



Product Environmental Report

2022

December 2022

Progress toward our 2030 goal

40% recycled content
Over 20% of manufacturing facilities
powered from renewable energy

Responsible Sourcing

100% recycled content in wood fiber
96% fiber-based products work
with recycled ink

Responsible Manufacturing

Supplier Code of Conduct
and disclosure of
information



Smarter chemistry

Reduced use of
hazardous
chemicals
and
heavy metals

Log it

Product lifecycle
tracking
improvement

Recycle

Recycled content
and
waste reduction

First in the world to use certified recycled steel in the battery tray

Information contained herein is confidential and intended for U.S. configuration of the product only. It is not to be distributed outside the U.S. without the express written consent of Apple.



Our product carbon neutrality strategy

We go forward and reduce our carbon footprint by 23% during our 2023-2025 period. Our goal is to achieve net-zero emissions by 2030. We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint.

We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint. We will also focus on reducing our energy consumption and improving our energy efficiency. We will also focus on reducing our energy consumption and improving our energy efficiency.

How we're reducing emissions

- **Transition to 100 percent clean electricity for manufacturing:** We will transition our manufacturing operations to 100% clean electricity by 2025. We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint.
- **Transition to 100 percent clean electricity for product use:** We will transition our product use to 100% clean electricity by 2025. We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint.
- **Prioritize non-air transportation:** We will prioritize non-air transportation for our employees and customers. We will continue to invest in sustainable transportation options to reduce our carbon footprint.
- **Use recycled and low-carbon materials:** We will use recycled and low-carbon materials in our products and packaging. We will continue to invest in sustainable materials to reduce our carbon footprint.

How we'll get to net zero emissions

We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint. We will also focus on reducing our energy consumption and improving our energy efficiency. We will also focus on reducing our energy consumption and improving our energy efficiency.

