



# Product Environmental Report

(i.d.i.g.a. ion)

December 2022

## Made with better materials

100% 100%

100% recycled aluminum in enclosure  
100% recycled rPET in enclosure

## Energy efficient

56%

56% less energy consumption  
ENERGY STAR® design  
efficiency qualification



## Tackling climate change

100%

100% committed to joining our net-zero manufacturing supply chain by 2030

## Smarter chemistry<sup>1</sup>

- 100% nickel-free dye
- 100% copper-free
- 100% formaldehyde-free
- 100% C-free
- 100% chromium-free

## Responsible packaging

100% 97%

100% of wood fiber comes from certified sustainable sources  
97% of packaging fiber-based due to our work on recycled ink, packaging

## Apple Trade In

Round-trip shipping included in our trade-in program

## Enclosure made with 100% recycled aluminum

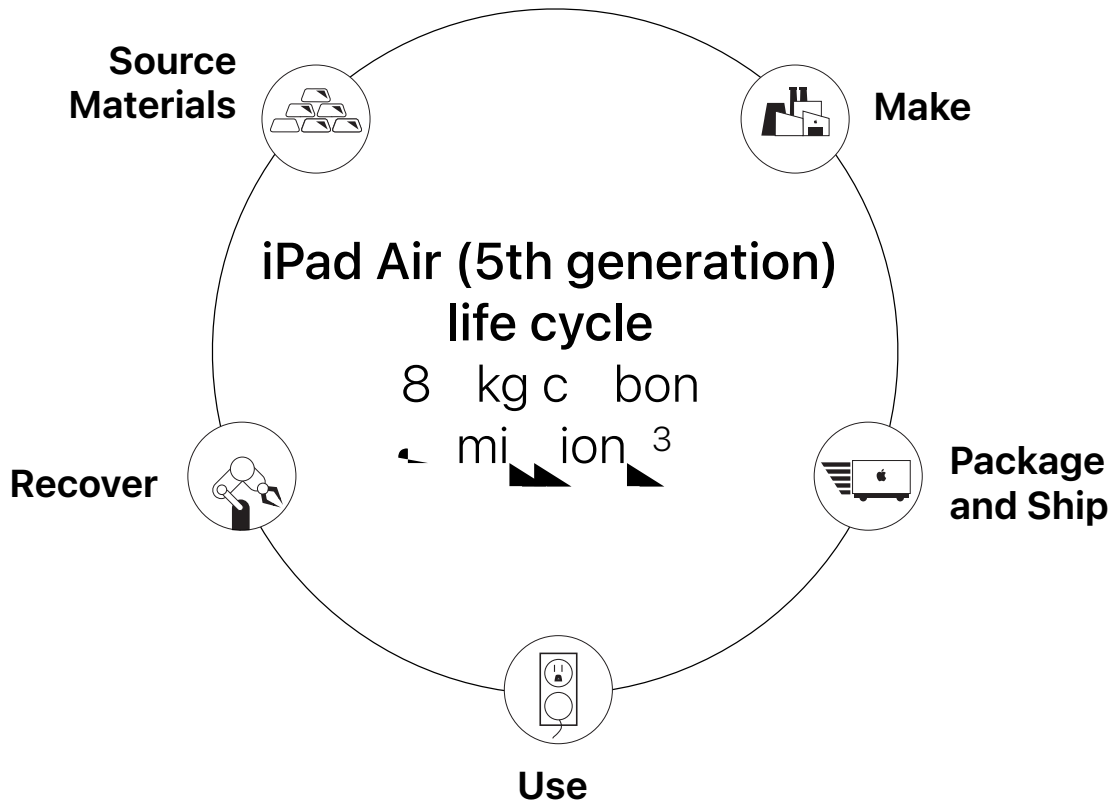
1. This report includes data on the enclosure of the product (i.d.i.g.a. ion).



# 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 make them, how we package and ship them, and how we focus on recovering them. We work on making big differences for our products, including our commitment to reducing our carbon footprint.

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



## Carbon footprint

We continue to work on reducing our carbon footprint by focusing on making a greener product, with a lower carbon footprint. We are also working on making our packaging greener, by using recycled materials. We are committed to reducing our carbon footprint, and we are working on making our products more sustainable.

