

Beta



# Click Clean Scorecard: Key Findings & Scores Explained

2015



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# Introduction

# 01

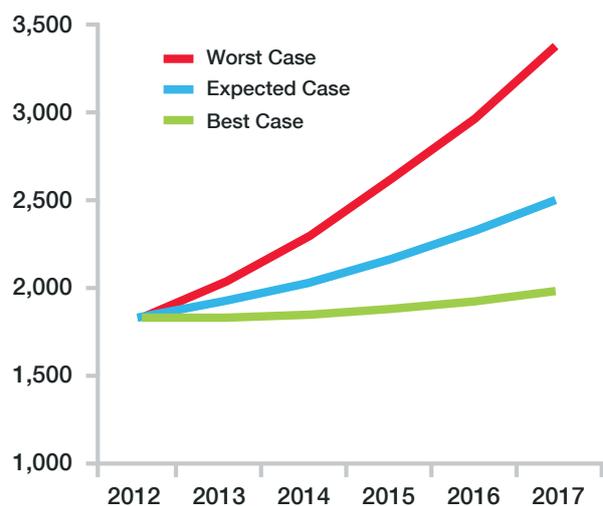
With each passing year, the Internet weaves itself more into the fabric of our lives. Where ten years ago, consumers were still renting movies in stores, buying music on CDs, storing photos in albums and getting their news on paper, they're now largely doing those things with services like Netflix, iTunes, Dropbox and The Huffington Post.

Nearly 80% of the planet's adult population will be connected to the internet by 2020, and the total number of internet-connected devices will be roughly twice the global population by 2018. All of this digital growth necessitates a massive amount of data, with total internet data now growing at a rate of over 20% each year.<sup>1</sup>

These changes can make connecting with family and friends or doing business easier or more fun, and even feel magical. Even the term used to describe much of this new functionality - "the cloud" - sounds seamless and devoid of consequence. But our digital footprint demands a massive and growing amount of electricity. A report that Greenpeace released earlier this year "Clicking Clean: A Guide to Building the Green Internet"<sup>2</sup> noted that the aggregate electricity demand of our digital infrastructure back in 2011 would have ranked sixth in the world if compared to countries.<sup>3</sup> The report also noted recent studies which estimate that the collective electricity consumption of our devices, data centers, and networks could jump from 7.4% of global electricity consumption in 2012 to as much as 12% by 2017.<sup>4</sup> "Clicking Clean" assessed the energy choices that the biggest operators of internet data centers are making and highlighted the obstacles that they face in procuring more renewable energy from monopoly electric utilities.

In this consumer's supplement to the "Clicking Clean" report, we drill a level deeper into the internet ecosystem, evaluating not just the companies building and operating data centers, but also the most popular online sites and services that are driving the growing power demand of the internet. Customers with growing digital lives have a right to know what kind of energy is powering their favorite online activities. Customers with an interest in watching online videos sustainably should have a way of evaluating whether there's a significant environmental difference between watching a show on HBO or Netflix, YouTube or Vimeo - regardless of whether those brands own their data centers, rent them, or host in the cloud.

## ITC Sector Global Electricity Consumption



Global electricity consumption in TWh/yr for best/expected/worse case scenarios. From "Emerging Trends in Electricity Consumption for Consumer ICT"

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## Our favorite online brands can build a green internet

The growth of the internet doesn't have to be a bad thing for our climate. If our favorite online brands power their operations with fossil fuels, like the economic sectors of the previous century, it will severely handicap our ability to avoid catastrophic climate change. But if companies consciously decide to power their operations with renewable energy, then the internet can be the engine that drives the economy toward a 100% renewably powered future.

Thankfully, some leading tech companies, like Apple, Facebook and Google, are doing exactly that, having committed to power their operations with 100% renewable energy. These commitments by internet companies have had a big impact in driving investments in renewable power in several key markets, as a growing number of utilities have begun to shift their investments to renewable energy to meet this new demand. Their work has shown that the internet can be green if the companies behind it are motivated to make it so.

But action from a few leading companies is not enough. Most top internet properties do not disclose information about how much energy they use, and are not taking action to power with more renewable energy. For the internet to be green, many more of our favorite online brands need to put their skin in the game.

## The Click Clean Scorecard and Browser Extension

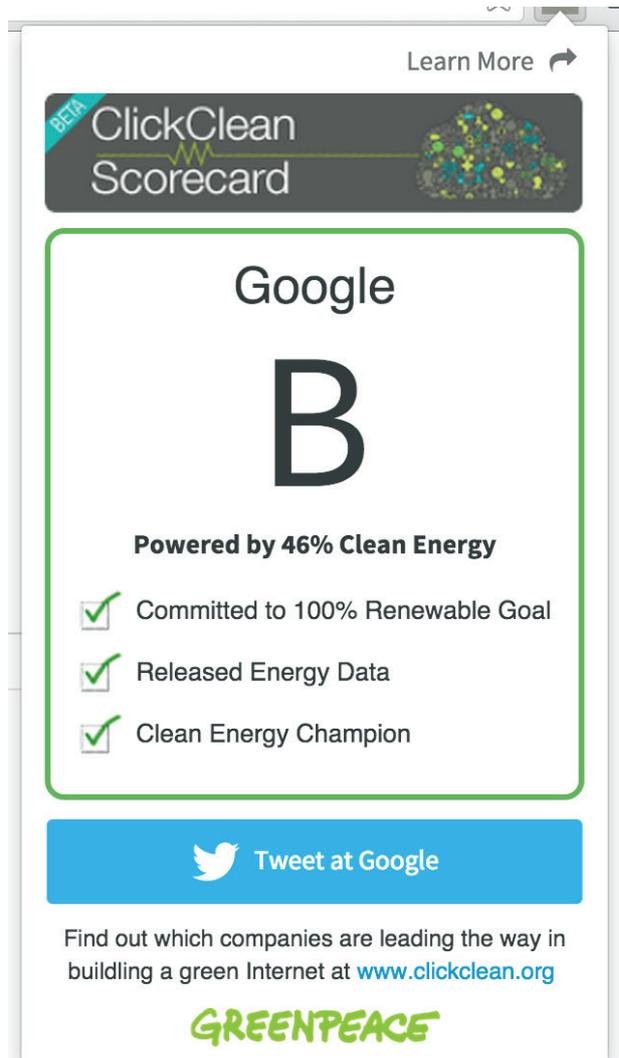
In an effort to empower consumers to factor sustainability into their digital choices, Greenpeace has expanded its assessment of IT companies this year to include some of the top trafficked websites and services on the internet. This guide includes companies that own their own data centers as well as online brands that rent server space in colocation facilities, host their operations with cloud computing vendors and content delivery networks, or use some combination of these options.

Colocation and cloud computing both have massive potential to reduce the overall power demand of the internet. These options can result in companies increasing utilization and efficiency, needing fewer servers to accomplish the same tasks. But the promise of the high-utilization, ultra-efficient cloud goes unfulfilled if the colocation and cloud data centers to which many online brands are flocking are powered by fossil fuels, and not renewable energy. Companies that host their operations in the cloud are not absolved for taking responsibility for their energy footprint; they must ensure that the carbon gains promised by cloud computing are actually delivered by their suppliers.

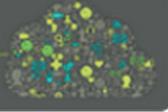
Most of the customers assessed in this report do not operate the mega data centers that Google, Amazon and Microsoft do, but their role in building a greener internet is just as important. Data center operators and cloud computing vendors will prioritize powering with renewable energy only when their customers demand it, and those customers need to step up to the challenge.

Greenpeace has developed a Click Clean Scorecard browser extension, compatible with Google Chrome and available at [clickclean.org](http://clickclean.org) and in the Chrome extension store, so that users can for the first time see the energy footprint and choices of their favorite sites, as they visit them. For consumers that want to see the data in one place, it's contained in this report. Greenpeace will update the extension as companies report new data in real time, with updated static reports like this one to follow.

Greenpeace chose the sites for this initial round of reporting based on lists of top U.S. sites by traffic, using Alexa rankings for guidance, and aiming for a number of sites reflecting top categories such as search, streaming video, social media, ecommerce, and news.<sup>5</sup> For sites and services not currently in the Click Clean database, consumers can use the Click Clean extension to suggest to Greenpeace which sites to evaluate next.



Learn More 

**BETA** ClickClean Scorecard 

**Google**

**B**

**Powered by 46% Clean Energy**

- Committed to 100% Renewable Goal
- Released Energy Data
- Clean Energy Champion

 **Tweet at Google**

Find out which companies are leading the way in building a green Internet at [www.clickclean.org](http://www.clickclean.org)

**GREENPEACE**

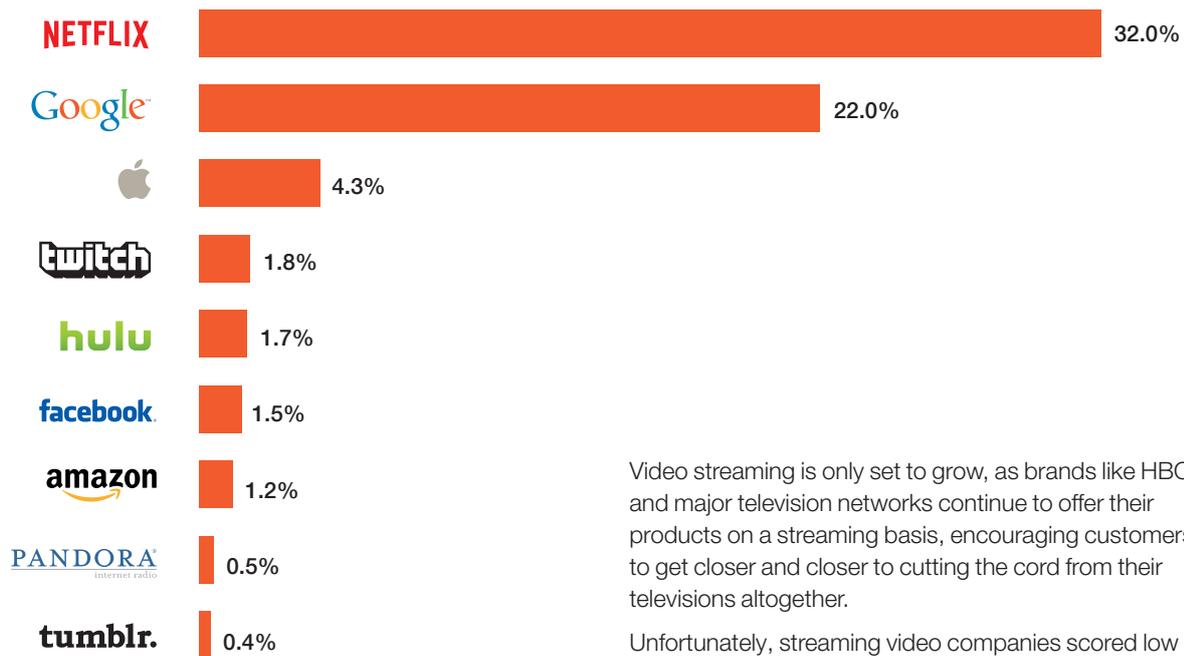


# Key Findings

# 02

## 1. Green Streaming will be crucial

Percentage of US peak Internet Traffic produced by companies' networks. Source: The Wall Street Journal. February, 2014.



Online video is far and away the biggest driver of consumer internet data. Consumers bought nearly 100 million internet connected TVs in 2014, and the steady increase of video enabled mobile devices has dramatically changed how and where we watch TV and movies. YouTube, Netflix, Hulu and other video streaming that have suddenly become a regular staple in our daily lives already make up more than 60% of consumer traffic, and that number is expected to grow to 79% by 2018. Netflix alone accounts for as much as 35% of downstream U.S. internet traffic by some measures.<sup>8</sup>

Video streaming is only set to grow, as brands like HBO and major television networks continue to offer their products on a streaming basis, encouraging customers to get closer and closer to cutting the cord from their televisions altogether.