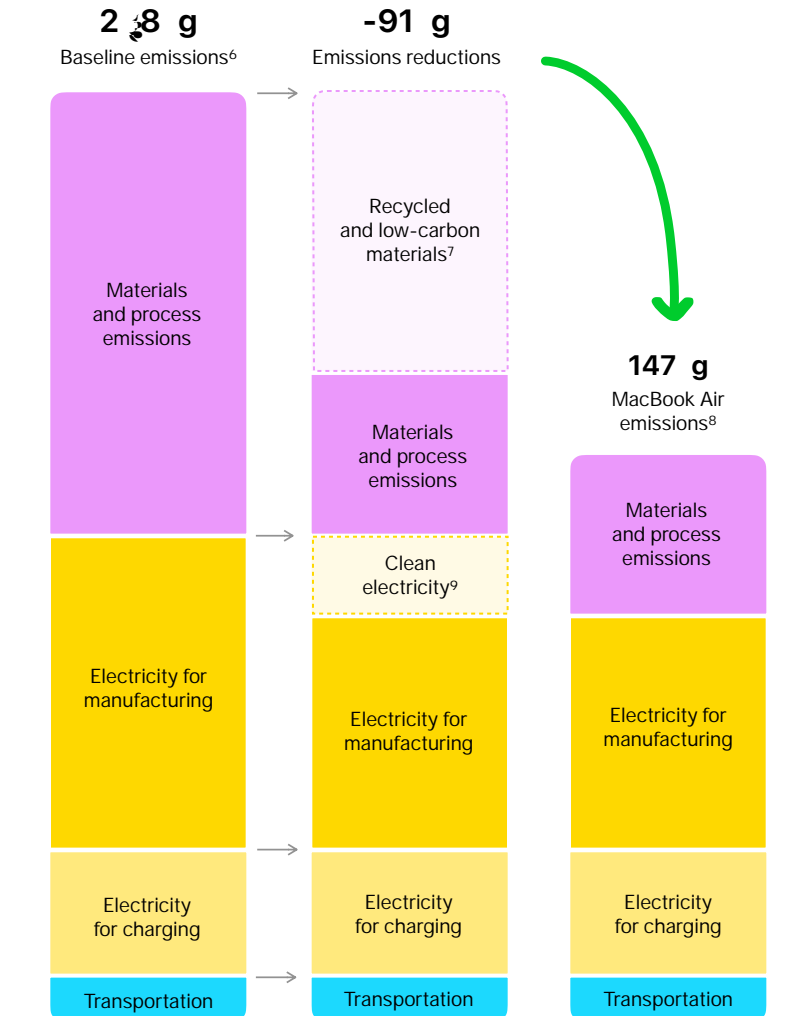
How we're monitoring progress

We will continue to invest in renewable energy and sustainable practices to reduce our carbon footprint. We will also focus on reducing our energy consumption and improving our energy efficiency. We will also focus on reducing our energy consumption and improving our energy efficiency.

- No use of air conditioning for manufacturing operations.
- 100% of our energy consumption will be from renewable sources by 2025.
- 100% of our product use will be from renewable sources by 2025.

Progress to reach carbon neutral

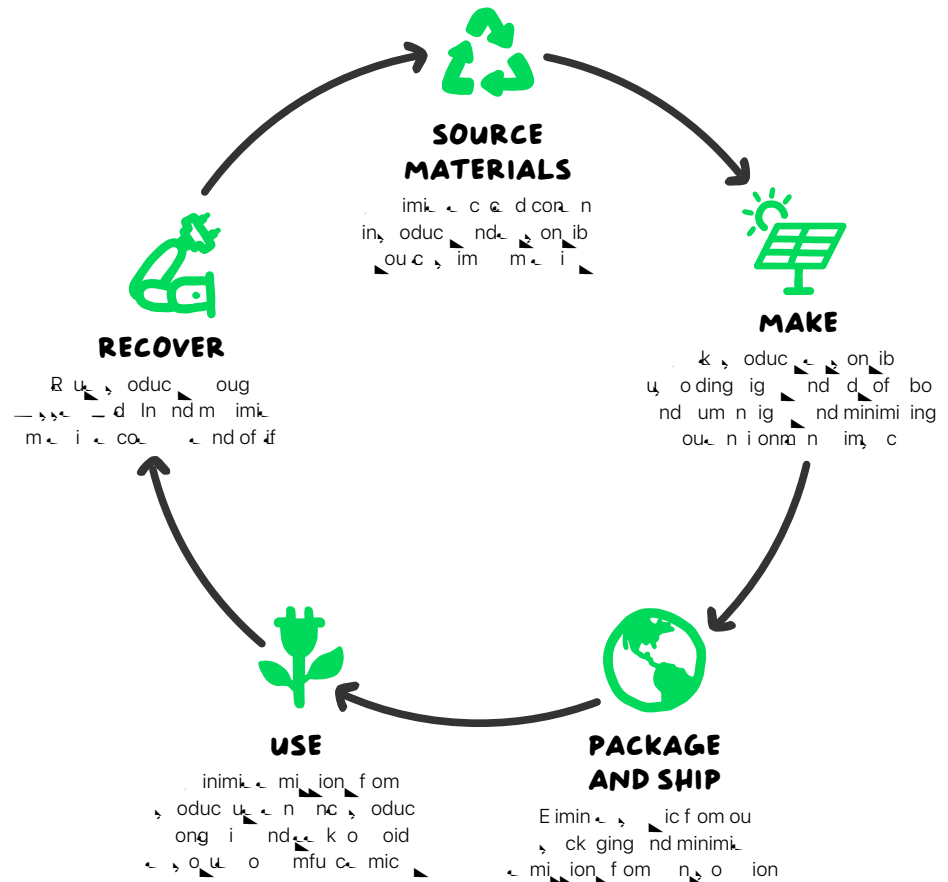
We reduced emissions for MacBook Air by 20% by 2020, and by 38% by 2022. We are on track to reach carbon neutrality for MacBook Air by 2025. We are committed to reducing MacBook Air emissions by 50% by 2030. We are committed to reducing MacBook Air emissions by 80% by 2040.



Taking responsibility for our products at every stage

We take responsibility for our products throughout their lifecycle—including the materials we use, the way we source them, how we make them, how we package and ship them, how we use them, and how we recover them. We work to make big differences for our products by reducing our impact on the environment, our communities, and our planet.