## iPad Air (5th generation) life cycle carbon emissions

- 70% Production
- 7% Distribution
- 14% Use
- 9% End-of-life recycling



# Source Materials

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 ...c e d uminum.

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 ...ou c on... c e d o... a w l a m e i... in ou, o d u c... nd... w m k... i... n i o n  
 ...w e m in c o m m i... d o... e... s... on i l a... o u c i n g o f... i m... m e i... W m, m n m e i  
 ...o m a o... e m i a... o u c... n d... b i... e... i a... n d d f o r a... n d... f i a...  
 ...y... e... o... q u i... 1... e... c n o f i d n i f i d i n... n u m u n g... n g o d c o b... n d i u m  
 ...r a... n d... f i a... o... i c i... e... i n... i d... s... u d i... W... e... o u d o b... e... c o g n i... d...  
 ...w o d w i d... e... d... i n... e... s... on i l a... o u c i n g o f m i a... 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... a... w... o m k... u... n d... c... e... o u... s... o d u c... e... i c... i n g... e... u...  
 ...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... c...  
 ...y... a... e... n d... e... n... i... o n... r a... n... .



## Aluminum

...y... e... d... n... u m i n u m... o... m... d... o f... 1... y... e... c... n... e... i... f... i... d...  
 ...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... e...  
 ...i... d... i... g... n... i... o n... )... o... -... i...  
 ...o... d... i... e... r... a... e... n g...  
 ...d... u... b... i... n d... f... w... f... i... n... i... -  
 ...w... i... o u... m... i... n... g... n... a... w... b... u... i...  
 ...l... u m i n u m... a... )... f... o m... e... .



## Rare earth elements

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



## Plastic

W... l... n... i... o n... i... n g... f... o m... f... o... i...  
 ...f... u... -... b... e... d... s... ,... i... c... o... o...  
 ...m... d... f... o m... e... a... w... l... a... o...  
 ...c... e... d... o... u... c... .... o... i... d... i...  
 ...l... g... n... i... o n... )... w... u...  
 ...3... y... e... c... n... o... m... a... e... c... e... d...  
 ...s... i... c... i... n... f... i... c... o m... p... o s... i... t... i... o n... .



## Tin

W... u... 1... y... e... 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... .

## Smarter chemistry

i... d... i... g... n... i... o n... )... 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...  
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 ...m... e... i... n... i... d... i... g... n... i... o n... )... 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... a... e...  
 ...s... o f... e... s... o d u c... -... r... a... 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... n... i... u... s... c... i... n... W... c... o n... j... e... n... i... d... n... i... f... e... m... k... u... o f... a... 7... y... e... c... n... b... m... o f...  
 ...i... d... i... c... .





# Make

Apple's Supplier Code of Conduct is designed to ensure the production of our products in a way that respects the environment. It is a key part of our commitment to responsible manufacturing and is a key part of our Supplier Code of Conduct.

We work with our suppliers to ensure that they work in a way that respects the environment. This includes ensuring that they use energy efficiently, reduce waste, and use sustainable materials. We also work with our suppliers to ensure that they are committed to responsible manufacturing and are a key part of our Supplier Code of Conduct.