Unfortunately, streaming video companies scored low in our analysis. Netflix, which hosts mainly through Amazon Web Services, has begun to offer some data on its energy use, but has yet to offer comprehensive data on the overall energy consumption and carbon footprint of its platform. Netflix has yet to make a commitment to power its growing footprint with 100% renewable energy without resorting to the purchase of renewable energy credits, which do not fundamentally change the mix of electricity powering the areas where Netflix operates.

In fact, among major streaming companies, only Apple's iTunes offers full transparency about its energy use, despite streaming video's rapidly growing electricity footprint. Only Apple and Google's YouTube are currently publicly committed to a goal of powering with 100% renewable energy.<sup>9</sup>

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## 2. Amazon Web Services is holding many of our favorite sites hostage to dirty energy

No company could do more to make our favorite sites green than Amazon Web Services. AWS is the dominant player in cloud computing, owning over one fourth of the market by one estimate, and over triple the market share of Microsoft, its nearest competitor.<sup>10</sup>

In the sample of 110 web sites included in this report, at least 35 (32%) use AWS for a significant portion of their hosting, with many others likely using their services to some degree. A massive portion of the internet would be on the road to becoming greener if Amazon moved to power with renewable energy. Over 60% of AWS' servers reside in its Virginia, or US-East, region, which is powered by a mix of 37% coal, 37% nuclear, 13% gas, and only 2% renewable energy.<sup>11</sup>

While AWS committed to a long-term target of powering with 100% renewable energy in November of 2014, and says it will be 40% renewably powered by the end of 2016, it remains impossible for its customers or the public to benchmark any progress toward that goal, since the company refuses to disclose any of its energy data.

AWS customers should push the company to become more transparent about its energy footprint, and to make clear what strategies and principles it is using to reach its 100% renewable energy goal, particularly in its dirtiest regions, like Virginia.

## 3. Transparency about our favorite online brands' energy use is sorely lacking

While some top sites like Facebook provide metrics for consumers about how much energy the service demands, and what type, most sites provide very little information about their energy footprint.

Eighty one of the 110 web sites (74%) that Greenpeace assessed did not receive a check for transparency about the energy footprint of their operation. In some cases, companies that would like to be more transparent about their energy footprint have been hampered by their cloud providers' refusal to provide them with data.

Companies that are fully committed to openness about their energy use should publish:

- The amount of electricity their data centers use, broken out by facility or region, for any owned facilities, leased data center space, and significant footprints via cloud computing providers and content delivery networks.
- A breakdown by percentage of the resource mix powering their operations.
- The carbon footprint of their operations

It's impossible for companies to begin to address or manage something they can't measure, and publishing the data for consumers demonstrates that a company is willing to hold itself accountable. Acquiring and publishing this data is the first thing a company that wants to contribute to a green internet should do. Not all companies are yet in the position to make renewable energy investments, due to their size, budget or market position, but any company can publish its energy data to show that it is taking the issue seriously.

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**Energy transparency leaders include:**

- **Apple** published a detailed breakdown on its progress toward 100% renewably powered data center operations, setting a high bar for other companies to match, including facility-level information of renewable energy supply and the impact its renewable investments and procurement had,<sup>12</sup> in keeping with the spirit of the dual track reporting under the recently adopted Scope 2 Greenhouse Gas Protocol.<sup>13</sup>
- **Automattic**, the maker of the Wordpress blogging platform, reported the energy demand, resource mix and carbon footprint of its data centers in colocation facilities.<sup>14</sup>
- **Etsy** issues an annual sustainability report to the public which reports its total electricity demand and carbon footprint, also breaking out that data for its data center footprint.<sup>15</sup> Etsy also reported the energy resource mix of each of its data centers to Greenpeace.
- **Facebook** provides clear and accessible information about its energy consumption on its “Green on Facebook” page,<sup>16</sup> which allows users to compare Facebook’s footprint dating back to 2011. Facebook reports facility-level consumption, resource mix and carbon data for its own facilities and its colocation footprint.
- **Intuit**, the software company behind Quicken and TurboTax, reported its overall electricity demand and carbon footprint to CDP, as well as the electricity demand, PUE and carbon footprint of its data center in Quincy, WA.<sup>17</sup> Intuit also reported to Greenpeace the electricity demand and resource mix of its colocation facility, and will include that in future CDP submissions, and is working with its cloud vendors to procure information about its energy demand with them.

- **LinkedIn** reported a comprehensive breakdown of its electricity demand, resource mix and carbon footprint for each of its data centers, working to acquire the information from its colocation providers<sup>18</sup>.

- **The Wikimedia Foundation**, which operates Wikipedia.org, reported the energy demand and resource mix of its data centers in colocation facilities.<sup>19</sup>

Other companies have notably failed to offer any transparency about the energy use of their digital operations.

- **Twitter** has refused to offer even basic information about its energy use even as it grows. Twitter’s steadfast opacity stands in stark contrast to social media peers like Facebook and LinkedIn.

- **Amazon’s** lack of transparency creates an even bigger obstacle to the green internet. While all internet users are familiar with e-commerce site Amazon.com, they may not yet have heard of Amazon Web Services (AWS), Amazon’s cloud computing subsidiary that hosts the data for many top internet properties. While AWS laudably committed to a long-term target of powering with 100% renewable energy in November of 2014, it remains impossible for its customers or the public to benchmark any progress toward that goal, since the company refuses to disclose comprehensive energy or carbon data.

- **HBO**, whose new over-the-top streaming video service portends massive growth for its digital infrastructure, has yet to disclose information about its energy footprint. HBO is hosting its streaming service through Major League Baseball Advanced Media, which relies on multiple data centers and AWS; **MLBAM** also has not disclosed any information about its energy use.<sup>20</sup>

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## 4. Cloud and colocation customers can play a key role as renewable energy champions

Whereas ten years ago, a new online product was likely hosted on its own servers, today it would most certainly be in the cloud or in colocation facilities. This migration to the cloud has great potential to be environmentally positive: online sites and services can reduce their direct energy footprint by switching to cloud computing providers or colocation centers. These savings represent the potential of increased utilization and efficiency to make the IT sector more efficient.

However, saving energy cannot be the finish line for customers when the rapid growth of the sector risks outstripping those gains. Even if customers have reduced their footprint by outsourcing their IT to the cloud, they should still aim to power their operations renewably, and to do that they must partner with - and sometimes push - their providers to power their operations with renewable energy.

Even wealthy companies that operate their own data centers have not been able to increase their renewable energy supply without working with others. Apple, Facebook and Google have had to push their utility providers and policymakers for renewable electricity - and where they've not had success in those efforts, they've remained harnessed to dirty energy, like in North Carolina, where Google and Facebook data centers continue to be powered by Duke Energy's mix of brown power,<sup>21</sup> despite efforts to push for more renewable options.

Companies with smaller budgets and footprints have the same opportunity to champion renewable energy throughout their ecosystem of providers. Some colocation customers are already pushing their hosts to provide them with more renewable energy, and it's clear that their requests are having an impact. Equinix, a leading colocation provider, committed to power its operations with 100% renewable energy,<sup>22</sup> and has started to offer renewable energy options to customers. In Arizona, colocation provider IO was able to procure renewable energy from Arizona Public Service to pass through to its customers with no additional mark-up. IO cited customers' renewable energy goals in explaining why it made the move.<sup>23</sup>

Companies that host in colocation and cloud environments can send a powerful signal to potential vendors by adopting procurement policies to work with vendors that demonstrate energy transparency and are committed to increasing their renewable energy supply. For their current vendors, cloud and colocation customers should advocate for renewable energy, lobbying them alongside peer customers if necessary. If their colocation or cloud vendors refuse to move in that direction, customers may eventually need to consider switching providers. Working with vendors in this way will take time and some effort, but companies should avoid being tempted by shortcut solutions, like purchasing carbon offsets or unbundled renewable energy credits. These actions may help a company's PR efforts to seem green, but they will not fundamentally change the mix of electricity powering the areas where they have operations.

Leaders in renewable energy championship that are working with suppliers to improve their renewable energy supply include:

- **Apple**, which has pushed utilities in Arizona and Nevada to provide its data centers there with renewable energy.<sup>24</sup>
- **Adobe**, which joined a renewable energy purchasers group to assert its request for more renewable energy to utilities and policymakers, and advocated for policies in California that would allow consumers to aggregate to procure renewable energy more easily.<sup>25</sup> Adobe has also requested that its cloud and colocation vendors provide it with renewable energy.<sup>26</sup>
- **Etsy**, which has worked closely with its CDN and Data Center partners to gain greater insight and understanding into the energy used to power its site, and advocated that its partners pursue both onsite renewable energy projects as well as the purchase of grid-supplied renewable energy to power their operations.<sup>27</sup> In addition to its individual advocacy, Etsy also participates in Business for Social Responsibility's "Future of Internet Power" Group.
- **Ask.com**, which evaluates new data centers with renewable power as a leading criteria when its existing contracts expire.<sup>28</sup>
- The blog **Boing Boing**, which chooses to purchase 100% renewable energy for its data center, at least half of which comes from new sources on the same energy grid as Boing Boing's data center.<sup>29</sup>
- **Tumblr**, **Hootsuite** and **The Huffington Post** were among 19 companies that are AWS customers which sent a letter to AWS urging the company to adopt greater energy transparency and to increase its supply of renewable energy. urging the company to adopt greater energy transparency and to increase its supply of renewable energy.
- **The Huffington Post** committed to power 50% of its AWS infrastructure in carbon-neutral regions and publicly called on AWS and Akamai, its CDN, to provide greater energy transparency.<sup>30</sup>

# 03 Road Map for Companies: How to Green Your Corner of the Internet

2  
Commit to a goal of powering with 100% renewable energy.

3  
To ensure new growth is green...

**Start**  
Do you Want to Make Your Corner of the Internet Green?

4  
For new data centers you will build and own...

5  
If you're expanding your colocation footprint...

7  
Establish a siting policy requiring access to renewable energy

6  
If you're expanding your footprint in the cloud...

8  
Establish a procurement policy for providers to offer access to renewable energy.

**PUBLISH** your GOALS, STRATEGY and SUCCESSES to customers as you make progress. **REFINE** with interim goals and benchmarks.

