



Product Environmental Report

2022

December 2022

Progress toward our 2030 goal

40% of manufacturing facilities are powered by renewable energy. Over 20% of manufacturing facilities are powered by 100% renewable energy.

Responsible Sourcing

100% of our wood and wood products are sourced from responsibly managed forests. 96% of our suppliers are certified to responsible sourcing standards.

Responsible Manufacturing

100% of our manufacturing facilities are certified to the Responsible Sourcing Code of Conduct. 100% of our manufacturing facilities are certified to the Responsible Sourcing Code of Conduct.



Smarter chemistry

100% of our products are made with 100% recycled materials. 100% of our products are made with 100% recycled materials.

Log it

100% of our products are made with 100% recycled materials. 100% of our products are made with 100% recycled materials.

Recycle it

100% of our products are made with 100% recycled materials. 100% of our products are made with 100% recycled materials.

Apple is the first product to use certified recycled steel in the battery tray.

Apple is the first product to use certified recycled steel in the battery tray.



Our product carbon neutrality strategy

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

We will continue to invest in renewable energy and sustainable materials 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 water consumption and improving our water 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 also focus on reducing our energy consumption and improving our energy efficiency.
- **Transition to 100 percent clean electricity for product use:** We will transition our product use to 100% clean electricity by 2025. We will also focus on reducing our energy consumption and improving our energy efficiency.
- **Prioritize non-air transportation:** We will prioritize non-air transportation for our employees and customers. We will also focus on reducing our energy consumption and improving our energy efficiency.
- **Use recycled and low-carbon materials:** We will use recycled and low-carbon materials in our products. We will also focus on reducing our energy consumption and improving our energy efficiency.

How we'll get to net zero emissions

We will continue to invest in renewable energy and sustainable materials 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 water consumption and improving our water efficiency.

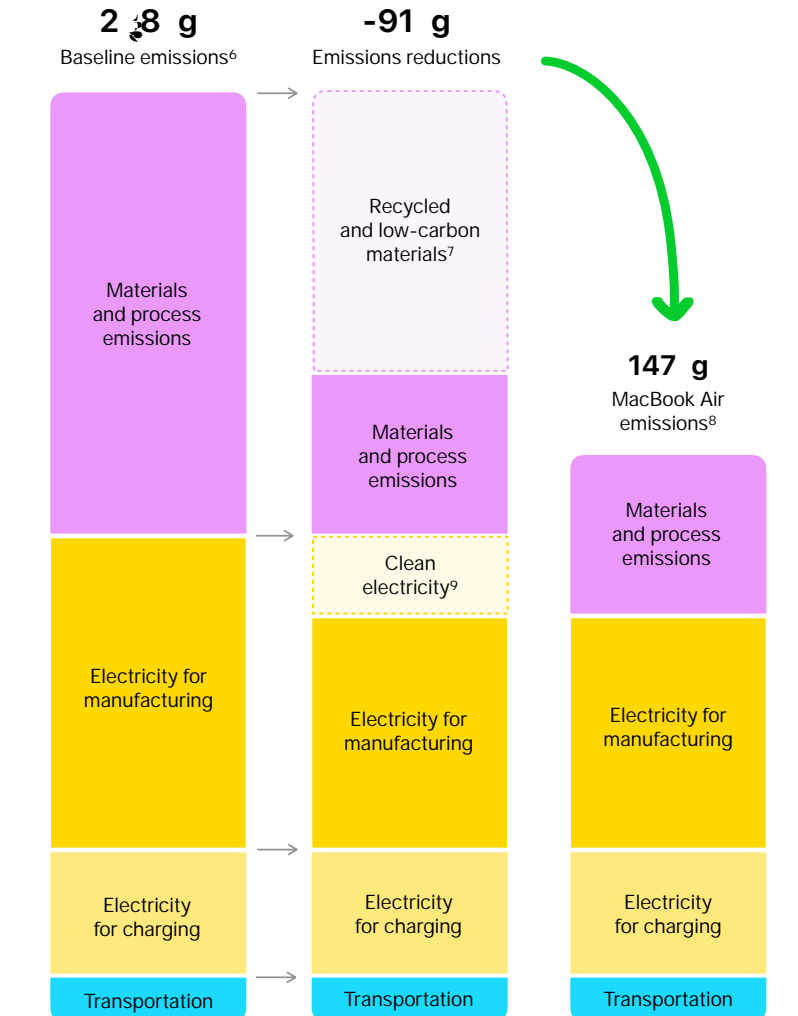
How we're monitoring progress

We will continue to invest in renewable energy and sustainable materials 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 water consumption and improving our water efficiency.