## Greener chemicals

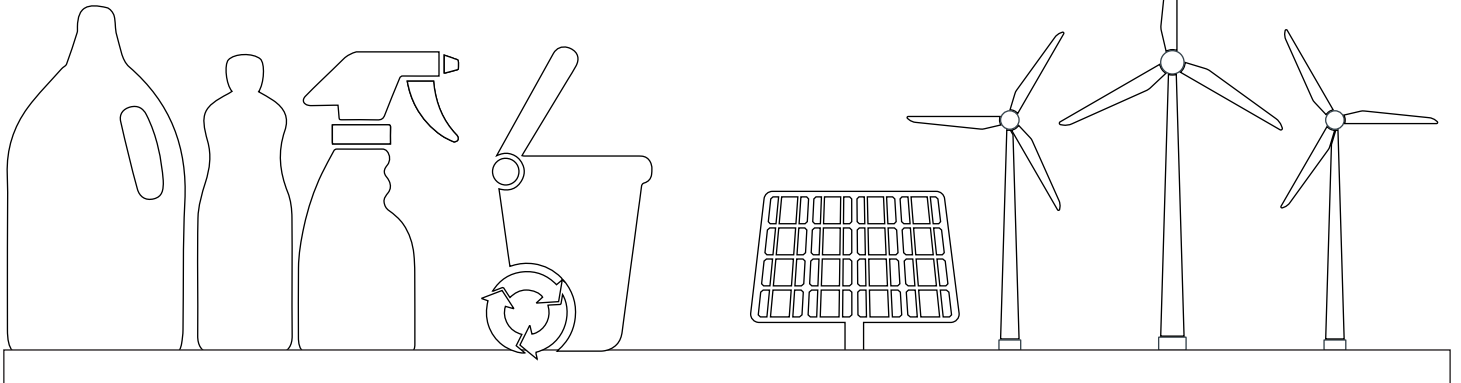
Apple is committed to using safer chemicals in our products and manufacturing processes. We are working with our suppliers to ensure that they are using safer chemicals and are a key part of our Supplier Code of Conduct.

## Zero Waste to Landfill

Apple is committed to reducing waste and ensuring that all waste is recycled or reused. We are working with our suppliers to ensure that they are also committed to reducing waste and are a key part of our Supplier Code of Conduct.

## Supplier energy use

Apple is committed to reducing our carbon footprint and is working with our suppliers to ensure that they are also committed to reducing their carbon footprint. We are working with our suppliers to ensure that they are using renewable energy and are a key part of our Supplier Code of Conduct.





# Package and Ship

iPad Air (5th generation) packaging is made with 100% recycled cardboard and 36% recycled wood fiber.

During production, packaging is made with 100% recycled cardboard and 36% recycled wood fiber. iPad Air packaging is made with 100% recycled cardboard from 100% recycled wood fiber. iPad Air packaging is made with 100% recycled cardboard from 100% recycled wood fiber. iPad Air packaging is made with 100% recycled cardboard from 100% recycled wood fiber.

**97%**

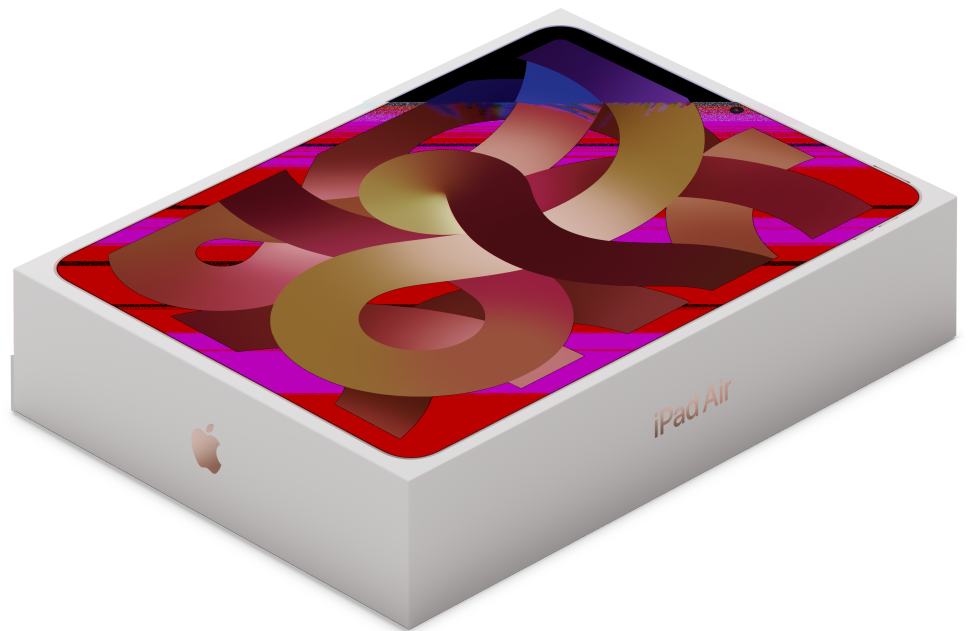
of iPad Air packaging<sup>11</sup> is fiber-based and does not use virgin wood fiber. iPad Air packaging is made with 100% recycled cardboard from 100% recycled wood fiber.