9  
To ensure existing infrastructure is green...

13  
If you own the data center, get energy data from the utility.

10  
Determine how clean your cloud is right now (electricity use, energy supply and carbon data).

12  
If in colocation facilities, get energy data from colocation providers.

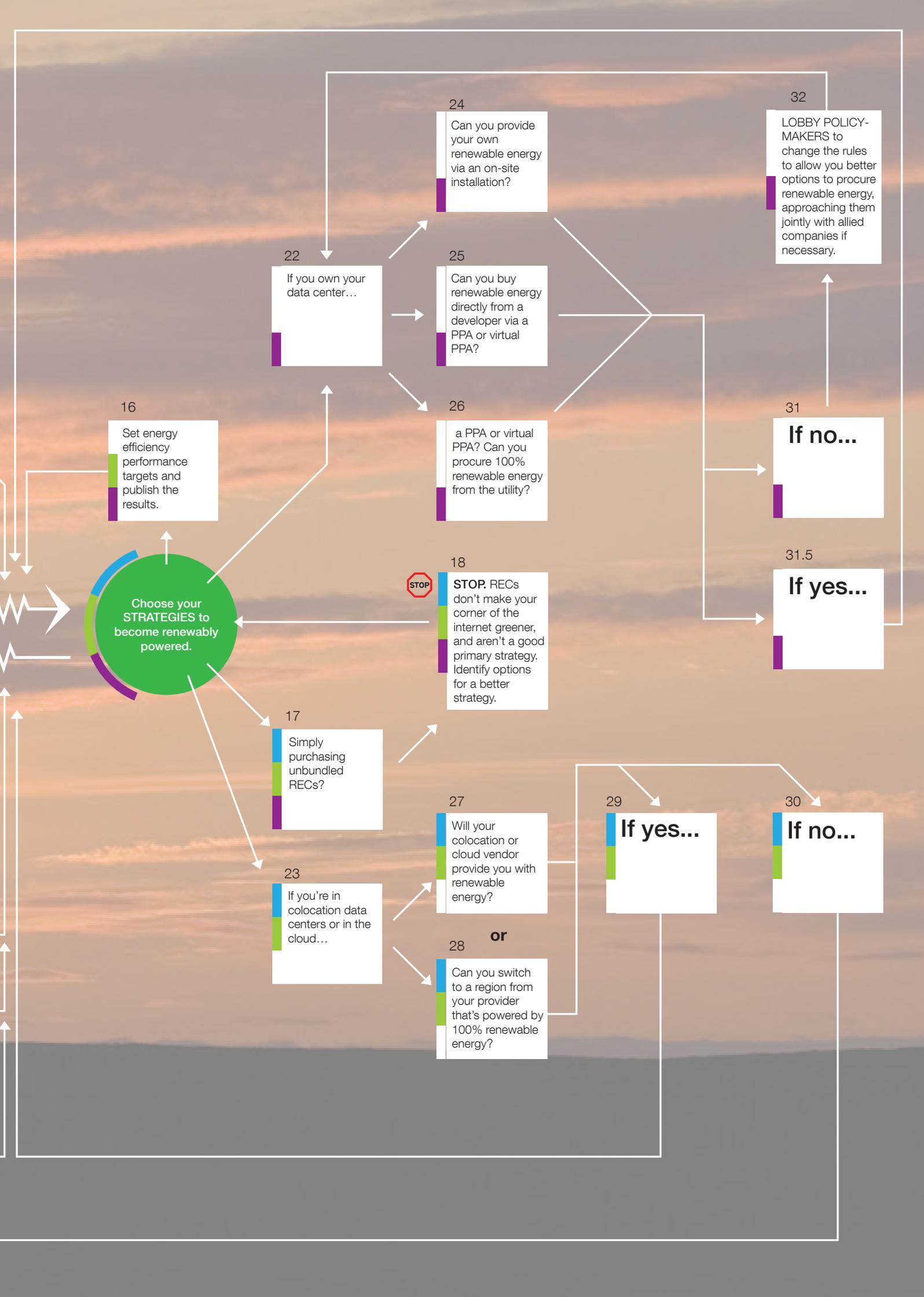
11  
If in the cloud, request energy data from cloud providers.

19  
My provider refuses to tell me energy data, or let me disclose it.

20  
Switch providers. Others may be more cooperative.

21 **or**  
Find allies. Approach provider jointly with peer customers to increase pressure.

- For footprint with cloud computing providers
- For footprint in colocation space
- For footprint in owned data centers



16  
Set energy efficiency performance targets and publish the results.

Choose your STRATEGIES to become renewably powered.

17  
Simply purchasing unbundled RECs?

23  
If you're in colocation data centers or in the cloud...

18  
**STOP**  
RECs don't make your corner of the internet greener, and aren't a good primary strategy. Identify options for a better strategy.

27  
Will your colocation or cloud vendor provide you with renewable energy?

28  
**or**  
Can you switch to a region from your provider that's powered by 100% renewable energy?

22  
If you own your data center...

25  
Can you buy renewable energy directly from a developer via a PPA or virtual PPA?

26  
a PPA or virtual PPA? Can you procure 100% renewable energy from the utility?

24  
Can you provide your own renewable energy via an on-site installation?

31  
**If no...**

31.5  
**If yes...**

29  
**If yes...**

30  
**If no...**

32  
**LOBBY POLICY-MAKERS** to change the rules to allow you better options to procure renewable energy, approaching them jointly with allied companies if necessary.

# Clicking Clean Scorecards

# 04

## Blogs

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Blogger.com	<b>B</b>	Google	✓	✓	✓	46	21	15	13
Blogspot.com	<b>B</b>	Google	✓	✓	✓	46	21	15	13
Boingboing.com	<b>B</b>	PriorityColo	✓	✗	✓	64	0	5	31
Engadget.com	<b>D</b>	AOL	✓	✗	✗	11	37	23	28
Gizmodo.com	<b>F</b>	Datagram	✗	✗	✗	21	3	41	32
Lifehacker.com	<b>F</b>	Datagram	✗	✗	✗	21	3	41	32
Techcrunch.com	<b>D</b>	AOL	✓	✗	✗	11	37	23	28
TMZ.com	<b>D</b>	Amazon Web Services	✗	✗	✗	23	27	21	26
Tumblr.com	<b>C</b>	AWS and others	✗	✗	✓	23	27	21	26
Wired.com	<b>F</b>	Amazon Web Services	✗	✗	✗	23	27	21	26
Wordpress.com	<b>D</b>	Multiple providers	✓	✗	✗	8	39	26	25

## E-Commerce

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Amazon.com	<b>D</b>	Amazon Web Services	✗	✓	✗	23	27	21	26
Bestbuy.com	<b>D</b>	BestBuy	✗	✗	✗	21	36	13	27
Craigslist.org	<b>F</b>	Craigslist	✗	✗	✗	19	19	25	26
Ebay.com	<b>C</b>	Ebay	✓	✗	✓	10	29	51	9
Etsy.com	<b>B</b>	Multiple providers	✓	✓	✓	8	41	17	33
Homedepot.com	<b>D</b>	Home Depot	✗	✗	✗	13	34	29	24
Groupon.com	<b>D</b>	Groupon and Amazon Web Services	✗	✗	✗	41	8	44	0
Slickdeals.net	<b>F</b>	PhoenixNAP	✗	✗	✗	14	55	12	19
Target.com	<b>D</b>	Target	✗	✗	✗	19	51	8	21

# IT Services

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Adobe.com	C	Adobe and others	✓	✗	✓	30	19	39	7
Amazonaws.com	D	Amazon Web Services	✗	✓	✗	23	27	21	26
Github.com	F	Rackspace	✗	✗	✗	25	33	21	21
Godaddy.com	F	GoDaddy and others	✗	✗	✗	10	30	22	30
Mailchimp.com	C	QTS and others	✓	✗	✓	9	33	37	21
Outbrain.com	F	InterNAP	✗	✗	✗	9	43	17	26
Salesforce.com	B	Salesforce	✓	✓	✓	23	25	20	26

# News

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
ABCnews.go.com	D	Switch	✗	✗	✗	14	36	48	1
Businessinsider.com	F	Datapipe	✗	✗	✗	3	33	20	25
Buzzfeed.com	F	Amazon Web Services	✗	✗	✗	23	27	21	26
CNET.com	F	IO	✗	✗	✗	10	38	22	30
CNN.com	F	Time Warner	✗	✗	✗	3	35	39	23
Thedailybeast.com	F	Amazon Web Services	✗	✗	✗	23	27	21	26
Forbes.com	F	AT&T	✗	✗	✗	21	3	41	32
Foxnews.com	D	Amazon Web Services	✗	✗	✗	23	27	21	26
Gawker.com	F	Datagram	✗	✗	✗	21	3	41	32
Huffingtonpost.com	C	Amazon Web Services	✗	✗	✓	23	27	21	26
Mashable.com	D	Rackspace	✗	✗	✗	25	33	21	21
NBCnews.com	F	NBC Universal	✗	✗	✗	13	43	17	22
NYTimes.com	D	New York Times / AWS	✗	✗	✗	42	9	25	23
NPR.org	F	Amazon Web Services	✗	✗	✗	23	27	21	26
PBS.org	F	Amazon Web Services	✗	✗	✗	23	27	21	26
USAToday.com	F	Gannett	✗	✗	✗	6	41	25	26
WSJ.com	D	Amazon Web Services	✗	✗	✗	23	27	21	26
Washingtonpost.com	D	The Washington Post	✗	✗	✗	23	27	21	26

## Online Services

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Fedex.com	D	FedEx	✗	✗	✗	12	64	24	0
Greenpeace.org	A	Evoswitch and others	✓	✓	✓	100	0	0	0
Indeed.com	D	Multiple hosts	✗	✗	✗	38	30	12	14
Intuit.com	B	Intuit and others	✓	✗	✓	65	11	21	2
Paypal.com	C	eBay	✓	✗	✓	10	29	51	9
UPS.com	D	UPS	✗	✗	✗	3	39	28	29
USPS.com	D	USPS	✓	✗	✗	24	22	19	25
Weather.com	D	Amazon Web Services	✗	✗	✗	23	27	21	26
Wunderground.com	D	Amazon Web Services	✗	✗	✗	23	27	21	26
Yelp.com	F	Yelp and AWS	✗	✗	✗	26	14	25	24
Zillow.com	F	Zillow and AWS	✗	✗	✗	23	27	21	26

## Photos

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Flickr.com	B	Yahoo	✓	✗	✓	73	11	6	8
Imgur.com	F	Amazon Web Services	✗	✗	✗	23	27	21	26

## Reference

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
About.com	C	Equinix and others	✓	✗	✗	20	11	38	25
Answers.com	F	C7 Data Centers	✗	✗	✗	14	64	15	0
Ask.com	C	Multiple hosts	✓	✗	✓	4	36	37	16
IMDB.com	F	Amazon Web Services	✗	✗	✗	23	27	21	26
Reference.com	C	Multiple providers	✓	✗	✓	4	42	20	32
Stackexchange.com	F	QTS and others	✗	✗	✗	3	61	18	35
Stackoverflow.com	F	QTS and others	✗	✗	✗	3	61	18	35
Wikia.com	F	Multiple hosts	✗	✗	✗	25	34	25	10
Wikihow.com	D	Rackspace	✓	✗	✗	25	33	21	21
Wikipedia.org	D	Equinix and others	✓	✗	✗	9	34	28	28

## Search & Email

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
AOL.com	D	AOL and others	✓	✗	✗	11	37	23	28
Bing.com	C	Microsoft	✗	✗	✓	39	30	19	10
Google.com	B	Google	✓	✓	✓	46	21	15	13
Live.com	C	Microsoft	✗	✗	✓	39	30	19	10
Microsoft.com	C	Microsoft	✗	✗	✓	39	30	19	10
Microsoftonline.com	C	Microsoft	✗	✗	✓	39	30	19	10
MSN.com	C	Microsoft	✗	✗	✓	39	30	19	10
Yahoo.com	B	Yahoo	✓	✗	✓	73	11	6	8

## Social

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Diply.com	D	Microsoft	✗	✗	✗	39	30	19	10
Facebook.com	A	Facebook	✓	✓	✓	49	25	10	14
Hootsuite.com	C	Amazon Web Services	✗	✗	✓	10	31	24	32
Instagram.com	A	Facebook	✓	✓	✓	49	25	10	14
Linkedin.com	C	Digital Realty / others	✓	✗	✓	9	27	26	27
Pinterest.com	D	Amazon Web Services	✗	✗	✗	23	27	21	26
Reddit.com	F	Amazon Web Services	✗	✗	✗	23	27	21	26
Twitter.com	F	QTS and others	✗	✗	✗	10	25	35	21

## Sports

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Bleacherreport.com	F	Amazon Web Services	✗	✗	✗	23	27	21	26
ESPN.go.com	D	Switch	✗	✗	✗	14	36	48	1
MLB.com	F	MLB Advanced Media	✗	✗	✗	21	22	24	28
NBCSports.com	D	Microsoft	✗	✗	✗	39	30	19	10

## Storage

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Box.com	B	Multiple providers	✗	✓	✓	40	10	36	9
Dropbox.com	F	AWS and others	✗	✗	✗	17	33	27	20

## Streaming Audio

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Apple.com	A	Apple	✓	✓	✓	100	0	0	0
Pandora.com	F	Equinix and others	✗	✗	✗	11	27	23	31
Soundcloud.com	F	Amazon Web Services	✗	✗	✗	23	27	21	26
Spotify.com	F	Multiple hosts	✗	✗	✗	25	22	20	29

