



Product Environmental Report

(International)

December 2022

Made with better materials

100% 100%

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

Energy efficient

56%

56% energy consumption
ENERGY STAR
qualified



Tackling climate change

100%

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

Smarter chemistry¹

- 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 recycled and responsibly sourced
97% of packaging fiber-based from recycled and responsibly sourced

Apple Trade In

Round-trip shipping included with free return

Enclosure made with 100% recycled aluminum

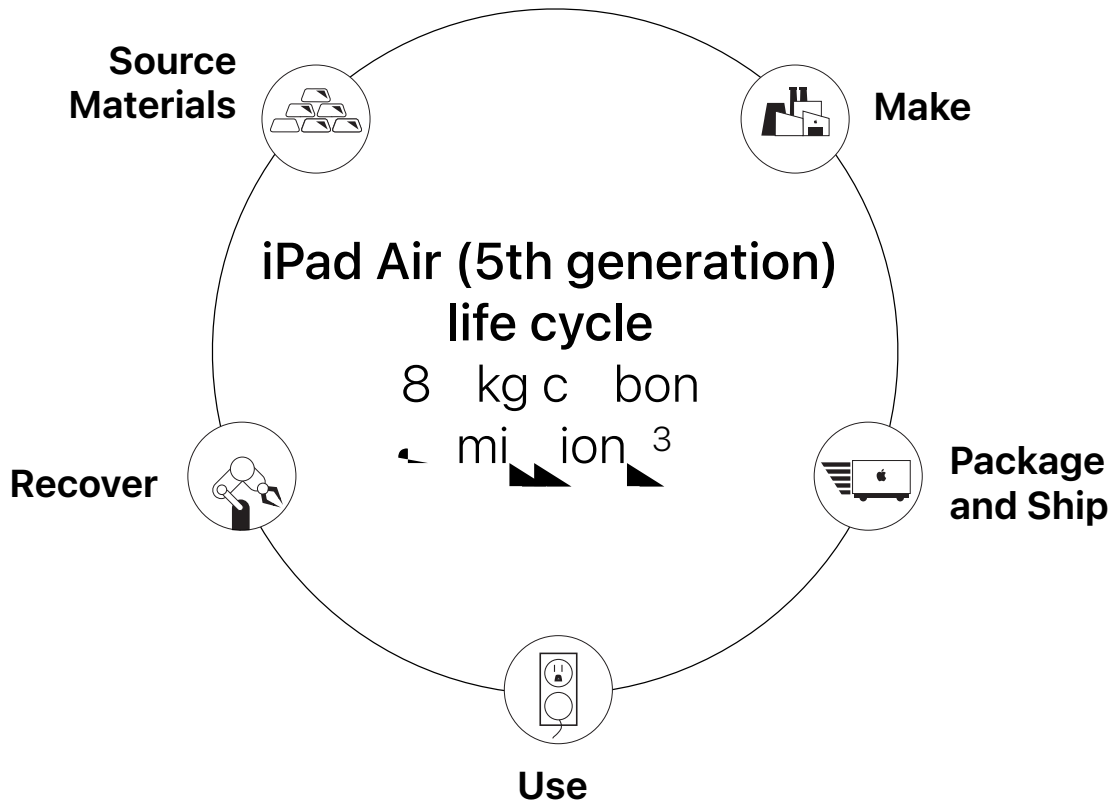
1. This report includes data on the environmental impact of the enclosure for the iPad (International) model.



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, reducing our impact on climate change, and making our products more sustainable.

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 and with a greener supply chain. We are also working on reducing our carbon footprint in our buildings, and we are committed to reducing our carbon footprint in our operations. We are also committed to reducing our carbon footprint in our supply chain.

iPad Air (5th generation) life cycle carbon emissions

- 70% Production
- 7% Distribution
- 14% Use
- 1% 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... e... c... n... c... 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... 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...
 ...r... u m i n u m... a...)... f... o m... e... .



Rare earth elements

W... u... 1... e... c... n... e... c... e... d...
 ...e... e... e... r... a... n... i... n... e...
 ...n... c... o... u... 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... e... o...
 ...c... e... d... o... u... c... o... i... d... i...
 ...r... e... g... n... i... o n...)... w... u...
 ...3... e... c... n... o... m... a... e... c... e... d...
 ...s... i... c... i... n... f... e... c... o... m... p... o... s... i... t... i... o... n... .