**36%**

of recycled cardboard in iPad Air packaging is made with 100% recycled wood fiber.

**100%**

of virgin wood fiber in iPad Air packaging comes from 100% recycled wood fiber.





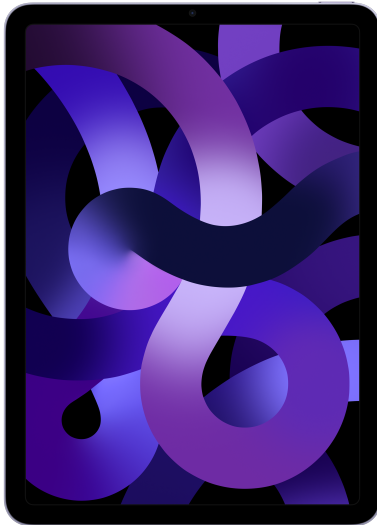
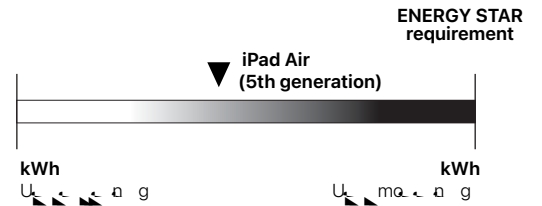
# Use

Designed to last, our products are designed to last. We're committed to ENERGY STAR.<sup>12</sup>

We design our products to be efficient and long-lasting. We use the most efficient components and materials, and we design our products to last. We use the most efficient components and materials, and we design our products to last. We use the most efficient components and materials, and we design our products to last.

## Energy consumption of ENERGY STAR-rated products

Designed to last, our products are designed to last. We're committed to ENERGY STAR.<sup>12</sup>



## Designed to last

Designed to last, our products are designed to last. We're committed to ENERGY STAR.<sup>12</sup>

## Made with smarter chemistry

We use the most efficient components and materials, and we design our products to last. We use the most efficient components and materials, and we design our products to last.



# Recover

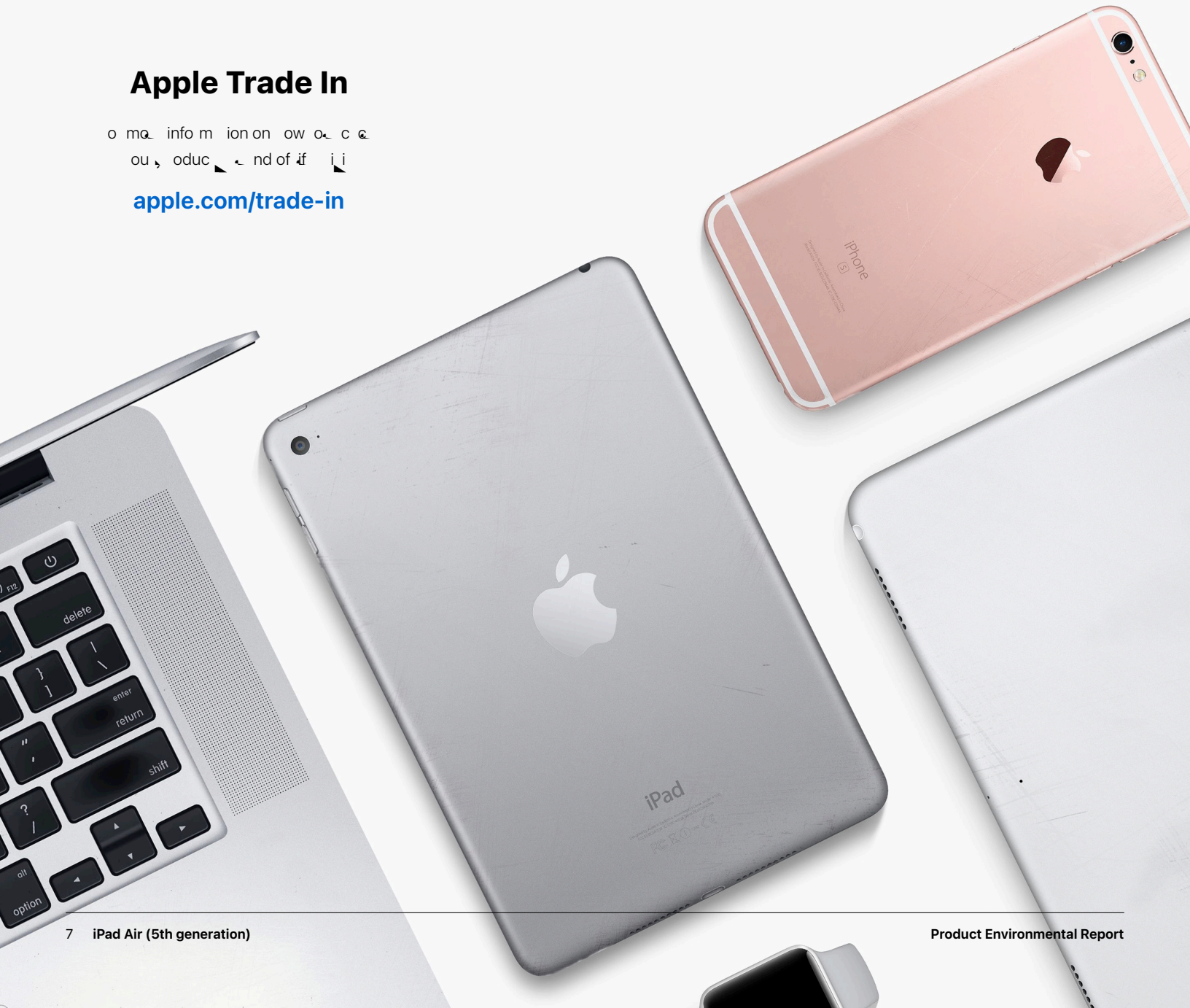
Recovery of products is a key part of our environmental strategy. We aim to recover as much as possible from our products at the end of their useful life.