## Streaming Video

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
ABC.go.com	D	Amazon Web Services	✗	✗	✗	23	27	21	26
Go.com	D	Switch	✗	✗	✗	14	36	48	1
HBOgo.com	D	MLB Advanced Media	✗	✗	✗	21	22	24	28
Hulu.com	F	Equinix	✗	✗	✗	15	32	28	18
Netflix.com	D	Amazon Web Services	✗	✗	✗	23	27	21	26
Twitch.tv	F	Multiple providers	✗	✗	✗	12	31	29	21
Vevo.com	F	Rackspace and AWS	✗	✗	✗	24	30	21	24
Vimeo.com	D	Multiple providers	✗	✗	✗	22	31	27	20
Vine.co	F	Amazon Web Services	✗	✗	✗	23	27	21	26
Youtube.com	B	Google	✓	✓	✓	46	21	15	13

# Travel

Site	Grade	Host	Transparency	Commitment	Championship	Clean Energy %	Coal %	Gas %	Nuclear %
Airbnb.com	<b>F</b>	Amazon Web Services	✗	✗	✗	23	27	21	26
Booking.com	<b>F</b>	Equinix	✗	✗	✗	15	29	29	20
Expedia.com	<b>F</b>	Expedia/AWS	✗	✗	✗	16	33	27	22
Kayak.com	<b>D</b>	Kayak.com	✗	✗	✗	54	2	20	17
Priceline.com	<b>F</b>	Equinix	✗	✗	✗	15	29	29	20
Rentalcars.com	<b>F</b>	Equinix	✗	✗	✗	15	29	29	20

# Company Scores Explained

05

## Blogs

### Blogger.com

B

CLEAN ENERGY: 46%

COAL: 21%

GAS: 15%

NUCLEAR: 13%

Blogger.com, the blogging platform, is owned and hosted by Google, which operates a fleet of global data centers. Greenpeace assessed Google for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>31</sup>

**Energy Transparency:** Blogger received 15 points for Google’s reporting its corporate-wide energy consumption and greenhouse gas footprint through CDP and the “Google Green” website.<sup>32</sup> Google does not provide facility-level energy and greenhouse gas data.

**Renewable Energy Commitment:** Blogger received 25 points for Google’s long-term goal of being 100% renewably powered and its clear reporting of progress toward the goal, indicating what percentage is a result of specific market purchases.<sup>33</sup>

**Renewable Energy Championship:** Blogger received 20 points for Google’s use of PPAs to procure renewable energy, its investments in renewable energy, and its advocacy with utilities and policymakers for increased renewable energy.

### BlogSpot.com

B

CLEAN ENERGY: 46%

COAL: 21%

GAS: 15%

NUCLEAR: 13%

BlogSpot.com, the blogging platform, is owned and hosted by Google, which operates a fleet of global data centers. Greenpeace assessed Google for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>34</sup>

**Energy Transparency:** Blogspot received 15 points for Google’s reporting its corporate-wide energy consumption and greenhouse gas footprint through CDP and the “Google Green” website.<sup>35</sup> Google does not provide facility-level energy and greenhouse gas data.

**Renewable Energy Commitment:** Blogspot received 25 points for Google’s long-term goal of being 100% renewably powered, and its clear reporting of progress toward the goal, indicating what percentage is a result of specific market purchases.<sup>36</sup>

**Renewable Energy Championship:** Blogspot received 20 points for Google’s use of PPAs to procure renewable energy, its investments in renewable energy, and its advocacy with utilities and policymakers for increased renewable energy.

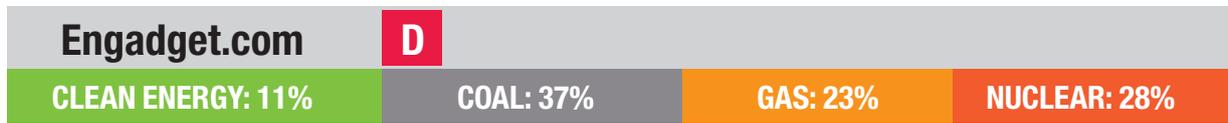


BoingBoing.net, the online zine and blog, is hosted in a PriorityColo data center in Toronto.<sup>37</sup>

**Energy Transparency:** Boing Boing earned 15 points for providing Greenpeace with comprehensive data about its energy use, including the amount of energy its servers consume, and the resource mix powering the data center. Boing Boing would earn full credit for disclosing its energy use and carbon footprint with its readers.

**Renewable Energy Commitment:** Boing Boing has not set any energy goals.

**Renewable Energy Championship:** Boing Boing earned full credit (20 points) for choosing to purchase 100% renewable energy for its data center, at least half of which comes from new sources on the same energy grid as Boing Boing's data center.<sup>38</sup>



Engadget.com, a tech blog, is owned by AOL, which has digital infrastructure residing in a mix of its own self-operated data centers (54%), colocation facilities via Digital Realty Trust (40%) and the public cloud via Amazon Web Services (6%).<sup>39</sup>

**Energy Transparency:** Engadget received 15 points for AOL's reporting of electricity consumption data for its owned and leased data centers to Greenpeace, for AOL's reporting the ratio of its operations with different vendors, and for AOL's reporting the resource mix of its owned facilities.

**Renewable Energy Commitment:** Neither Engadget nor AOL have made any public commitments about Engadget's energy use.

**Renewable Energy Championship:** Engadget received 5 points for AOL's reduction of its overall energy and carbon footprint. AOL achieved a carbon footprint reduction of 36.7K metric tons, or 35% of its overall critical load as of January 1, 2015.<sup>40</sup>

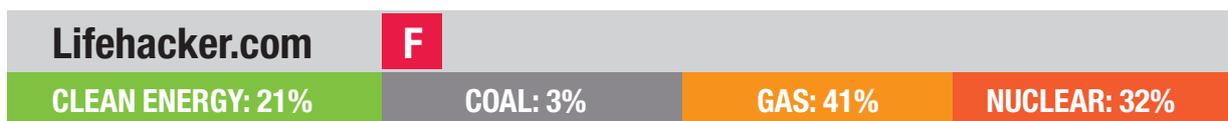


Gizmodo.com, a design and technology blog owned by Gawker Media, appears to be hosted by Datagram.<sup>41</sup> Gawker Media did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Gawker Media does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Gawker Media has not set any energy goals.

**Renewable Energy Championship:** Gawker Media has not offered evidence of renewable energy championship.

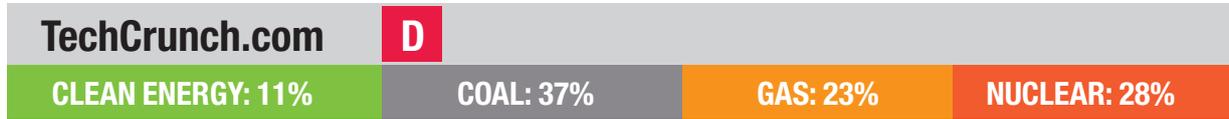


Lifehacker.com, a blog about life hacks and software owned by Gawker Media, appears to be hosted by Datagram.<sup>42</sup> Gawker Media did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Gawker Media does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Gawker Media has not set any energy goals.

**Renewable Energy Championship:** Gawker Media has not offered evidence of renewable energy championship.

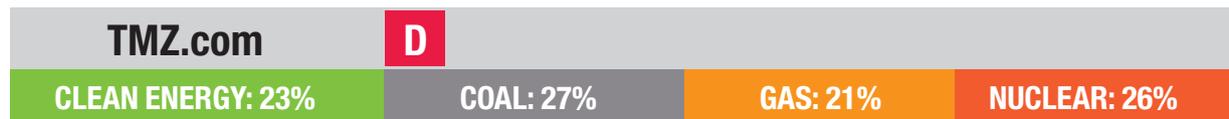


TechCrunch.com, a tech blog, is owned by AOL, which has digital infrastructure residing in a mix of its own self-operated data centers (54%), colocation facilities via Digital Realty Trust (40%), and the public cloud via AWS (6%), according to information reported by AOL to Greenpeace.<sup>43</sup>

**Energy Transparency:** TechCrunch received 15 points for AOL's reporting of electricity consumption data for its owned and leased data centers to Greenpeace, for AOL's reporting the ratio of its operations with different vendors, and for AOL's reporting the resource mix of its owned facilities.

**Renewable Energy Commitment:** Neither TechCrunch nor AOL have made any public commitments about TechCrunch's energy use.

**Renewable Energy Championship:** TechCrunch received 5 points for AOL's reduction of its overall energy and carbon footprint. AOL achieved a carbon footprint reduction of 36.7K metric tons, or 35% of its overall critical load as of January 1, 2015.<sup>44</sup>

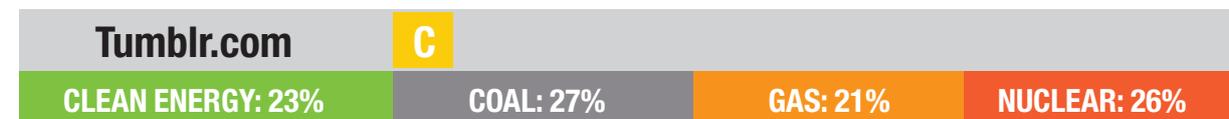


TMZ.com, a celebrity news website, is owned by Time Warner and appears to be hosted by AWS.<sup>45</sup> TMZ did not provide Greenpeace with information about its energy use.

**Energy Transparency:** TMZ earned 5 points for a disclosure by Time Warner, Inc. of its overall electricity consumption and carbon footprint to the CDP.<sup>46</sup>

**Renewable Energy Commitment:** TMZ has not set any energy goals.

**Renewable Energy Championship:** TMZ has not offered evidence of renewable energy championship.



Tumblr.com, the image hosting site, is owned by Yahoo but hosted by AWS and other providers. Greenpeace assessed Yahoo and AWS for their data center energy use in detail in the report "Clicking Clean: A Guide to Building the Green Internet."<sup>47</sup>

**Energy Transparency:** Tumblr received 5 points for Yahoo's noting in its CDP filing that Tumblr is powered by AWS, and that "an accurate estimate is challenging due to the lack of data regarding AWS." Yahoo applied a US average carbon intensity to arrive at its carbon estimate for Tumblr.

**Renewable Energy Commitment:** Tumblr received 5 points for Yahoo's intention to become sustainable through a long-term focus on energy efficiency and renewable energy.<sup>48</sup>

**Renewable Energy Championship:** Tumblr received 20 points for joining other AWS customers in sending a letter to AWS urging the company to adopt greater energy transparency and to increase its supply of renewable energy.

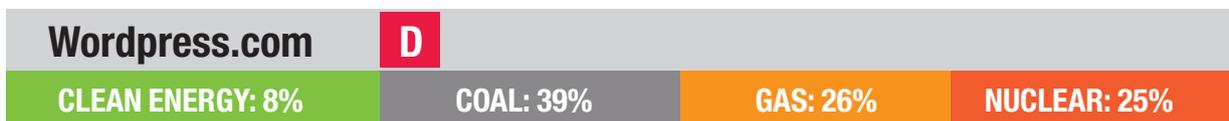


Wired.com, the technology magazine that is owned by Condé Nast, appears to be hosted by AWS. Wired did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Wired does not provide any information about its energy footprint. Condé Nast has a social responsibility page, but it does not include information about the company's energy or environmental footprints.<sup>50</sup>

**Renewable Energy Commitment:** Wired has not set any energy goals.

**Renewable Energy Championship:** Wired has not offered evidence of renewable energy championship.



Wordpress.com is a blogging platform owned by Automattic, which operates data centers in 13 colocation facilities in the US, Europe, Asia and Australia.<sup>51</sup> Its colocation hosts are Equinix, DataBank and Peer1.

**Energy Transparency:** Wordpress.com received 15 points for providing comprehensive electricity footprint and carbon data for each of its data centers, and its full data center footprint, to Greenpeace.