We sell millions of products. So making even small adjustments can have a meaningful impact.





Source materials

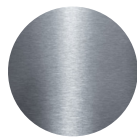
... cook i wi ... 2 c i con in 4 ... c n c e d o ... n w b e con n.1

... con ... im o n e ou c w w o k o d u c e m e i w u e nd im o o a d ... ou c on e c e d o e n w b e m e i in ou s o d u c ... nd w m k i n i o n w ... m in commi d o e e ... on i l a ou c i n g o f ... im m e i . W m s m n m e i ... o r a o e m i n o u c n d b i e i e ... nd d f o r a e n d e f i a ... o e q u i 1 ... c n o f i d n i f i d i n n u m u n g e n g o d c o b n d i u m ... n d e f i a o s i c i e i n i d s u d i .¹⁰ W e s o u d o b e c o g n i d w o d w i d ... d i n e e ... on i l a ou c i n g o f m i n i n o u s o d u c . u s o d u c d i g n o c o n i d ... e f o f o w o m k u e n d e c e o u s o d u c e i c i n g e u e o f u n d d o f ... m f u u b n c . u n d d g o b o n d w ' e q u i d b w o s a e c e e n d ... e n i o n r a n .



Rare earth elements

W u 1 ... c n e c e d e e ... r a n i n m g a ... n i n g ... 8 ... c n o f e o ... e e r a n ... i n e d i c .



Steel

W u 2 ... c n e c e d e e i n e ... b e ... - f i f o



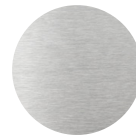
Ti

W u 1 ... c n e c e d i n i n e o d ... o f e m i n o g i c b o d .



Elastomer

W e n i o n i n g f o m f o i f u - b e d ... i c o o m d f o m e n w b ... o e c e d o u c . o c c o o k i ... w i 2 c i w u 3 ... c n o m a ... c e d s i c i n 1 c o m o a n .



Aluminum

... e e d n u m i n u m o m d o f 1 ... c n e c e d u m i n u m w i c w u e f o ... e n c o u e o f c o o k i w i 2 c i .¹¹ ... i o d i e ... r a e n g d u b i i ... n d f w ... f i n i - w i o u m i n i n g n a w ... b u i (u m i n u m e) f o m e e .



Smarter chemistry

... c o o k i w i 2 c i i f e o f m f u u b n c i k b i u m b o m i n e d f r a e d n ... C s ... e n i c i n e d i s g ... n d r a c u 3 n d 1 ... c n o f e m e i i n ... c o o k i w i 2 c i e c o e d b o u R g u e d S u b n c S e c i f i c i o n . W g o b o n d ... w ' e q u i d b i m i n g o u n d ... n d e n o n e g u e d u b n c i r e s o f e ... s o d u c - r e f f o e q u i n i n d u e d i n g e o f n e n c o u g e e n i u s ... c i n . W c o n i e n i d n i f e m k u o f a 7 ... c n b m o f c d i c .



Value

Our Supplier Code of Conduct is a guide for the selection of our suppliers and the way we work with you. It is a key part of our business strategy and is designed to ensure that we work with you in a way that is consistent with our values and the requirements of our customers.

We work with you to identify and work to reduce the environmental and social risks associated with our supply chain. We are committed to ensuring that our suppliers are also committed to the same standards. We will work with you to ensure that our supply chain is transparent and that we are able to identify and address any risks that may arise. For more information, please visit www.3m.com/our-supplier-code-of-conduct.