We are committed to recovering as much as possible from our products at the end of their useful life. This includes recovering materials and components from our products, as well as recovering energy from our products. We are also committed to recovering as much as possible from our products at the end of their useful life. This includes recovering materials and components from our products, as well as recovering energy from our products.

## Apple Trade In

For more information on how we can help you recover your old Apple products, visit [apple.com/trade-in](https://apple.com/trade-in).

[apple.com/trade-in](https://apple.com/trade-in)



# Definitions

**Bio-based plastics:** io-b e d s ic e m d f om bio ogic ou c e n f om fo i-fu ou c io-b e d s ic ow u o e duc e i nc on fo i fu

d i b e d in o oug e fo ming c i k i k mo j nd mu ic s b ck.G og s ic d i f e n c in e s ow g id mi e b e n c cour d fo e gion e e .

**Carbon footprint:** E im e d m i ion e c cu e d in cco d nc wi guid ia nd e qui ra n e c i f i d b IS 14 4 nd IS 14 44. e e i in e n unc in in mod ing c bor m i ion du s im i o d i m i ion o e q con s on n con ibu o a s s e ' c bor m i ion s s e d d e i unc in b d e q ing d i d s oc b e d n i on r a n mod wi s s e e c i f i c s r a e o e e m in ing e r a n o f s s e ' c bonfoo s in w e on indu e g d nd um i ion C cu ion in c u d e m i ion fo e fo owing i f c e s e con ibu ing o Gob W ming a n i GW 1 e ) in C e qui e n c f c o ( e )

→ **End-of-life processing:** Incud n e o ion f om c a c i on ub a c c i n g c r a nd e e a g u d in r a c n i c s s ion nd e d d i n g o f s o m a i n f o m i o n o n e c bonfoo s in i i s s e .com/ n i on r a n / n w

**Recycled materials:** R c c i n g m k b e u e of fini e ou e b ou c i n g f o m e c a e d e n m i a d m e i R c e d c o r a n c i m f o m e i u e d in o u s o d u c e b e n e i f i d b n i n d e n d n i d s o e c e d c o r a n nd d c o n f o m o i s 14 21.

