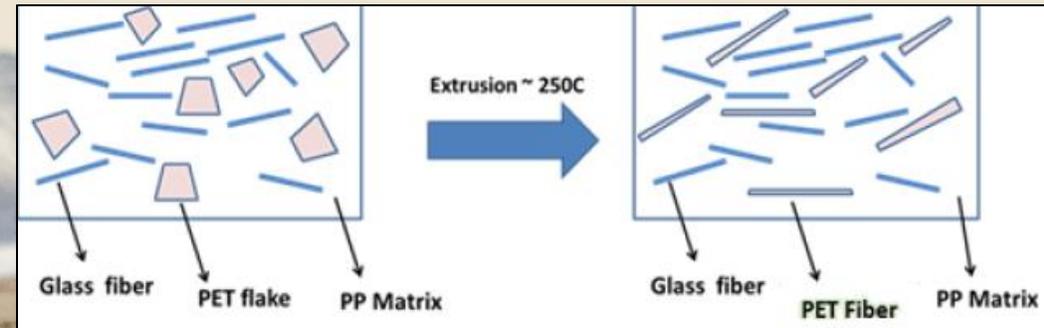
ERP



Responsible Recycling: Case Study Recycle Drum WM

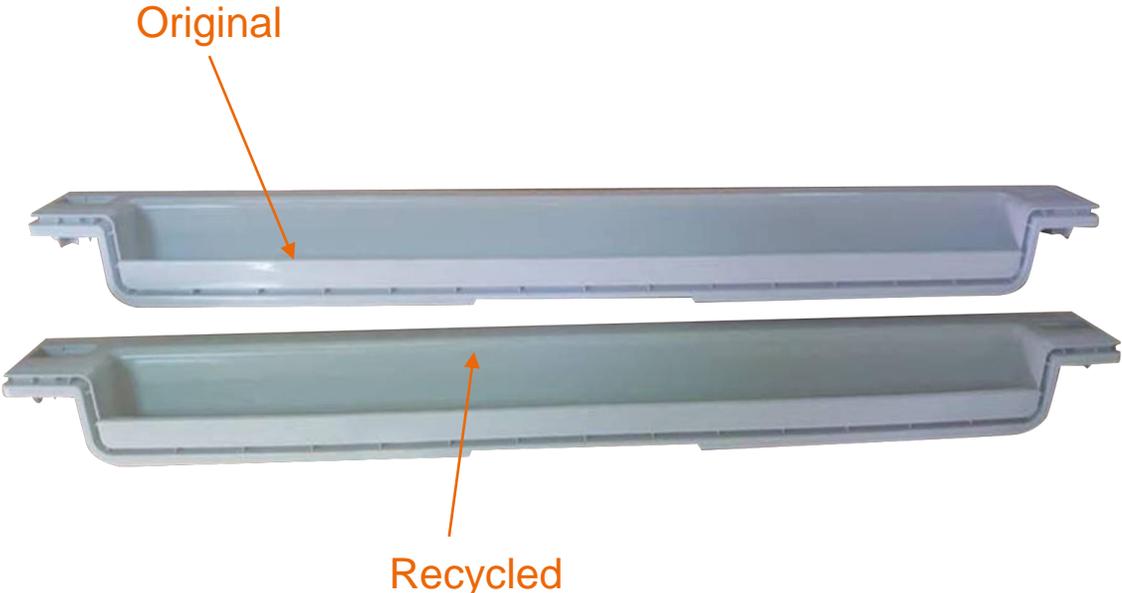


The method for producing such a tub is the subject of a patent (EP3454716B1, “A household appliance having a tub made of a composite material and a process for producing such tub.”) The glass fibers and the polyethylene terephthalate (PET) fibers are present in the composite material in a percentage by weight between 25% and 40%.



Shortlisted by Recoup for Recycled product of the year

Responsible Recycling: Case Study AO Recycled Plastics in Refrigeration



Built in our Romanian factory

We are now looking at how we might use these plastics in our Turkish production facilities

Responsible Recycling: Case Study Howdens



Case study

UK depot waste backhaul

One of the new projects that helped us cut our UK depot waste percentage to landfill by 30% in 2020 was developing a "backhaul" waste recovery system using our own distribution fleet.