Reduce chemicals

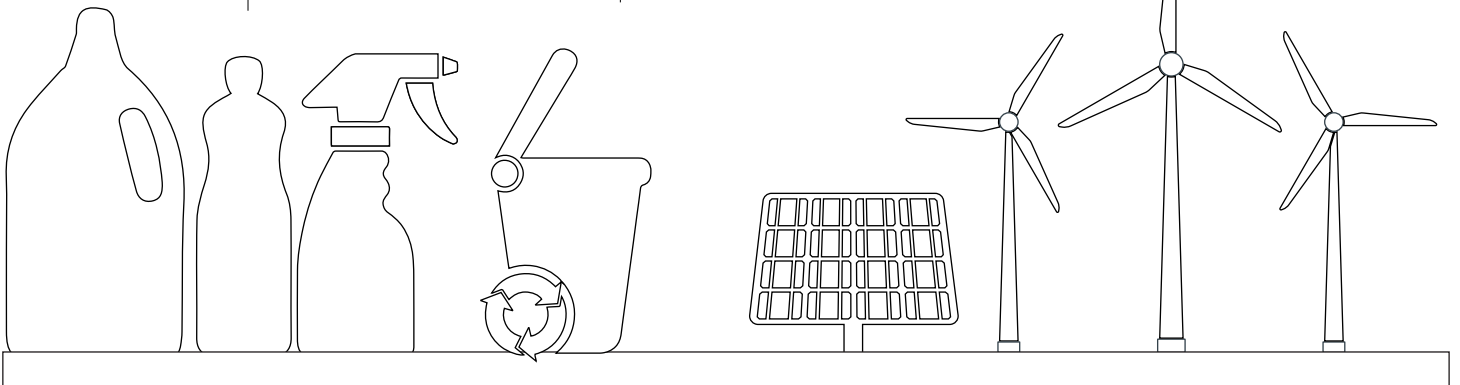
Our biodegradable cleaning products are designed to be safe for the environment and our employees. We are committed to reducing the use of hazardous chemicals in our products and processes. We are also committed to ensuring that our products are safe for use in the home and in the workplace.

Zero Waste to Landfill

Our biodegradable cleaning products are designed to be safe for the environment and our employees. We are committed to reducing the use of hazardous chemicals in our products and processes. We are also committed to ensuring that our products are safe for use in the home and in the workplace.

Sustainable energy use

Our biodegradable cleaning products are designed to be safe for the environment and our employees. We are committed to reducing the use of hazardous chemicals in our products and processes. We are also committed to ensuring that our products are safe for use in the home and in the workplace.





ac age a d Shi

ac age a d Shi 2 c i s ck ging i m d wi 1 c n
 c e d cor n on ib ou c d wood fib .

o im, a ou, ck ging w e wo king e imin e s ic in e c e d cor n nd
 u e s ck ging a of e wood fib in ou, ck ging i e c e d o cor n
 f om e s on ib m n g d fa .¹⁴ nd w e s e e d o e e d noug e s on ib
 m n g d fa o ca e i gin wood fib w u e in ou, ck ging.¹⁵ i e n u
 wo king fa e b e o g ow nd con inu o e n ou i nd, u if ou w e .

— w n s o ou, oduc f om ou m nuf c u o ou con um w e s io i i ing
 c bon-in n k i s ing mod n i n s o uc i nd oc n.

95%

of e s ck ging¹⁶
 i fib -b e d du o
 ou wo k e imin e
 s ic in s ck ging

45%

e c e d cor n in
 fib s ck ging

10%

of e i gin wood
 fib in e s ck ging
 com f om e s on ib
 m n g d fa .¹⁴





Use

... cook i wi ... 2 c i u ... 7 ... c n ... a g ... n ...
 ... qui m n fo ENERGY S...R.17

W d ignou, oduc ob a g e f f i a i n o n g - i n g n d f . c o o k i w i . 2 c i
 u ... of w e n d , o w e f f i a i n c o m , o a n ... i r i g n m n g , o w c o n u m , i o n .
 W o u n o u o w n R i b i i n d E n i o n r a n ... i n g b w e o u , o d u c g o u g
 i g o u e ... i n g b f a e e e o u d o o . u u , o c o n i n u ... o u g o u e c , o d u c '
 i f c e w i e g u ... of w e u d e ... o k e , d i c c u e n n d a w o k o f u o i d
 e , i , a f ... i o n ... o ... i c e m i f a c o d d ... m i , i o n , i d o e e e c i c i o u
 , o d u c u w e b u i l d i n g e r a a g , a j c n d n g g i n g w i o u c u o m o
 e d u c e n d , o i d a , o u n i k i o u , o e d c b o n i i o n o f e g i d .