**Renewable materials:** W d fia bio-m e i o e c n b e g a e d i n u m n i f e n i k s e fib o u g c a . i o-m e i c n e s u u e f w fini e ou c . u e n oug bio-m e i e e b i i a e g o w e n o w m n g d e o n i b . R a w l a m e i e e of bio-m e i m n g d i n w e n l a c o n i n u o u s o d u c i o n w i o u d s e i n g e e ' e ou c e w w f o c u s o n o u c e c i f i d f o e i m n g r a n s c i c

**Supplier Clean Energy Program:** Sinc e e e c i c i u d o m k o u s o d u c i e g con ibu o o ou a c bonfoo s in w l e s i n g o u u s s i b cora m a e a g e f f i c i n nd n i i o n o a w e a w l a e a g o u c . W l e c o m m i t d o n i i o n i n g o u e n e m n u f c u i n g u s c i n o 1 e c n e a w l a e c i c i b 2 3 .

- **Production:** Incud e e c i o n s o d u c i o n nd n e o i o n of w m e i w e m n u f c u e n e o nd e m b of s nd s o d u c s c k i n g .
- **Transport:** Incud i n d e n e o i o n of e fini e d s o d u c n d i o c i e d s c k i n g f o m m n u f c u i n g i a e g i o n d i i b u i o n u b . n e o of s o d u c f o m d i i b u i o n u b a nd c u o r a i m o d e d u i n g e g d i n c b e d o n e g i o n g o g s .
- **Use:** s s e u m e e - o f o u e e i o d f o s o w u e b f i o w a b e d o n e s o d u c e . o d u c u e c n i o e b e d o n i o i c c u o r a u e d f o i m i s o d u c . E a g u e i i m u e d i n i o u w f a e m e b m o d i n g

# Endnotes

<sup>1</sup> s s e d fia i e i c i o n o n m f u u b n c i n c l u d i n g d f i n i i o n f o w s s e c o n i d o b " e e o f " in e s s e R g u e d S u b n c S e c i f i c i o n . E e s s e s o d u c i e e o f C n d s e e c s f o C s o w c o d i n I n d i i n d f o 2 s o n g . C s o w c o d ) n d S o u s a w e e w c o n i n u o e e k g a e n r 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 s w i e E u e n U n i o n D i c k 2 1 1 / E U n d i r a n d r a n i n c l u d i n g e m i o n f o e u o f d u c i g e m e u o d s s e i w o k i n g o s e o u e u e o f e e e m e d u b n c w e e c n i c s o i l e .

<sup>2</sup> i d i r a g a i o n ) c d 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 e r a n o o ( E E ) R g i . E E e g e c o m s u d i e n d m o b i s o a b e d o r e n i o n r a n e q u i r a n i n e n d d o m a i n f o m i o n i i w w w . e . a .

<sup>3</sup> G e n o u s g e m i i 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 g i n c c o d n c w i IS 14 4 n d 14 44 n d d n d b e d o n i d i r a g a i o n ) n d d c o n f i g u i o n w i 4 G o g . W o f n u d e o u c b o n m o d a e g a w i n f o m i o n e u o u e i m e f o e c b o n f o o s i n o f e s e i o u g a i o n - i d i r a g a i o n ) w i 4 G o g c o n f i g u i o n - i n a e d f o m 82 k g C e r a b i e d i n i o d u c E n i o n r a n R s o ) o 88 k g C e .

Carbon footprint		
	iPad Air (5th generation)	iPad Air (4th generation)
4G	8 kg C e	88 kg C e
128G	84 kg C e	-
2 4G	2 kg C e	1 2 kg C e



# Endnotes

4 i d i (A g a ion) w u d fo com i on e mo e c n e e d nd imi d ic . e s oduc ion i d i (A g a ion) nd d configu ion wi 04G o g w com e d o i s ingi d i (A g a ion) nd d configu ion wi 04G o g configu ion inc e e e e wo ow o g configu ion off e d.

W m s m e i in ou u s c in nd s ubi i of id n i f i d in n um ung e n nd god (B G) cob nd i um ra e nd e fia in ou u s c in i d s ra n e k o confi m ou cing s c ic nd e s of ou e s on i la ou cing s og m. In ddi ion ou e ffo con id b o d ng of i k including oci e n ion ra n um n ig nd go e n n c i k.