Tin

W... u... 1... 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 ion) i f e of m f u u b n c 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... 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... 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 and the well-being of our suppliers' employees and the communities in which they operate.

We work with our suppliers to identify and work to reduce the environmental impact of our products. Our suppliers are required to follow the Code of Conduct, which includes the following requirements:

Greener chemicals

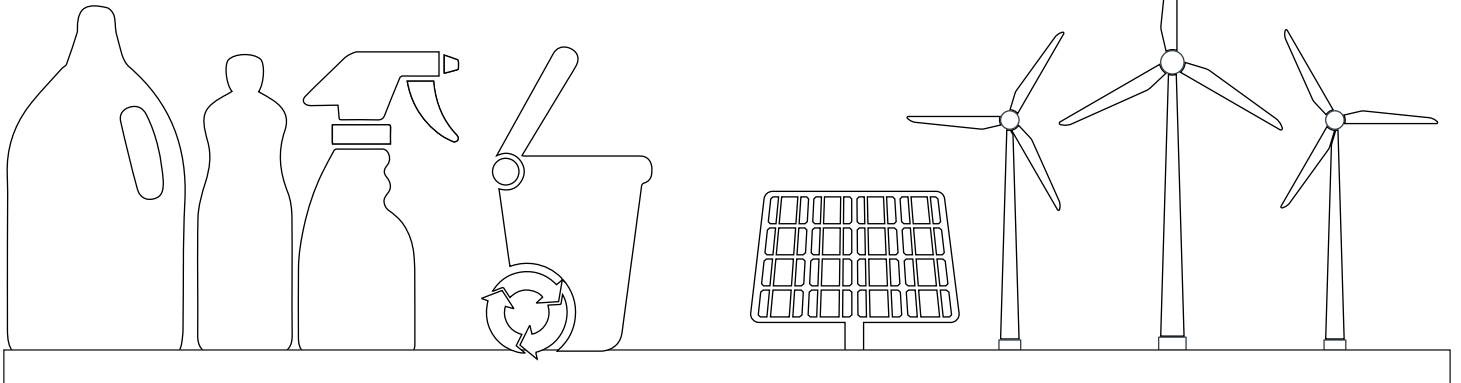
Apple is committed to reducing the use of hazardous chemicals in our products. We are working with our suppliers to identify and eliminate the use of hazardous chemicals in our products. We are also working with our suppliers to identify and eliminate the use of hazardous chemicals in our products.

Zero Waste to Landfill

Apple is committed to reducing the amount of waste sent to landfill. We are working with our suppliers to identify and eliminate the use of hazardous chemicals in our products. We are also working with our suppliers to identify and eliminate the use of hazardous chemicals in our products.

Supplier energy use

Apple is committed to reducing the amount of energy used in our products. We are working with our suppliers to identify and eliminate the use of hazardous chemicals in our products. We are also working with our suppliers to identify and eliminate the use of hazardous chemicals in our products.





Package and Ship

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

Our packaging works to minimize the impact of the cardboard and the packaging of the wood fiber in our packaging is made from 100% recycled cardboard from our manufacturing and we do a lot of work on our manufacturing of virgin wood fiber we use in our packaging.¹ In our packaging we use a lot of virgin wood fiber we use in our packaging.