Ei erg col sum tio, of ENER Y S T R-rated roducts

... d i c c o n j e n n k m o n g e i g ... f o m i n g , o d u c e d b ENERGY S...R
 w i c e ... c i f i c i o n ... , i c e f c e 2 ... c n m o e a g e f f i a i n d i c o n
 e m k ... c o o k i w i . 2 c i c o n u m ... 7 ... c n ... a g ... n ... e q u i m n
 fo ENERGY S...R.17

esig, ed to last

... n u d u b i i w ... d
 ... c o o k i w i . 2 c i i n o u
 R i b i i ... i n g b u i n g i g o u
 ... i n g m o d ... i m u e
 c u o m e ... i n c .

ade ith smarter chemistr

W ... i g o u c o n o f o
 m e i u e o u c - b e d
 o n e c o m m a n d i o n f o m
 o i c o o g i ... n d d m o o g i .



Recover

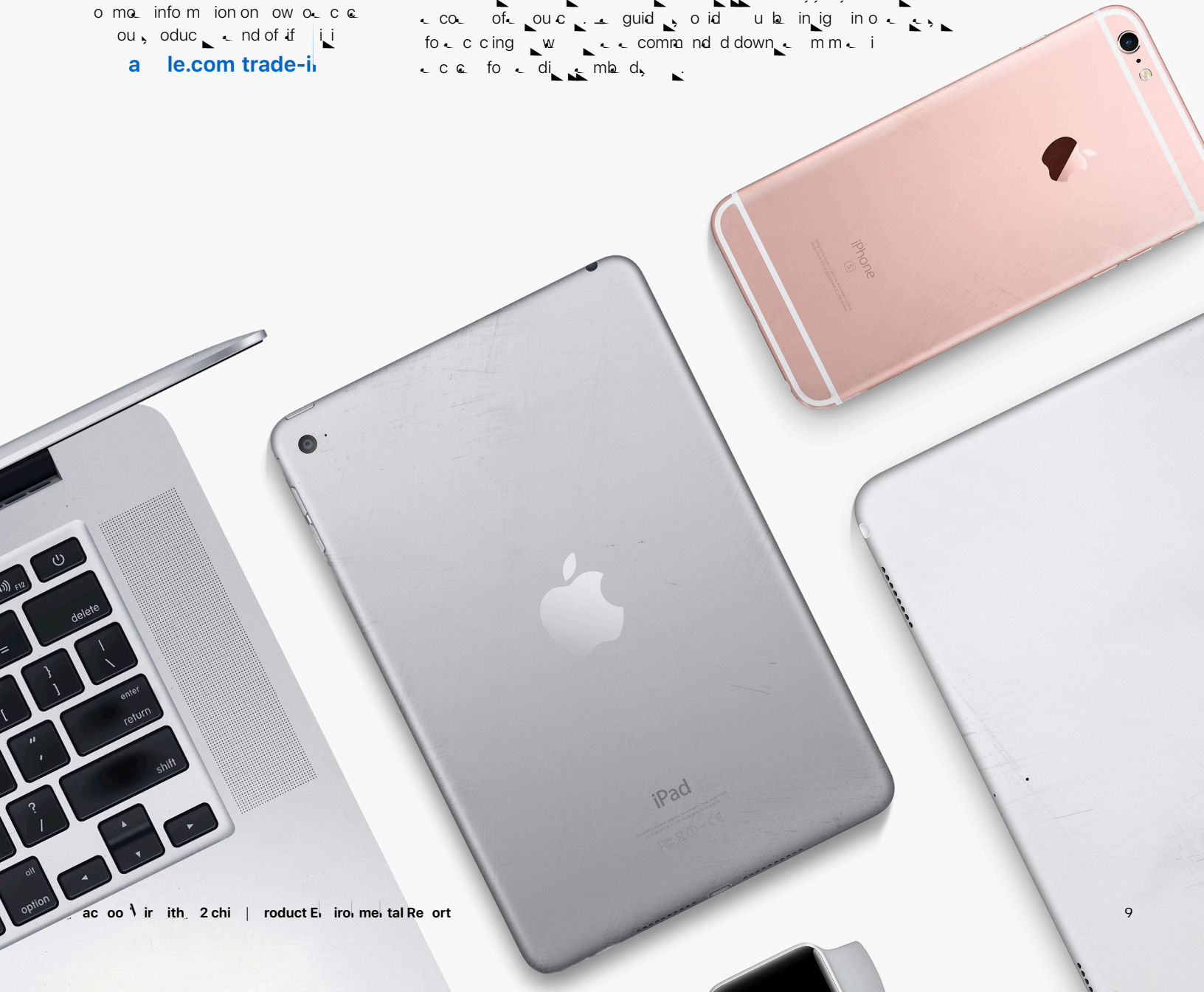
Run our product with us and in new ways. It's a long if not a life cycle.