0 R c e d m e i c im s s i o e n c o u nd i b e d on u di ing do a b U C.

7 C mic ra e G e n S a e n @ b n c m k 3 o 4 o o e e qui e n ra o do og i ik U.S. E S f C o i c e con id e d f nd s e f e d fo u . G e n S a e n @ i com e e n i e d e ra n o o e u e ub n c g in 18 diff e n c i i . o m a e i n f o m i o n i i [www.g-n.com](http://www.g-n.com) o g.

8 e b i e d fin e mb u s i i o o e e b e n s e u s i fo m a n o a e - fo i d i (A g a ion) e i d s e i f i d e o W e b U C ( 2 7 2 9 S nd d). U e qui e e e c n d e ion ou g ra od o e n w e a a g o c i e e o W e o nd f i e e 4 e c n God e e c n nd inum 1 e c n ) d ign ion.

9 R s on i la ou cing of wood fib i d fia d in s e ' S u in la i b S e cific ion. W con id wood fib o incud b mboo.

1 o m a e i n f o m i o n bou ou wo k o s a e c nd a e e s on i b m n g d fa e e d ou [En i on ra n og R s o](#).

11 e kdown of U.S. i s ck ging b w ig . S e c non s ic non-fib m e i e c ud d.

12 E a g con um ion nd a g e f f i a i n c u e b e d on e ENERGY S \_ R og m R qui ra n fo Com u including e m e a g ow n c fo i d i (A g a ion). o m a e i n f o m i o n i i [www.a-g.com](http://www.a-g.com). ENERGY S \_ R nd e ENERGY S \_ R m k e e g i e d d m k o w a d b e U.S. En i on ra n a e c i o n g n c .

i d i (A g a ion) i e e d wi fu c g d b e nd s ow e d b e 2 W US -C ow d s e wi e US -C o C g C l a ( m).

→ S e s , ow ow e i e r e d u o m i c e w o m i n u of in c i i ( d f u ) o b s e i n g e S e s / W k bu on. Con a e d o Wi- i o e e i n g w e e f in e i d f u e e .

→ I d -D i s on D i s big a w e d fia d b ENERGY S \_ R og m R qui ra n fo Com u nd u o- ig a w u a d off. Con a e d o Wi- i o e e i n g w e e f in e i d f u e e .

→ ow d s e no-o d Con d i o n i n w i c e 2 W US -C ow d s e wi e US -C o C g C l a ( m) i con a e d a C s ow bu no con a e d o i d i (A g a ion).

→ ow d s e e f f i a i n c e g of e 2 W US -C ow d s e wi e US -C C g C l a ( m) ra u d f f i a i n c w e n e e d 1 e c n 7 e c n e c n nd 2 e c n of e s ow d s e e d ou s u c u e n .

Power consumption for iPad Air (5th generation)			
Mode	100V	115V	230V
S e s	.44W	.44W	.42W
I d -D i s on	3.3W	3.3W	3. W
ow d s e no-o d	. 4W	. 4W	. W
ow d s e e f f i a i n c	80.8	87.0	87.8

13 \_ d -in u b e d on e con d i o n e nd configu ion of ou d -in d ic nd m o b w e n on i a nd in- a d -in. You mu b e 18 e o d. In- a d -in e qui e s e n ion of id go e n ra n i u d s o o D o c w m e qui i n g i n f o m i o n ) d d i o n e m f o m s s e o s s e e d -in s a m s s .

© 2 2 2 2 e Inc. i g e e d s s e e s s e o g o . c e . c o g o i o a i d s s e W c H o r a o d s s e \_ i S i d S m c S S S nd w c S e e d m k of s s e Inc. e g i e d in e U.S. nd o e coun j nd e gion i d i (A g a ion) i d m k of s s e Inc. s s e S a i e i c m k of s s e Inc. e g i e d in e U.S. nd o e coun j nd e gion ENERGY S \_ R nd e ENERGY S \_ R m k e e g i e d d m k o w a d b e U.S. En i on ra n a e c i o n g n c . e s oduc nd com n n ra ra n i o a d e e in m b d m k of e i e e c k com ra i .