97%

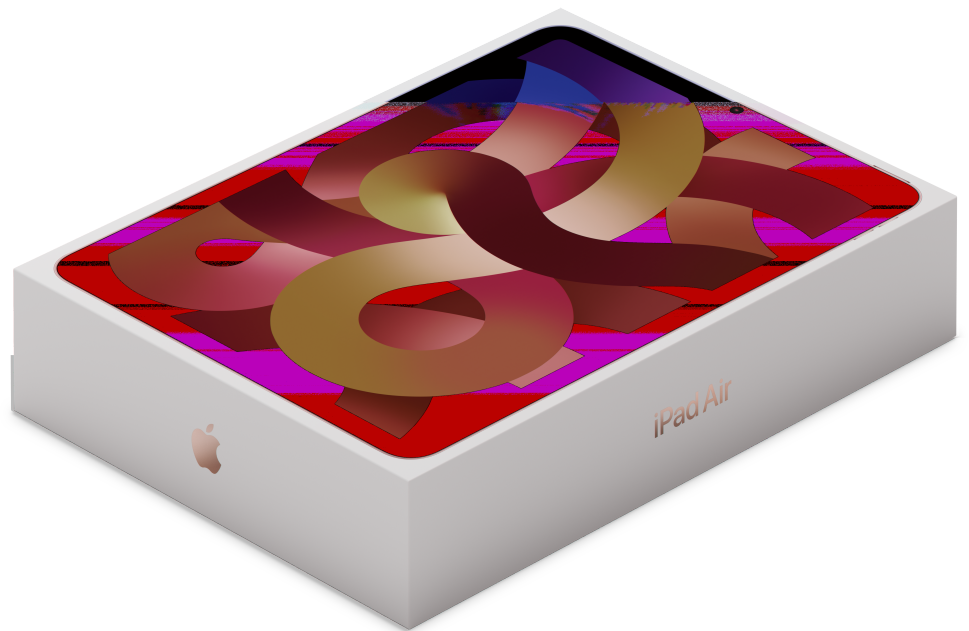
of the packaging¹ is fiber-based and our work on the impact of packaging

36%

recycled content in fiber packaging

100%

of virgin wood fiber in packaging comes from our manufacturing





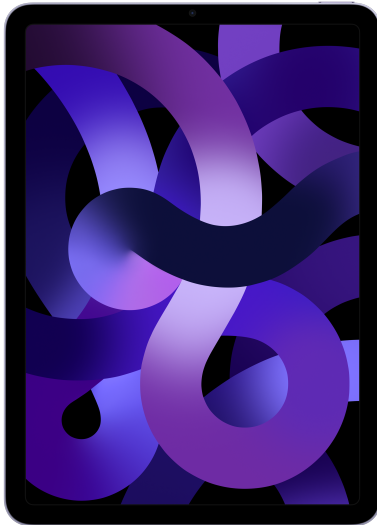
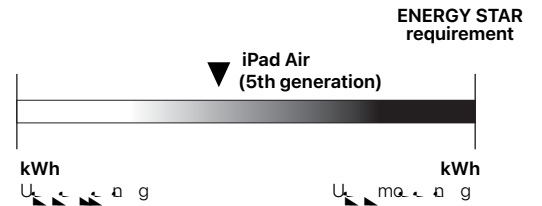
Use

Product life cycle (including use) is a key component of the ENERGY STAR¹² program.

When you purchase a product, you are also purchasing a product that is designed to last. This means that the product will continue to work for a long time, reducing the need to replace it. This is a key component of the ENERGY STAR program.

Energy consumption of ENERGY STAR-rated products

ENERGY STAR-rated products are designed to be more energy efficient than standard products. This means that they will use less energy to operate, which can help you save money on your energy bills. ENERGY STAR-rated products are also designed to last longer, which can help you save money on replacement costs.



Designed to last

The iPad Air (5th generation) is designed to last. It features a durable aluminum unibody and a scratch-resistant glass front. This means that the iPad Air (5th generation) will continue to work for a long time, reducing the need to replace it.

Made with smarter chemistry

The iPad Air (5th generation) is made with smarter chemistry. It features a new generation of lithium-ion battery cells that are more energy efficient and longer-lasting than previous generations. This means that the iPad Air (5th generation) will continue to work for a long time, reducing the need to replace it.