When you use our products, we're not just using them, we're making them. In our factories, we use recycled materials to make our products. It's a long if not a life cycle. We're not just using them, we're making them. In our factories, we use recycled materials to make our products. It's a long if not a life cycle.

The Trade In

Our information on how to trade in your old device is available at apple.com/trade-in.

With our new [Recycle Guide](#), you can find out how to recycle your old device. It's a long if not a life cycle. We're not just using them, we're making them. In our factories, we use recycled materials to make our products. It's a long if not a life cycle.



Definition

Bio-based plastics Bio-based plastics are made from biological sources and can be used for a wide range of applications. Bio-based plastics are made from renewable resources and can be used for a wide range of applications.

Carbon footprint The carbon footprint of a product is the total amount of greenhouse gases (GHG) emitted during its production, use, and disposal. The carbon footprint of a product is the total amount of greenhouse gases (GHG) emitted during its production, use, and disposal.

Reduction Reduction is the process of decreasing the amount of waste or emissions generated by a product or process. Reduction is the process of decreasing the amount of waste or emissions generated by a product or process.

Traceability Traceability is the ability to track the origin and movement of a product or material throughout its supply chain. Traceability is the ability to track the origin and movement of a product or material throughout its supply chain.

Use Use refers to the application of a product or material in a specific context. Use refers to the application of a product or material in a specific context.

End-of-life process End-of-life process refers to the management of a product or material at the end of its useful life. End-of-life process refers to the management of a product or material at the end of its useful life.

For more information on our products, visit www.bonfo.com/en/online.

Low-carbon materials Low-carbon materials are materials that have a low carbon footprint. Low-carbon materials are materials that have a low carbon footprint.

Recycled materials Recycled materials are materials that have been recycled from waste. Recycled materials are materials that have been recycled from waste.

Renewable materials Renewable materials are materials that can be replenished naturally. Renewable materials are materials that can be replenished naturally.

Supplier Clean Energy Program The Supplier Clean Energy Program is a program that encourages suppliers to use clean energy. The Supplier Clean Energy Program is a program that encourages suppliers to use clean energy.

Carbon Footprint

Greenhouse gas emissions were calculated during the production of the product in accordance with ISO 14047 and ISO 14044 and based on the data provided in the 2022 GRI report. The carbon footprint is based on the production of the product, including the production of the components, the production of the in-box components, and the packaging.

Greenhouse gas emissions	Product with 2 Chi 256GB storage
Total product footprint	147 kg CO₂e
Greenhouse gas emissions from the production of the product (CO ₂ e)	kg CO ₂ e
Greenhouse gas emissions from the production of the product (CO ₂ e)	147 kg CO ₂ e
Production	0
Manufacturing	8
Production	22
End-of-life recycling	-1
GHG reduction credit ⁶	-38

Not including the production of the product.

The carbon footprint of the product varies in different configurations.