**Renewable Energy Commitment:** Automattic has not yet made commitments about its energy use or carbon footprint.

**Renewable Energy Championship:** Automattic has not yet offered evidence of renewable energy championship.

# E-Commerce



Amazon.com, the e-commerce site, is hosted by its own subsidiary, AWS, which operates a fleet of data centers. Greenpeace assessed AWS for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>52</sup>

**Energy Transparency:** Amazon.com received 5 points for disclosing that it is currently 25% renewably powered. AWS offers no data about its energy consumption or carbon footprint to help verify its claim.<sup>53</sup>

**Renewable Energy Commitment:** Amazon.com received 10 points for its long-term goal of powering with 100% renewable energy, and its goal of powering with 40% renewable energy by the end of 2016.<sup>54</sup> Amazon offers no information about the policies or methods it uses to define its renewable commitment.

**Renewable Energy Championship:** Amazon received 5 points for its purchase of 150 MW of wind power in Indiana, though it has provided no information about the data center(s) to which it will apply that purchase.<sup>55</sup>

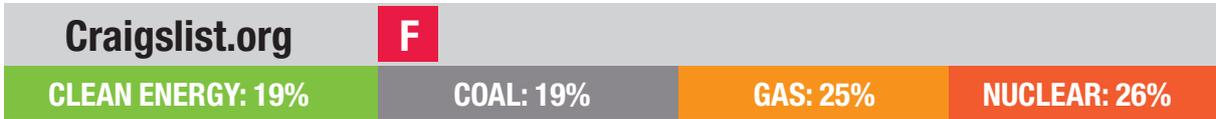


Bestbuy.com, the website for electronic retailer Best Buy, Inc, operates a data center in Bloomington, MN.

**Energy Transparency:** Best Buy received 5 points for disclosing its overall energy and carbon footprint in its CDP filing.<sup>57</sup>

**Renewable Energy Commitment:** Best Buy received 5 points for its corporate-wide goal of reducing its greenhouse gas footprint 20% by 2020.

**Renewable Energy Championship:** Best Buy received 5 points for its investment in renewable energy credits to match 12.5% of its electricity usage.<sup>58</sup> See page 13 for more information on renewable energy credits.



Craigslist is a community moderated online classified, organized by over 700 locations in 70 countries globally, and appears to operate data centers in California and Arizona.

**Energy Transparency:** Craigslist does not provide any information on its energy footprint.

**Renewable Energy Commitment:** Craigslist has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** Craigslist has not offered any evidence of renewable energy leadership or made investments to increase the amount of renewable energy it uses.

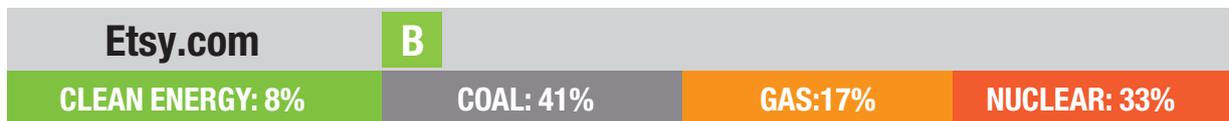


eBay.com, the e-commerce site, operates its own data centers. Greenpeace assessed eBay for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>59</sup>

**Energy Transparency:** eBay received 20 points for reporting energy and greenhouse gas data to CDP,<sup>60</sup> and for its Digital Service Efficiency dashboard, which provides clear metrics on its energy performance, but needs to be updated beyond Q2, 2013.<sup>61</sup>

**Renewable Energy Commitment:** eBay received 5 points for its goal of powering with at least 8% “cleaner” energy by 2015.

**Renewable Energy Championship:** eBay received 10 points for its advocacy to change the law in Utah to allow companies to buy directly from renewable energy developers, for its use of fuel cells to decrease its reliance on coal, and for other advocacy.<sup>62</sup>

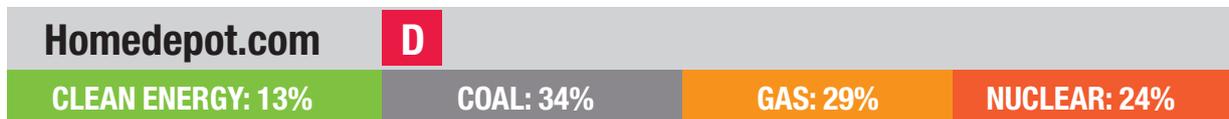


Over the course of 2014, Etsy.com, the online marketplace focused on vintage or handmade items, hosts its data in three different colocation facilities.<sup>63</sup>

**Energy Transparency:** Etsy received 20 points for energy transparency. Its most recent sustainability report catalogued its electricity use and carbon emissions, including a breakdown of major electricity sources with specific data on its data centers.<sup>64</sup> Etsy provided Greenpeace with information detailing its fuel mix and consumption at each of its data centers.

**Renewable Energy Commitment:** Etsy received 15 points for its commitment to transition to 100% renewable energy by 2020.<sup>65</sup> It has not yet published a procurement standard to indicate what methods and principles it would use to achieve its goal.

**Renewable Energy Championship:** Etsy received 20 points for a history of engagement with its colocation providers with a goal of increasing the amount of renewable energy powering its operations. Etsy has worked closely with its CDN and data center partners to gain greater insight and understanding into the energy used to power its site, and has advocated that its partners pursue both onsite renewable energy projects as well as the purchase of grid-supplied renewable energy to power their operations.<sup>66</sup>



Homedepot.com, the online store for Home Depot hardware stores, appears to operate data centers in Austin, TX and Atlanta, GA.<sup>67</sup> Home Depot did not provide Greenpeace with information about its energy use.<sup>68</sup>

**Energy Transparency:** Home Depot received 5 points for tracking and publishing its corporate-wide carbon footprint.<sup>69</sup>

**Renewable Energy Commitment:** Home Depot received 5 points for its goal to reduce its corporate-wide greenhouse gas emissions 20% by 2015.<sup>70</sup>

**Renewable Energy Championship:** HomeDepot.com has not yet offered evidence of renewable energy championship.

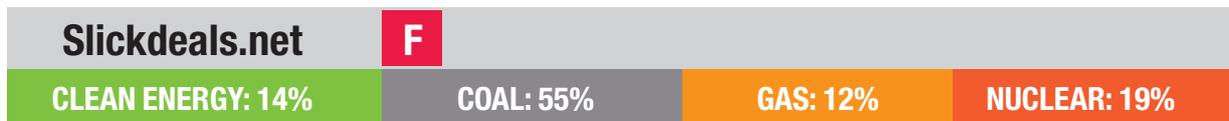


Groupon.com appears to host its web site out of a data center in Santa Clara, CA, as well as some undisclosed international sites and via AWS.<sup>72,73</sup> Groupon did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Groupon does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Groupon has not set any energy goals.

**Renewable Energy Championship:** Groupon has not offered evidence of renewable energy championship.

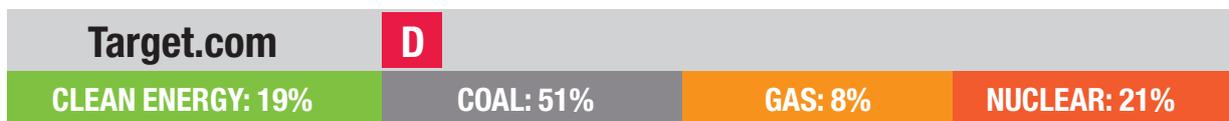


Slickdeals.net, a retailer coupon and savings search engine, appears to be hosted by PhoenixNAP in Phoenix, AZ.<sup>74</sup>

**Energy Transparency:** Slickdeals does not provide evidence about its energy footprint.

**Renewable Energy Commitment:** Slickdeals has not set any energy goals.

**Renewable Energy Championship:** Slickdeals received 5 points for its selection of a new provider based on its energy efficiency and renewable energy efforts. Slickdeals says it has cut its energy consumption by moving to Switch.<sup>75</sup>



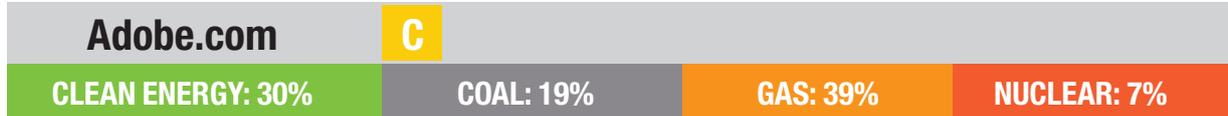
Target.com, the online retail store owned by Target Corporation, appears to operate its data centers in Elk River and Brooklyn Park, MN.<sup>76</sup> Target did not provide Greenpeace with information about its energy use.<sup>77</sup>

**Energy Transparency:** Target received 5 points for disclosing its overall energy and carbon footprint in its annual CDP filing.<sup>78</sup>

**Renewable Energy Commitment:** Target received 5 points for its public goal to reduce its greenhouse gas emissions 10% by 2015.<sup>79</sup>

**Renewable Energy Championship:** Target has not shown evidence of renewable energy championship for its data centers.<sup>80</sup>

# IT Services



Adobe, the software company, operates its own data center in Oregon, relies on colocation facilities, and uses AWS to host aspects of its “Creative Cloud.”<sup>81</sup>

**Energy Transparency:** Adobe received 15 points for reporting its overall greenhouse gas emissions and electricity consumption publicly, for breaking down the emissions and consumption for its data centers in its CDP filing, and for providing Greenpeace with its data center footprint by utility and provider.<sup>82</sup>

**Renewable Energy Commitment:** Adobe received 5 points for its 20% energy and carbon reduction goals from a 2012 baseline by 2015 for its San Jose and San Francisco facilities.<sup>83</sup>

**Renewable Energy Championship:** Adobe received 10 points for building its data center in Oregon “due to the cool climate, low carbon energy mix, and the potential for implementing use of renewable energy.” Adobe has joined the Corporate Renewable Energy Buyers Principles, and has advocated independently for pro-renewable energy policies like Community Choice Aggregation in San Francisco and Silicon Valley.<sup>85</sup> Adobe has requested that all of its cloud and colocation vendors provide it with renewable energy.<sup>86</sup>

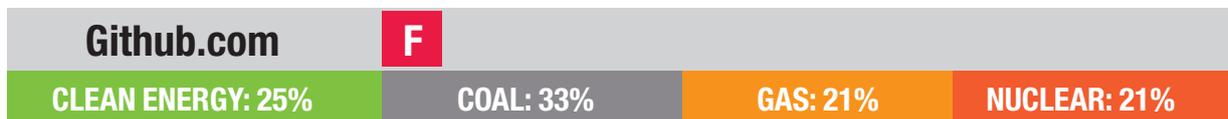


Amazon Web Services, the cloud computing platform, operates a fleet of data centers. Greenpeace assessed AWS for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>87</sup>

**Energy Transparency:** AWS received 5 points for disclosing that it is currently 25% renewably powered. AWS offers no data about its energy consumption or carbon footprint to help verify its claim.<sup>88</sup>

**Renewable Energy Commitment:** AWS received 10 points for its long-term goal of powering with 100% renewable energy, and its goal of powering with 40% renewable energy by the end of 2016.<sup>89</sup> Amazon offers no information about the policies or methods it uses to define its renewable commitment.

**Renewable Energy Championship:** AWS received 5 points for its purchase of 150 MW of wind power in Indiana, though it has provided no information about the data center(s) to which it will apply that purchase.<sup>90</sup>



Github.com, a code hosting service, appears to be hosted in data centers operated by Rackspace.<sup>91</sup> Github did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Github.com does not disclose information about its energy footprint.