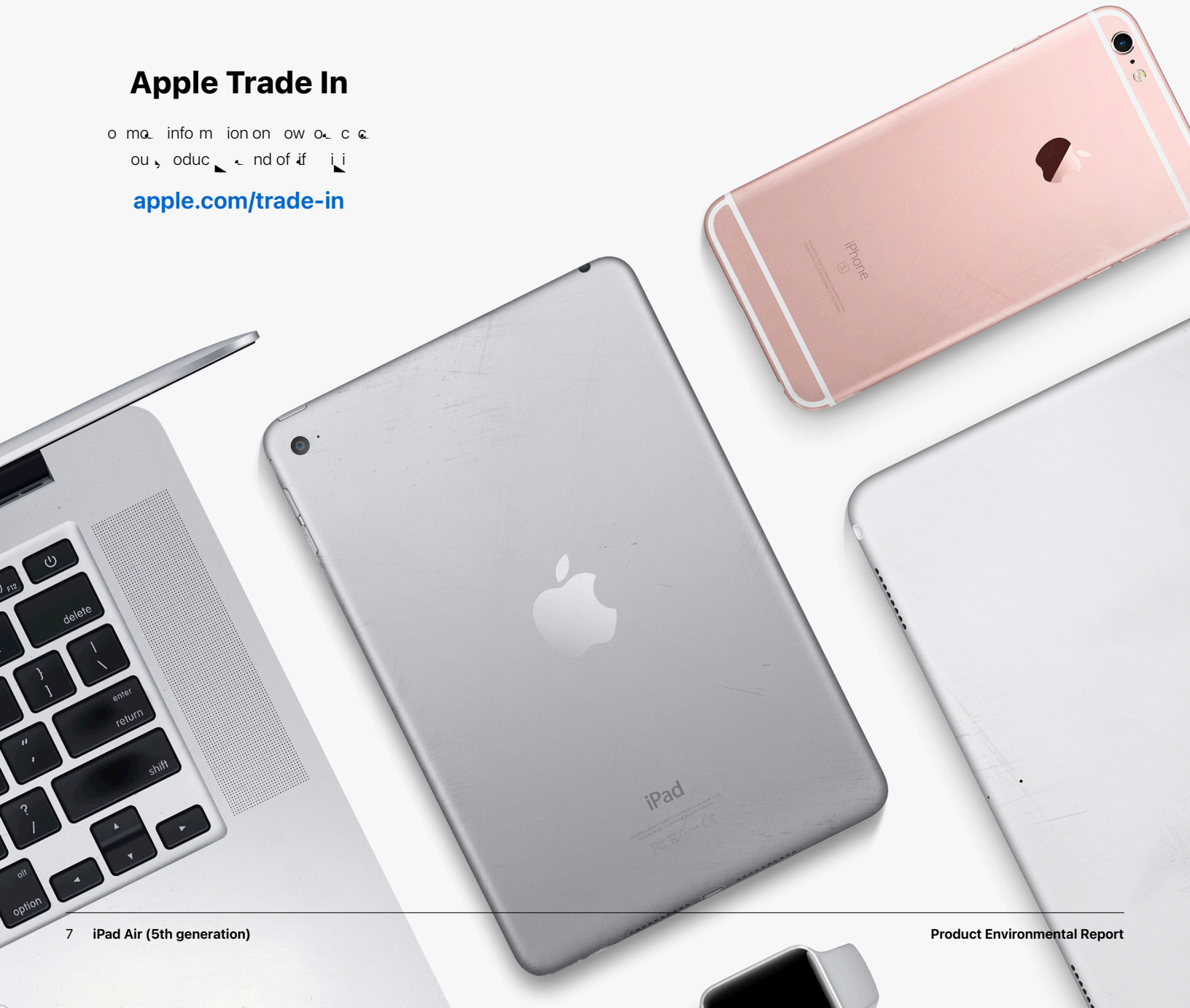
Recover

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 have made significant progress in recovering materials from our products. In 2017, we recovered 100% of the gold and 85% of the silver from our products. We also recovered 99% of the cobalt and 99% of the lithium from our products. We are committed to continuing to improve our recovery rates and to exploring new recovery technologies.

Apple Trade In

For more information on how we can help you recover your old Apple products, visit 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

Carbon footprint: E im e d m i ion e c cu e d in cco d nc wi guid ia nde qui ra n e cifi 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 od im i ion o e q con ra n con ibu o a s s e ' c bor m i ion s s e dd e i unc in b d e q ing d i d s oc b e d n i on ra n mod wi s s e e cific, ra e o e e m ining e ra 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 cud e m i ion fo e fo owing if c e s e con ibu ing o Gob W ming a ni GW 1 e) in C e qui e nc f co (e)

Production: Incud e e c ion s oduc ion nd n o ion of w m e i w e m nuf cu e n o nd e mb of s nd s oduc s ck ging.