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

Progress to reach carbon neutral

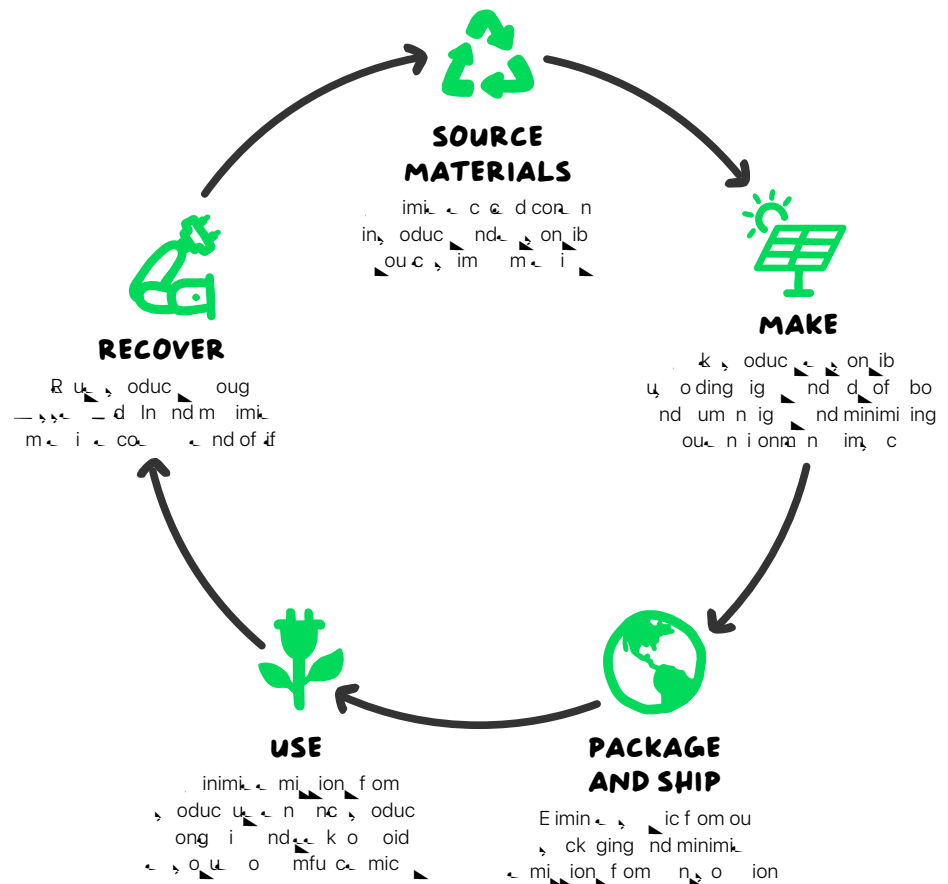
We reduced emissions for MacBook Air by 20% by 2020, and by 38% by 2022. We are on track to reach carbon neutrality for MacBook Air by 2025. We are committed to reducing MacBook Air emissions by 50% by 2030. We are committed to reducing MacBook Air emissions by 80% by 2040.



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 customers.

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





Source materials

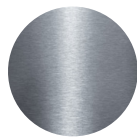
... cook i wi ... 2 c i con in 4 ... c n c e d o ... n w b e con n.1

... 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 of, 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 fo r a e n d e f i a ... o e q u i 1 ... c n of 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 r a e ... 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 of 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 of 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 of u n d d of ... m f 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 of 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



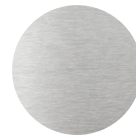
Ti

W u 1 ... c n e c e d i n i n e o d ... of 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 p o a n .



Aluminum

... e e d n u m i n u m o m d of 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 of 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 of m f 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 of 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 of 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 of 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 of a 7 ... c n b m of c d i c .



Value

Supplier Code of Conduct is a standard for the operation of our business in and around the world. It is a way for our suppliers to form a new industry standard and guide our business.

We work with our suppliers to identify and work on areas where we can improve our business and reduce our environmental impact. We require our suppliers to include environmental clauses in their contracts. Our findings from our audits are reported to our suppliers. For more information, visit www.3m.com/suppliercode.