Configuration	Product with 2 Chi
20GB storage	147 kg CO ₂ e
128GB storage	171 kg CO ₂ e

Et dnotes

- 1 oduc e e do e a w la cor n i e m of c ifi d e e d m e i e k o e a m of e d ic no incuding, ck ging o in-bo cc ai
- 2 We im e e e c n o e c i c i e e d m i j o n i n o u m n u f c u i n g i j o u c d f o m e a e c i c i b i b u i n g o o u c b o n m o d e a r a g s o c u d b o u u s j i n e s i o f i c e b e d o n e u s j i m n u f c u i n g o c i o n i r a o f s o d u c u n c . I n c u d d i n i n u m b j o n e a e c i c i u s e o i u s j i e s o c u d s a f s s e ' S u s j i G e n E a g o g m .
- 3 s s e ' R g u e d S u b n c S e c i f i c i o n d c i b s s e ' e i c i o n e u o f c i n a m i c u b n c i n m e i i n s s e s o d u c c c a i m n u f c u i n g s o c e n d s c k g i n g u e d f o i s i n g s o d u c o u s s e ' e n d c u o r a R i c i o n e d i k d f o m i r a n i o n w o d i c i e g u o g n e i e c o b e q u i r a n e n i o n r a n n d d n d s s e s o i a i . E e u s s e ' o d u c i e e o f C n d s e e c s f a C s o w c o d i n d i i n d f o 2 s o n g C s o w c o d j) n d S o u s a e w e w c o n i n u o e k g o e n a n s s o f o o u C n d s e e s c r a n s s e s o d u c c o m w i e E u o e n U n i o n D i c k 2 1 1 6 . / E U n d i r a n d r a n i n c u d i n g e m j o n f o e u o f d u c i g e m e u o d . u s e i w o k i n g o s e o u e u o f e e e m e d u b n c f o a w s o d u c w e e c n i c s o i a .
- 4 c o o k i w i 2 c i c i e d G o d i n g i n e U n i d S e n d C n d i n c c o d n c w i I E E E 1 0 8 . 1 o U 1 1 n d i j e d u c o n e E c o n i c o d u c E n i o n r a n u e r a n o o E E J R g i . E E e g i e c o m u d i s n d m o b i s o a b e d o r a n i o n r a n e q u i r a n i n e e n d d . o m a i n f o m i o n i j i www.e.a .
- 5 We cogni e e n e n o u c o f e c i c i e e i d u c b o r m i j o n c o e i f c e e g . f o m m n u f c u i n g) w i c w e c c o u f o w e n e c u i n g o u s o d u c c a e 3 m i j o n .
- 6 C b o n e d u c i o n e c c u e d g i n b e i a c n i o 1) N o u o f e a e c i c i f o m n u f c u i n g o s o d u c u b o n d w i e d i l a o n e g i d b e d o n e g i o n e m i j o n f c o . 2) s s e ' c b o n i r a n j i o f k m e i o f 2 1 . o u b e i a e f o u 2 3 s o d u c c b o n a u i g o . C b o n i r a n j i o f m e i e f c u e o f e c e d c o r a n n d s o d u c i o n e c n o o g . 3) s s e ' e g m i o f n o i o n m o d i i o c n u c k i n g) b s o d u c i a c o e e e f i c e 2 1 7 o 2 1 6) o b c s u e b e i a n s o i o r m i j o n o f o u s o d u c .
- 7 W c c u e e m i j o n i n g f o m e u o f e c e d o o w c b o n m e i i n o u s o d u c b o m i n g e c b o n i r a n j i o f k m e i o 2 1 . b e i a . W c u e n o n q u n i f e c b o n i n g f o m e u o f e c e d u m i n u m w i c r a n e c u e m i j o n o i d d e i k g . W s n o i m a o u c c o u n i n g o f e c e d c o r a n a i r a .
- 8 G e n o u e g e m i j o n w e c c u e d u i n g i f c e e r a n r a o d o o g i n c c o d n c w i I S 1 4 4 n d 1 4 4 4 n d d n d b e d o n . c o o k i w i 2 c i n d 2 0 G o g .
- 9 We im e e m i j o n i n g f o m u s j i e a w l a e e c i c i b o c i n g o o u c b o n m o d e a e c i c i g a e d b o u u s j i i n e s i o f i c e b e d o n e u s j i m n u f c u i n g o c i o n i r a o f s o d u c u n c .
- 10 W m s m e i i n o u u s c i n d s u b i j i o f i d n i f i d i n n u m u n g e n n d g o d 8 G) c o b n d i i u m r a e n d e f i a i n o u u s c i n . i d s e r a n e k o c o n f i m o u c i n g s c i c n d e s o f o u e o n i b o u c i n g s o g m . I n d d i o n o u e f f o c o n i d b o d n g o f i k i n c u d i n g o c i e n i o n r a n u m n i g n d g a n n e i k .
- 11 R e d m e i c i m s s e ' o e e n c o u .
- 12 C e m i c r e G e n S a e n @ b n c m k 3 o 4 o o e e q u i e n r a o d o o g i k U S . E . S f C o i c e c o n i d e d e f n d s e e d f o u e . G e n S a e n @ j c o m e e n k d e r a n o o e u e u b n c g i n 1 8 d i f f e n c i i . o m a i n f o m i o n i j i www.g.e.n.e.n.c.mic.o.g .
- 13 e b i e d f i n e m b u s j i i o o e e b e n s s e u s j i f o m a n o a e f o c o o k i w i 2 c i e i d s e i f i d e o W e b U C 2 7 0 0 S n d d) . U e q u i e e c n d e i o n o u g r a o d o e n w e e a g o c i e e o W e o n d f i i e e 0 4 e c n G o d 0 0 e c n n d i n u m 1 e c n) d i g n i o n .
- 14 R o n i l a o u c i n g o f w o o d f i b i d f i a d i n s s e ' S u i n l e i b S e c i f i c i o n .
- 15 o m a i n f o m i o n b o u o u w o k o s a e c n d a e e s o n i b m n g d f a s s e e e d o u E n i o n r a n o g . R s o .
- 16 e k d o w n o f U . S e i s c k g i n g b w i g d e k i n k n d c o i n g e e c u d d f o m o u c c u i o n o f s i c o r a n n d s c k g i n g w i g .