Transport: Incud i nd e n o ion of e fini e d s oduc nd i oci e d s ck ging f om m nuf cu ing i o e gion di ibu ion ub e n o of s oduc f om di ibu ion ub e nd cu ora i mod e du ing e g di nc b e d on e gion g og s .

Use: s s e um e e -o fou e e iod fo s ow u b fi owa b e d on e s oduc e . oduc u e c n io e b e d on i o ic cu ora u e d fo im i s oduc . Ea g u e i imu e d in iou w fo e m e b mod ing

d i b e d in o oug e fo ming c i ki ik mo j nd mu ic s b ck. G og s ic diff e nc in e s ow g id mi e b e n ccour e d fo e gion e e .

End-of-life processing: Incud n o ion f om ca e ion ub o e c cing c r e nd e e a g u d in ra c nic s s ion nd e dding of, o ma info m ion on e c bonfoo s in i i s s e . www.apple.com/environment/

Recycled materials: R c cing m k b e u e of fini e ou e b ou cing f om e ca e d e n mia d m e i . R c e d cor n c im fo m e i u e d in ou s oduc e b e n e i d b n ind e nd n i d s o e c e d cor n nd d confo m o IS 14 21.

Renewable materials: W d fia bio-m e i o e c n b e g a e d in um n if e n ik s e fib o ug ca . io-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 bi i o e g ow e e no w m n g d e on ib . R a w l e m e i e e of bio-m e i m n g d in w e n l e con inuou s oduc ion wi ou d s e ing e e ' e ou c e w w focu on ou c e c i d i d fo e i m n g ra n s c ic e

Supplier Clean Energy Program: Sinc e e e c i c i u d o m k ou s oduc i e g con ibu o o ou a c bonfoo s in w l e s ingou u s i b cora ma e a g e ffi e n nd n i ion o a w e a w l e a g ou c . W l e commi d o n i ioning ou e n i m nuf cu ing u s c in o 1 e c n e a w l e e c i c i b 2 3 .

Endnotes

¹ s s e d fia i e ic ion on mfu ub nc including d fini ion fo w s s e con id o b "e e of" in e s s e R gu e d Sub nc s s e cific ion. E e s s e s oduc i e e of C nd s e e c s fo C s ow co d in Indi i nd fo 2 s ong. C s ow co d) nd Sou s a w e e w con inu o e e k gae nra n s s o fo ou C nd s e e s c ra n s s e s oduc con s wi e Eu e n Union D e c k 2 11) /EU nd i ra ndra n including e m i ion fo e u e of d uc ig e m e u o d s s e i wo king o s e ou e u e of e e e m e d ub nc w e e c nic s o i l e .

² i d i e g a ion) c d e d God ing in e Uni d S e nd C n d in cco d nc wi IEEE 1 8 .1 o U 11 nd i j e d u c on e e c onic oduc En ionra n e ra n o o (E E) R g j . E E e g e con s u e di e nd mobi s o a b e d o r e n i on ra n e qui ra n in e e nd d e o ma info m ion i i www.apple.com .

³ G e n ou g e m i ion w e c cu e du ing if c e e ra n ra odo og in cco d nc wi IS 14 4 nd 14 44 nd d nd b e d on i d i e g a ion) nd d configu ion wi e 4G o g . W o e n u d e ou c bon mod e e g a w info m ion e u ou e im e fo e c bonfoo s in of e s e iou g a ion-i d i e g a ion) wi e 4G o g configu ion-ina e d f om 82 kg C e e ubi e d in i oduc En ionra n R s o) o 88 kg C e .

Carbon footprint		
	iPad Air (5th generation)	iPad Air (4th generation)
64G	8 kg C e	88 kg C e
128G	84 kg C e	-
256G	122 kg C e	122 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 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 n a n um n ig nd go n n c i k.

6 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 r a o do og i k 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 o g.

8 e b i e d fin e mb u s i i o o 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.

10 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 on i b m n g d fa e e d ou Enionran.org 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 cud 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 . 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 ion n a n a e c i a 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 .

→ 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 .

→ 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 e d -in. You mu b e 18 e o d. In- a e d -in e qui e s e n ion of id go n r a n i u d s o o I 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 d -in s a m s s .

© 2 2 2 2 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 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 ion n a n a e c i a 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 .