**Renewable Energy Commitment:** Github.com has not set any energy goals.

**Renewable Energy Championship:** Github.com has not offered evidence of renewable energy championship.

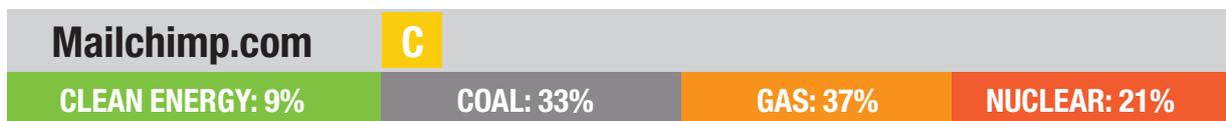


GoDaddy.com owns and operates one data center in Phoenix, AZ<sup>92</sup> and leases the remaining data center needs from wholesale providers across four domestic and two international colocation facilities located in Arizona, California, Illinois, Virginia, the Netherlands and Singapore.<sup>93</sup> GoDaddy did not provide Greenpeace with information about its energy use.<sup>94</sup>

**Energy Transparency:** GoDaddy.com does not disclose information about its energy footprint.

**Renewable Energy Commitment:** GoDaddy.com has not set any energy goals.

**Renewable Energy Championship:** GoDaddy.com has not offered evidence of renewable energy championship.

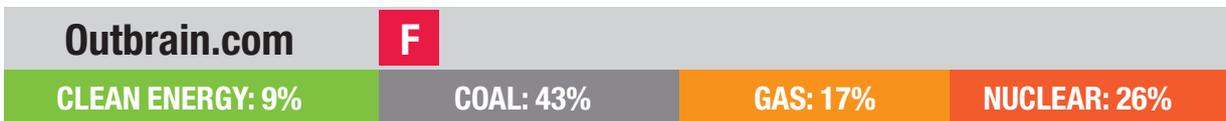


Mailchimp.com, an email marketing provider, hosts in colocation facilities in Atlanta (QTS), Suwanee (QTS), Dallas (Softlayer), and Seattle (Softlayer) based on information provided to Greenpeace by Mailchimp.

**Energy Transparency:** MailChimp received 15 points for providing Greenpeace with a detailed electricity footprint data for each of its data centers.

**Renewable Energy Commitment:** MailChimp received 5 points for including efficiency and green building as criteria in their selection of data center providers.

**Renewable Energy Championship:** MailChimp received 10 points for beginning to migrate its new growth from the Southeast to Seattle in large part to improve its energy resource mix.

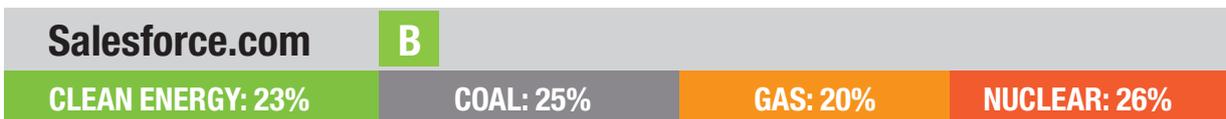


Outbrain.com, a content recommendation platform, appears to be hosted in data centers operated by Internap in Secaucus, NJ, Los Angeles, CA and Chicago, IL.<sup>95</sup> Outbrain did not provide Greenpeace with information about its energy use.<sup>96</sup>

**Energy Transparency:** Outbrain.com does not disclose information about its energy footprint.

**Renewable Energy Commitment:** Outbrain.com has not set any energy goals.

**Renewable Energy Championship:** Outbrain.com has not offered evidence of renewable energy championship.



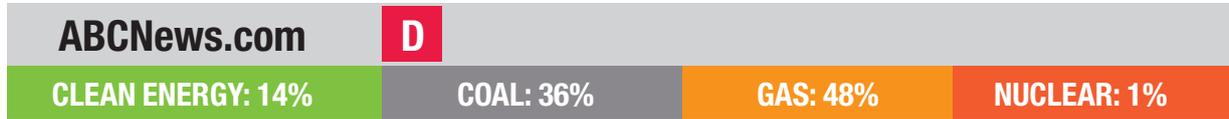
Salesforce.com, the cloud computing company, operates data centers in colocation facilities. Greenpeace assessed Salesforce for its data center energy use in detail in the report "Clicking Clean: A Guide to Building the Green Internet."<sup>97</sup>

**Energy Transparency:** Salesforce received 25 points for reporting its energy and greenhouse gas footprint in its 2013/2014 Sustainability Report<sup>98</sup> and to CDP, including facility-level energy data. Upon request, Salesforce provides carbon footprint information to its customers to track their energy and greenhouse gas impact as a result of using the Salesforce cloud.<sup>98</sup>

**Renewable Energy Commitment:** Salesforce received 15 points for its long-term commitment to power with 100% renewable energy.

**Renewable Energy Championship:** Salesforce received 10 points for securing a renewable supply of electricity for its UK data center, and for advocating for greater renewable energy access and supply from utilities.<sup>100</sup>

# News

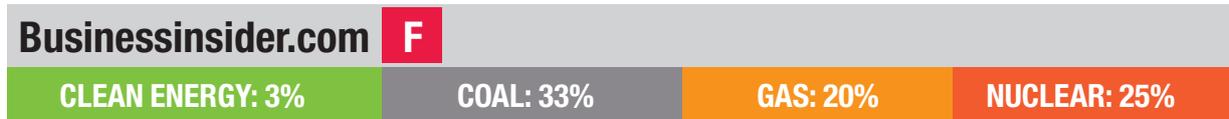


ABCNews.com is owned and operated by The Walt Disney Company, which operates a data center in North Carolina, but told Greenpeace that it hosts ABCNews.com in an unnamed colocation data center.<sup>101</sup> Disney did not provide Greenpeace with information about the energy use of its data centers.

**Energy Transparency:** ABCNews.com received 5 points for Disney's publication of corporate-wide carbon and electricity goals to CDP<sup>102</sup> and in its own sustainability report.<sup>103</sup> Disney does not break out any data specific to its data center operations.

**Renewable Energy Commitment:** ABCNews.com received 5 points for Disney's goal of zero net greenhouse gas emissions, and to reduce greenhouse gas emissions by 50% by 2020, and for its hierarchy of meeting those goals via emissions avoidance and efficiency, then fuel switching, and then purchasing carbon offsets.<sup>104</sup> However, Disney to date has purchased mostly carbon offsets.<sup>105</sup>

**Renewable Energy Championship:** ABCNews.com received 5 points for Disney's reduction of company-wide electricity consumption by 11.9% in 2013 compared to 2006 and its use of an internal carbon tax.<sup>106, 107</sup>

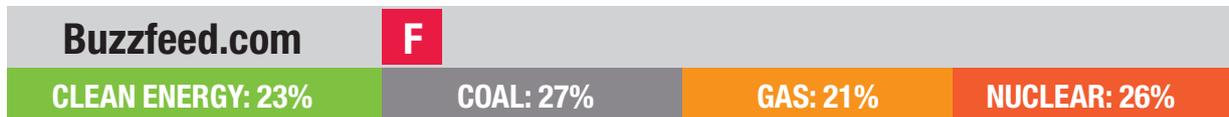


BusinessInsider.com, an online business and technology magazine, appears to host its servers with Datapipe in New Jersey.<sup>108</sup> Business Insider did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Business Insider does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Business Insider has not set any energy goals.

**Renewable Energy Championship:** Business Insider has not offered evidence of renewable energy championship. While its data center provider, Datapipe, does purchase renewable energy credits to offset its facility in New Jersey, Business Insider does not indicate this as a criterion for selecting its current or future providers or locations.<sup>109</sup> See page 13 for more information on renewable energy credits.



Buzzfeed.com appears to be hosted by Amazon Web Services.<sup>110</sup> BuzzFeed did not provide Greenpeace with information about its energy use.

**Energy Transparency:** BuzzFeed does not provide any information about its energy footprint.

**Renewable Energy Commitment:** BuzzFeed has not set any energy goals.

**Renewable Energy Championship:** BuzzFeed has not offered evidence of renewable energy championship.

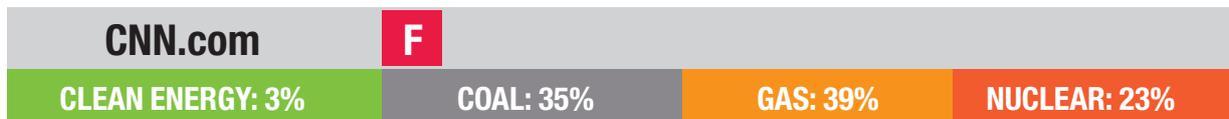


CNET.com appears to be hosted in an IO data center in Phoenix, where its parent company CBS Interactive is hosted.<sup>111</sup> CNET did not provide Greenpeace with information about its energy use.

**Energy Transparency:** CNET does not provide any information about its energy footprint. Its parent company, the CBS Corporation, filed a disclosure with CDP, but it did not report emissions or electricity data.<sup>112</sup>

**Renewable Energy Commitment:** CNET has not set any energy goals.

**Renewable Energy Championship:** CNET has not offered evidence of renewable energy championship.

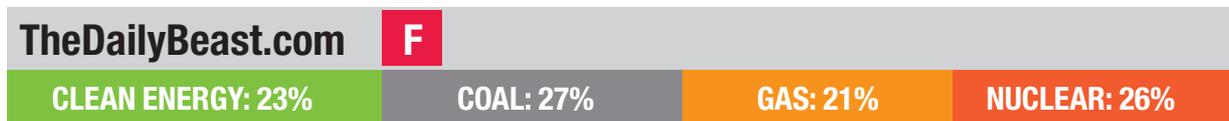


CNN.com appears to be hosted at the data center of its parent company, Time Warner, Inc., in Atlanta.<sup>113</sup> CNN did not respond to requests from Greenpeace with information about its energy use.

**Energy Transparency:** CNN earned 5 points for a disclosure by Time Warner, Inc. of its overall electricity consumption and carbon footprint to the CDP.<sup>114</sup> Time Warner did not break out energy information for its data center operations.

**Renewable Energy Commitment:** CNN has not set any energy goals.

**Renewable Energy Championship:** CNN has not offered evidence of renewable energy championship.

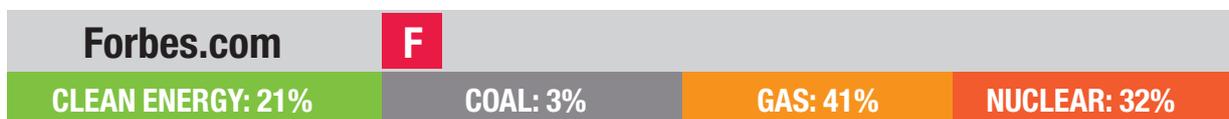


TheDailyBeast.com, an online news magazine owned by The Newsweek/Daily Beast Company, appears to be hosted by Amazon Web Services.<sup>115</sup> The Daily Beast did not provide Greenpeace with information about its energy use.

**Energy Transparency:** The Daily Beast does not provide any information about its energy footprint.

**Renewable Energy Commitment:** The Daily Beast has not set any energy goals.

**Renewable Energy Championship:** The Daily Beast has not offered evidence of renewable energy championship.



Forbes.com, an online business magazine, appears to be hosted by AT&T in New York City.<sup>116</sup> Forbes did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Forbes does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Forbes has not set any energy goals.

**Renewable Energy Championship:** Forbes has not offered evidence of renewable energy championship.

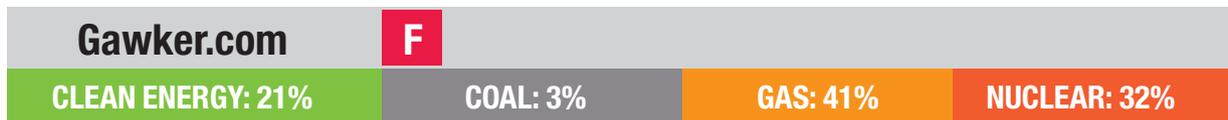


Foxnews.com, which is owned by 21st Century Fox, appears to host its data primarily with Amazon Web Services.<sup>117</sup> Fox News did not respond to requests from Greenpeace for information about its energy use.