Ednotes

¹⁷ Energy consumption and efficiency under the Energy Star program for the 2013 model year. ENERGY STAR and the Energy Star logo are trademarks of the U.S. Environmental Protection Agency.

... cook i wi 2c i j e d wi fu c g db e nd, ow e db e 3 WUS -C ow d, e wi e US -C o gS f 3C b 2m).

- ff ow s, ow mod of e m. S e m j u down.
- S e s, ow, ow e j e r e d u o m i c f 1 m i n u e o f i n c i i d f u) o b e c i n g S e s, f o m e s s e r a n u. W k f o a w o k c c e n b d.
- I d -D i e o n S e m j o n n d c o m e d o d i n g m c S. D i e b i g a w e d f i a d b E N E R G Y S T A R o g m R q u i r a n f o C o m u n d u o - i g a w u a d o f f. C o n a e d o W i - i.
- o w d, e n o - o d C o n d i o n i n w i c e 3 W U S - C o w d, e w i e U S - C o g S f 3 C b 2 m) i c o n a e d a C, o w b u n o c o n a e d o e m.
- o w d, e e f f i c i e n c y e g o f e 3 W U S - C o w d, e w i e U S - C o g S f 3 C b 2 m) r a u d f f i c i e n c y e d 1 e c n 7 e c n e c n n d 2 e c n o f e s, o w d, e e d o u, u c u e n.

Mode	Power consumption for ac power with 2 chi		
	115V	115V	230V
ff	.13W	.13W	.13W
S e s	.27W	.27W	.27W
I d -D i e o n	3.9W	3.14W	3.18W
o w d, e n o o d	.7W	.7W	.8W
o w d, e e f f i c i e n c y	88.8	89.1	88.8

¹⁸ ... in the ... condition and configuration of our ... in the ... and ... to ... in the ... You may be ... 18 ... in the ... which ... of ... id go ... n - i ... d, o o I D ... w m e q u i ... i n g i ... i n f o m i o n) ... d d i o n e m f o m ... o ... d - i n, a m ...