Reduce chemicals

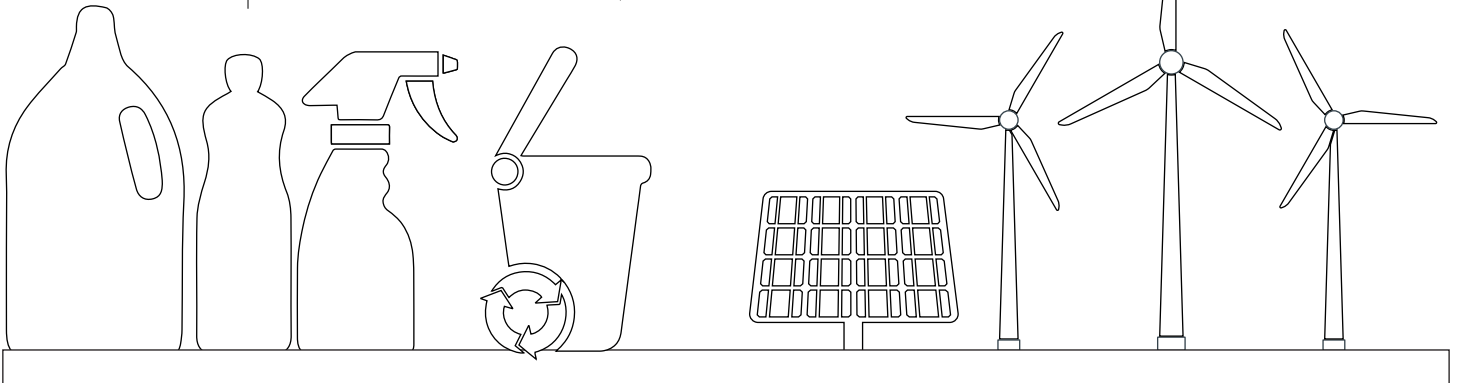
Our biodegradable cleaning products are designed to be safe for the environment and our employees. We are committed to reducing our chemical footprint and are working on developing new products that are safer and more sustainable.¹²

Zero Waste to Landfill

Our biodegradable cleaning products are designed to be safe for the environment and our employees. We are committed to reducing our chemical footprint and are working on developing new products that are safer and more sustainable.¹³

Supplier energy use

We are committed to reducing our energy footprint and are working on developing new products that are safer and more sustainable. We are also committed to reducing our energy footprint and are working on developing new products that are safer and more sustainable.²





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 , q f i o n ... o i c e m i f a c o d d e 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 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 ENER Y 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

e n u du 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. Our products are made from recycled materials, and we're using them to make more products. It's a long if not a life cycle. It's a long if not a life cycle. 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. It's a long if not a life cycle. 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 bio-based plastics, visit www.bonfoos.com/en/industry/news.

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.

Free, house gas emissions	across the life cycle
	256GB storage
Total product footprint	147 kg CO₂e
Greenhouse gas emissions from electricity (CO ₂ e)	kg CO ₂ e
Greenhouse gas emissions from production (CO ₂ e)	147 kg CO ₂ e
Production	0
Manufacturing	8
Production	22
End-of-life recycling	-1
GHG emissions credit ⁶	-38

Not including the manufacturing of the product.

Weight of the product is based on the production of the product in different configurations.

Configuration	across the life cycle
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 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 o n e u e o f c i n c 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 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 e 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 e 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 c n i c s o i l e .
- 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 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 s 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 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 e 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 e 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 l a 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 j i 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 f 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.e.m.i.c.o.g .
- 13 e b j 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 c o r a n n d s c k g i n g w i g .

Endnotes

¹⁷ Energy consumption and efficiency under the bed on ENERGY STAR and the Commission's including the following for cook i wi 2 c i . o m a i n f o m i o n i j i www.energystar.gov. ENERGY STAR and ENERGY STAR make the grid and the U.S. Energy Information Administration.

... cook i wi 2 c i i . e d w i f u c g d b e n d , o w e d b e 3 W U S - C o w d s e w i e U S - C o g S f 3 C b 2 m) .

- ff ow s ow mod of e m . S e m i u down.
- S e s , o w s , o w e i 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 i 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 s 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 s 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 s o w b u n o c o n a e d o e m .
- o w d s e e f f i c i e n c y e g o f e 3 W U S - C o w d s e w i e U S - C o g S f 3 C b 2 m) r a u d e 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 s e e d o u s 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 s e n o o d	.7W	.7W	.8W
o w d s e e f f i c i e n c y	88.8	89.1	88.8

¹⁸ ... in the bed on condition and configuration of our in-dish and the ... You may be ... 18 ... In the ... ion of ... id go ... n - i ... d s o o I D p o c 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 s s e a s s e d - i n , a m s s .