**Energy Transparency:** Foxnews.com received 5 points for 21st Century Fox’s publication of greenhouse gas emissions and electricity consumption data to CDP and on its web site.<sup>118</sup>

**Renewable Energy Commitment:** Foxnews.com received 5 points for 21st Century Fox’s goal of investing in clean energy equal to 20% of electricity use.<sup>119</sup> The company says that it is prioritizing clean energy sources “where feasible.”<sup>120</sup>

**Renewable Energy Championship:** Foxnews.com received 5 points for 21st Century Fox’s goal to “actively engage 100 of the company’s largest suppliers in improving their environmental impacts” though it’s unclear whether this group includes data center or cloud providers. 21st Century Fox worked with the Los Angeles Department of Water and Power in support of a solar feed-in tariff program.<sup>121</sup>

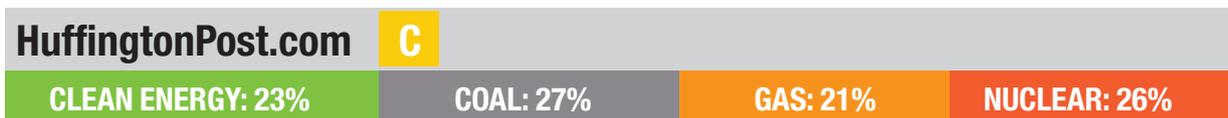


Gawker.com, a weblog magazine owned by Gawker Media, appears to be hosted by Datagram.<sup>122</sup> Gawker did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Gawker Media does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Gawker Media has not set any energy goals.

**Renewable Energy Championship:** Gawker Media has not offered evidence of renewable energy championship.

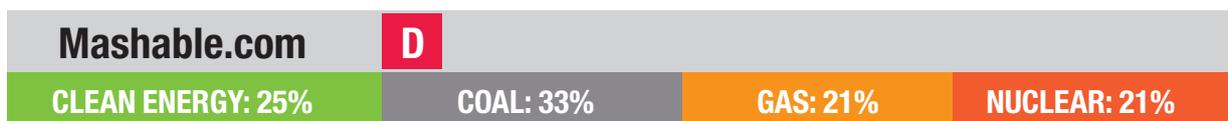


HuffingtonPost.com, a news site and blog, is owned by AOL, but is hosted by Amazon Web Services and heavily uses Akamai, the content delivery network.<sup>123</sup>

**Energy Transparency:** The Huffington Post received 10 points for disclosing its cloud and CDN provider, and for urging both publicly to provide it with greater insight into its energy use.<sup>124</sup>

**Renewable Energy Commitment:** The Huffington Post received 5 points for its goal to have 50% of its AWS infrastructure in carbon neutral regions.<sup>125</sup>

**Renewable Energy Championship:** The Huffington Post received 20 points for publicly calling on its providers to provide it with greater energy data and to move toward renewable sources, and for signing a letter to AWS from AWS customers demanding the same.<sup>126</sup>

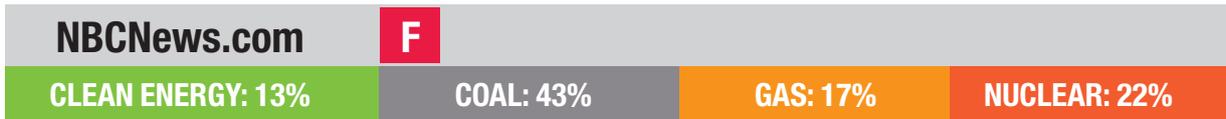


Mashable.com, the news and information blog, is hosted by Rackspace.<sup>127</sup> Mashable provided Greenpeace with confirmation of its hosting with Rackspace, but did not offer other information on its energy use.

**Energy Transparency:** Mashable received 5 points for providing information about its hosting provider to Greenpeace.

**Renewable Energy Commitment:** Mashable has not set any energy goals.

**Renewable Energy Championship:** Mashable has not offered evidence of renewable energy championship.



NBCnews.com, the online news website owned by NBC Universal, appears to operate its data centers in Los Angeles, CA and North Bergen, NJ.<sup>128</sup> NBC Universal did not provide Greenpeace with information about its energy use.

**Energy Transparency:** NBCnews.com does not provide any information about its energy footprint. NBCUniversal has a sustainability website, but it does not include information about the energy or environmental footprints of its data centers.<sup>129</sup>

**Renewable Energy Commitment:** NBCnews.com has not set any energy goals.

**Renewable Energy Championship:** NBCnews.com has not offered evidence of renewable energy championship.



NYTimes.com is the website of The New York Times newspaper. It appears to hosts its data on its own servers in Seattle and New York City, and with AWS.<sup>130</sup>

**Energy Transparency:** The New York Times does not provide any information about its energy footprint.

**Renewable Energy Commitment:** The New York Times has not set any energy goals.

**Renewable Energy Championship:** The New York Times has not offered evidence of renewable energy championship.

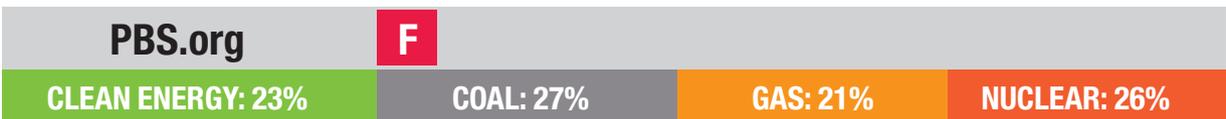


NPR is the public radio network in the United States, and streams its syndicated programs and original television broadcasts. NPR appears to rely heavily on AWS to support its online show delivery.

**Energy Transparency:** NPR does not provide any information on its energy footprint.

**Renewable Energy Commitment:** NPR has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** NPR has not offered any evidence of renewable energy leadership or made investments to increase the amount of renewable energy it uses.

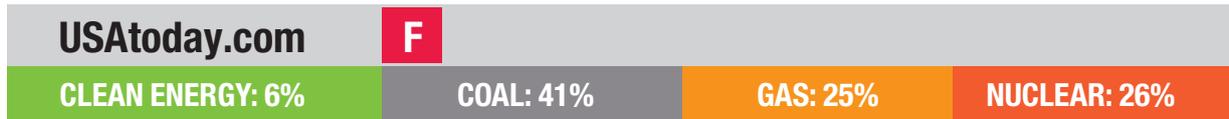


PBS is the public TV network in the United States, and streams its syndicated programs and original television broadcasts. PBS appears to rely heavily on AWS to support its online video delivery.

**Energy Transparency:** PBS does not provide any information on its energy footprint.

**Renewable Energy Commitment:** PBS has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** PBS has not offered any evidence of renewable energy leadership or made investments to increase the amount of renewable energy it uses.

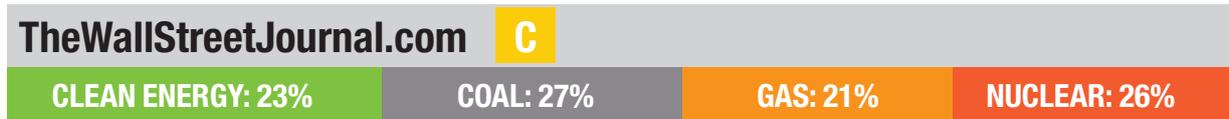


USAToday.com, the online newspaper published by Gannett Company, appears to operate its data centers in Maryland and Arizona.<sup>131</sup> USA Today did not provide Greenpeace with information about its energy use.<sup>132</sup>

**Energy Transparency:** USA Today does not provide any information about its energy footprint.

**Renewable Energy Commitment:** USA Today has not set any energy goals.

**Renewable Energy Championship:** USA Today has not offered evidence of renewable energy championship.

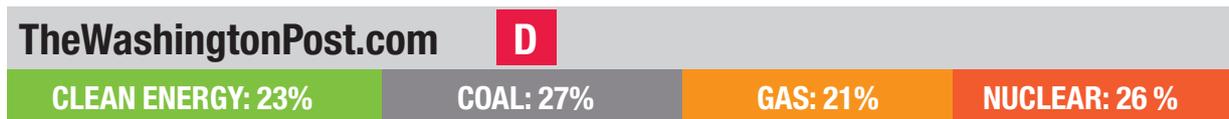


WSJ.com is the online newspaper of the Wall Street Journal and is published by Dow Jones & Company, itself a division of News Corp. Dow Jones says that it is migrating over 75% of its digital operations from its own data centers to AWS.<sup>133</sup> Dow Jones did not provide Greenpeace with information about its energy use.

**Energy Transparency:** The Wall Street Journal earned 10 points for News Corp.'s disclosure of Dow Jones' overall carbon emissions in its CDP filing, and for disclosing its overall electricity consumption and the carbon footprint of its data centers.<sup>134</sup>

**Renewable Energy Commitment:** The Wall Street Journal earned 5 points for News Corp.'s goal of investing in clean energy equal to 20% of electricity use.<sup>135</sup> News Corp. also pledges to be carbon neutral and has absolute emissions reduction goals. However, News Corp. does not seem to be accounting for electricity consumption or emissions via third parties like AWS in its CDP accounting.

**Renewable Energy Championship:** The Wall Street Journal earned 5 points for News Corp.'s claim that it works with suppliers "to measure the company's environmental impacts and develop strategies to reduce them."<sup>136</sup> There is no evidence that News Corp. has extended its supplier strategies to its digital infrastructure partners, like AWS.



The Washington Post hosts its web site primarily with Amazon Web Services, and also out of a data center in Virginia, which it has shrunk significantly since migrating to the cloud.<sup>137</sup>

**Energy Transparency:** The Washington Post received 5 points for providing information about its cloud computing vendor.

**Renewable Energy Commitment:** The Washington Post has not set any energy goals.

**Renewable Energy Championship:** The Washington Post has not offered evidence of renewable energy championship.

# Online Services

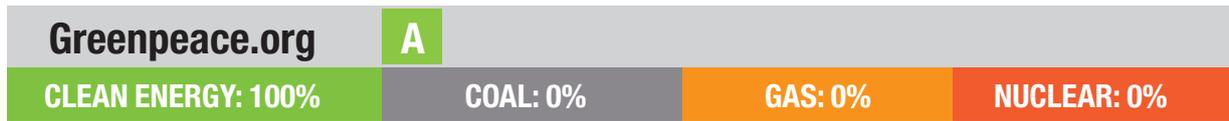


Fedex.com, the website for the global courier company Fedex Corporation, appears to own and operate its own data center in Colorado Springs, CO.<sup>138</sup> Fedex did not provide Greenpeace with information about its energy footprint.

**Energy Transparency:** Fedex received 5 points for tracking and publishing its company-wide energy and carbon footprint in its annual Sustainability Report.<sup>139</sup>

**Renewable Energy Commitment:** Fedex.com received 5 points for its commitment to expand on-site generation and procure renewable energy for its facilities.<sup>140</sup>

**Renewable Energy Championship:** Fedex received 5 points for its efforts to improve the efficiency of its existing and new data center facilities.<sup>141</sup>

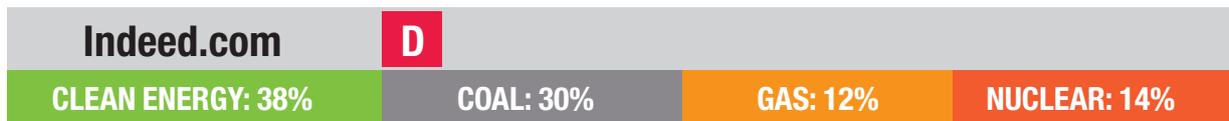


Greenpeace.org, the environmental organization’s web site, hosts its web site primarily in an EvoSwitch data center in the Netherlands powered by 100% renewable energy.<sup>142</sup>

**Energy Transparency:** Greenpeace received 25 points for reporting the energy mix behind its servers<sup>143</sup>, its overall energy consumption and carbon footprint, and the carbon footprint of its servers.<sup>144</sup>

**Renewable Energy Commitment:** Greenpeace received 25 points for a commitment to host its sites with 100% renewable energy.

**Renewable Energy Championship:** Greenpeace received 20 points for its policy to work with IT vendors committed to power with 100% renewable energy.



Indeed.com, the job-seekers’ search engine, is hosted in data centers by AWS in Sao Paulo, IBM/Softlayer on the East and West Coasts of the US, Rackspace in the UK and US Midwest, and RackCorp in Sydney.<sup>145</sup>

**Energy Transparency:** Indeed earned 10 points for providing information about the locations and providers behind its energy footprint.