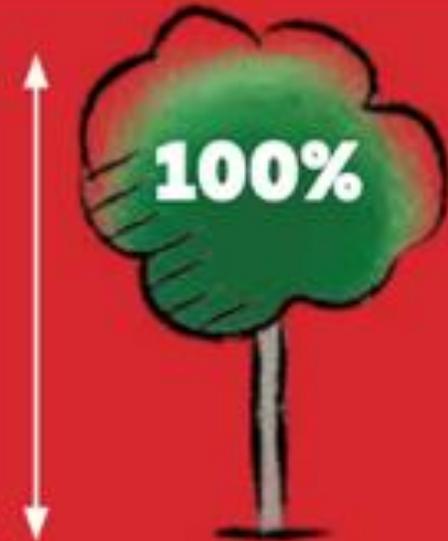
When we deliver stock to depots, we collect waste from them. Depending on the type of waste material, we then either return it to our factory or warehouse sites where we already have sophisticated reprocessing facilities, or we take it directly to wood processing facilities across the country. This means that a large volume of this waste is recycled into chipboard and ultimately back into our new cabinet production.

In the first part-year of this project, we have made over 8,000 waste backhaul collections and dealt with 2,000 tonnes of waste.



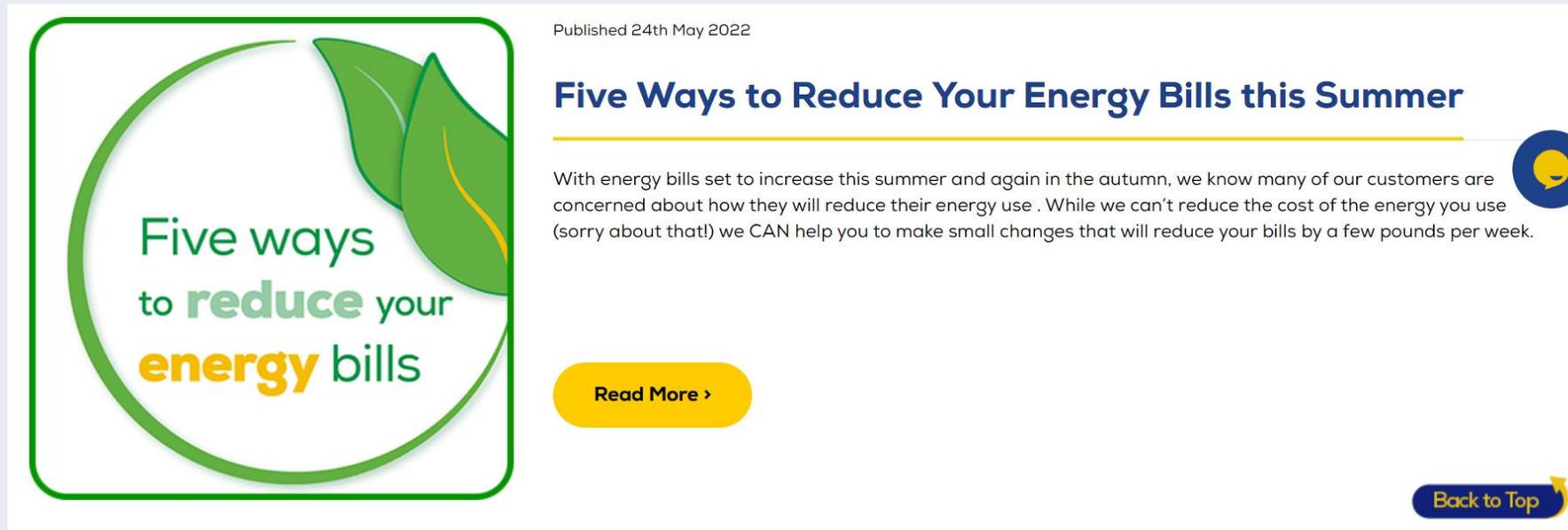
100% of chipboard & MDF used in our manufacturing processes from FSC® or PEFC™ certified sources

 For further KPIs see pages 30 to 32



Consumer education

Provide information to consumers on how to use their appliances in the most sustainable ways that benefits them and the planet.



Published 24th May 2022

Five Ways to Reduce Your Energy Bills this Summer

With energy bills set to increase this summer and again in the autumn, we know many of our customers are concerned about how they will reduce their energy use. While we can't reduce the cost of the energy you use (sorry about that!) we CAN help you to make small changes that will reduce your bills by a few pounds per week.

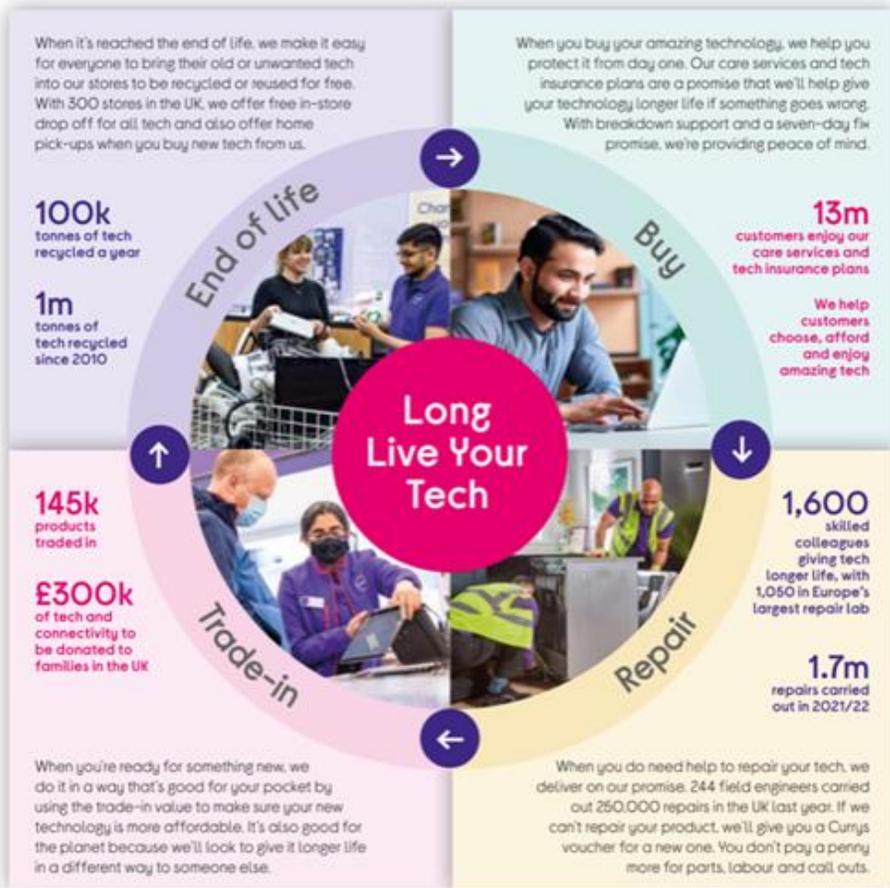
[Read More >](#)

[Back to Top](#)

The image shows a preview of a blog article. On the left is a green-bordered square containing a graphic of a green leaf and a circular arrow, with the text "Five ways to reduce your energy bills". To the right of the graphic is the article title "Five Ways to Reduce Your Energy Bills this Summer" and a sub-headline. Below the sub-headline is a paragraph of text. At the bottom left of the article preview is a yellow "Read More >" button, and at the bottom right is a blue "Back to Top" button with a yellow arrow icon.

Consumer education

Provide information to consumers on how to use their appliances in the most sustainable ways that benefits them and the planet.



Reduce your home's energy use with our most efficient tech.

Cash for trash.

Get at least £5 off your next eligible purchase for any old tech products you recycle with us in-store. T&Cs apply.

[Find your local store](#)

Consumer education

Know Watt's What Campaign

Helping households to choose, use and care for their appliances sustainably.



Industry Wide Engagement

'Breakfast
Show'
Type Talks

Government
advice

Consumer
helplines

Energy
efficiency
explained

Updated
legislation



A grid of diverse people's faces in various poses and colors, overlaid with a large white 'THANK YOU' text.

THANK YOU