**Renewable Energy Commitment:** Indeed earned 5 points for its “engineering commitment to using the least resources possible to effectively support our business.” which it says has allowed it to support more than 1 million unique visitors per server.<sup>146</sup> Indeed has not adopted any formal goals or targets for either efficiency or carbon reduction.

**Renewable Energy Championship:** Indeed has not offered evidence of renewable energy championship.

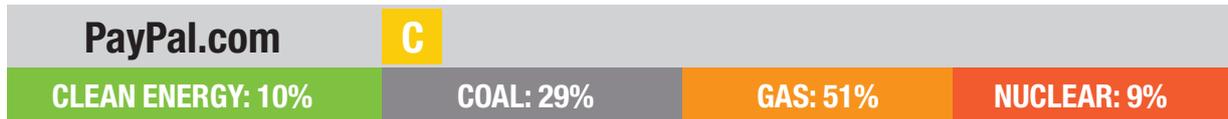


Intuit.com, which develops financial and tax preparation software such as TurboTax and Quickbooks, owns its own data center in Quincy, WA, and rents space in a Switch Communications data center in Las Vegas, NV.<sup>147</sup> Intuit also recently began a small contract for data hosting services with AWS, though this was not included in its footprint estimate since the current amount is negligible.

**Energy Transparency:** Intuit received 20 points for providing Greenpeace with electricity consumption data, energy usage ratio, and the resource mix for its owned and leased data centers, and for including carbon footprint and electricity consumption data in its annual CDP filing.<sup>148</sup>

**Renewable Energy Commitment:** Intuit received 5 points for its company-wide commitment to reduce its carbon footprint by 20% by 2020.

**Renewable Energy Championship:** Intuit received 10 points for engaging in discussions with Amazon Web Services and Switch regarding the environmental impact of their footprints, and for moving the majority of AWS workloads to workload to the US West (Oregon) region.

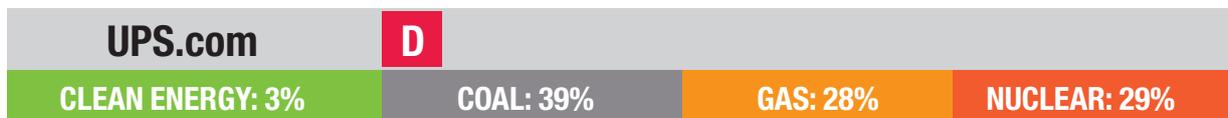


Paypal.com, the online payments system, is owned and hosted by eBay.<sup>149</sup> Greenpeace assessed eBay for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>150</sup>

**Energy Transparency:** Paypal.com received 20 points for eBay’s reporting energy and greenhouse gas data to CDP,<sup>151</sup> and for its Digital Service Efficiency Dashboard, which provides clear metrics on its energy performance, but needs to be updated beyond Q2, 2013.<sup>152</sup>

**Renewable Energy Commitment:** Paypal.com received 5 points for eBay’s goal of powering with at least 8% “cleaner” energy by 2015.

**Renewable Energy Championship:** Paypal.com received 10 points for eBay’s advocacy to change the law in Utah to allow companies to buy directly from renewable energy developers, for its use of fuel cells to decrease its reliance on coal, and for other advocacy.<sup>153</sup>



UPS.com, the website for the global courier United Postal Services, Inc, appears to own and operate data facilities in Mahwah, NJ and Atlanta, GA.<sup>154</sup> UPS did not provide Greenpeace with information about its energy use.<sup>155</sup>

**Energy Transparency:** UPS.com received 5 points for tracking and publishing its company-wide energy and carbon footprint through CDP.<sup>156</sup>

**Renewable Energy Commitment:** UPS received 5 points for carbon intensity targets for its transportation footprint.<sup>157</sup>

**Renewable Energy Championship:** UPS received 5 points for its efforts to reduce energy use at its data center facilities.<sup>158</sup>



USPS.com, the online platform for the United States Postal Service, owns and operates its data facilities in Eagan, MN, and San Mateo, CA, according to information provided to Greenpeace by the United States Postal Service.<sup>159</sup>

**Energy Transparency:** USPS received 15 points for providing electricity footprint data for each of its data centers to Greenpeace, and for tracking and publishing its agency-wide carbon footprint annually.<sup>160</sup>

**Renewable Energy Commitment:** USPS.com has not offered evidence of energy commitment.

**Renewable Energy Championship:** USPS received 5 points for its efforts to increase the efficiency of its data centers.<sup>161</sup> The USPS notes that its current financial situation is limiting, and that legislative restrictions limit its cumulative debt and do not allow it to partner and implement renewable energy or Shared Energy Savings projects.

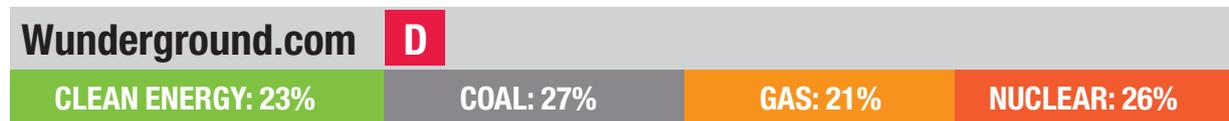


Weather.com, the online weather service operated by The Weather Company, is hosted primarily by AWS.<sup>162</sup>

**Energy Transparency:** The Weather Company does not provide any information about its energy footprint.

**Renewable Energy Commitment:** The Weather Company has not set any energy goals.

**Renewable Energy Championship:** The Weather Company received 5 points for signing “The Climate Declaration,” a corporate statement of support for climate change action.<sup>163</sup> The Weather Company says it talks to partners about renewable energy and is assessing potential options for moving workloads to lower carbon regions.<sup>164</sup>

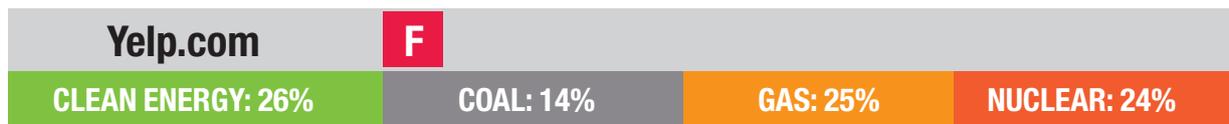


Wunderground.com, an online weather forecasting service operated by The Weather Company, is hosted primarily by AWS.<sup>165</sup>

**Energy Transparency:** The Weather Company does not provide any information about its energy footprint.

**Renewable Energy Commitment:** The Weather Company has not set any energy goals.

**Renewable Energy Championship:** The Weather Company received 5 points for signing “The Climate Declaration,” a corporate statement of support for climate change action.<sup>166</sup> The Weather Company says it talks to partners about renewable energy and is assessing potential options for moving workloads to lower carbon regions.<sup>167</sup>

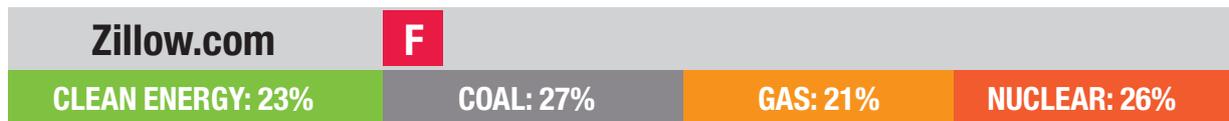


Yelp.com is hosted in a primary data center in San Francisco and a backup facility in Virginia, as well as via the AWS cloud.<sup>168</sup> Yelp did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Yelp does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Yelp has not set any energy goals.

**Renewable Energy Championship:** Yelp has not offered evidence of renewable energy championship.



Zillow.com, an online real estate database, appears to be hosted primarily by AWS, with legacy hosting still occurring at its own data center.<sup>169</sup> Zillow did not respond to requests from Greenpeace for information about its energy use.

**Energy Transparency:** Zillow does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Zillow has not set any energy goals.

**Renewable Energy Championship:** Zillow has not offered evidence of renewable energy championship.

# Photos/Images

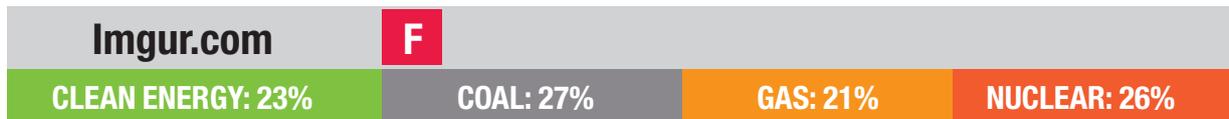


Flickr.com, the image hosting site, is owned and hosted by Yahoo, which operates a fleet of data centers. Greenpeace assessed Yahoo for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>170</sup>

**Energy Transparency:** Flickr received 15 points for Yahoo’s reporting its energy footprint and sustainability efforts to CDP, including consumption and energy performance data for its data centers. Yahoo has fallen behind other sector leaders in providing users with accessible information on its energy performance outside of CDP.

**Renewable Energy Commitment:** Flickr received 10 points for Yahoo’s intention to become sustainable through a long-term focus on energy efficiency and renewable energy. Despite not having a goal to be 100% renewable, Yahoo is procuring a high amount of renewable energy with a 73% clean energy index.

**Renewable Energy Championship:** Flickr received 20 points for Yahoo’s absolute carbon reductions, for shifting data center space from a long-term lease in coal-heavy Virginia to its own data centers powered mostly by clean energy, for a wind power purchase for its Nebraska data center, and for policy advocacy.<sup>171</sup>



Imgur.com appears to be hosted by AWS.<sup>172</sup> Imgur did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Imgur does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Imgur has not set any energy goals.

**Renewable Energy Championship:** Imgur has not offered evidence of renewable energy championship.

# Reference

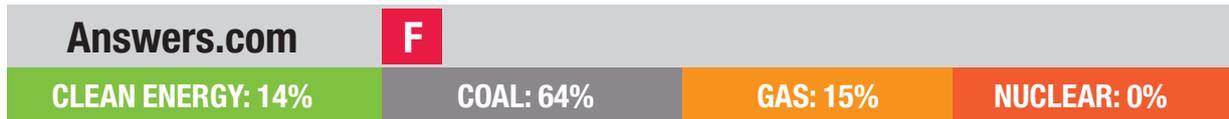


About.com, owned by IAC, is a source of expert content on the web and operates data centers out of three colocation facilities in New York City (Lighttower), Dallas (Equinix) and San Jose (Datapipe).<sup>173</sup>

**Transparency:** About.com received 15 points for providing Greenpeace with detailed electricity footprint data for each of its data centers, including location and energy usage information for each of its facilities.

**Renewable Energy Commitment:** About.com received 5 points for committing to evaluate renewable energy usage as a leading criterion in siting new data center locations.

**Renewable Energy Championship:** About.com received 5 points for its efforts to actively pick providers that invest in measures to reduce their environmental footprint.

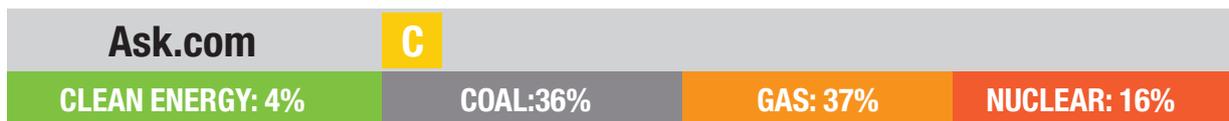


Answers.com appears to be hosted by C7 Data Centers in Lindon, Utah.<sup>174</sup> Answers.com did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Answers.com does not provide public information about its energy footprint.

**Renewable Energy Commitment:** Answers.com has not set any public energy goals.

**Renewable Energy Championship:** Answers.com has not offered evidence of renewable energy championship.



Ask.com, the Q&A search engine owned by IAC, operates its data centers out of five colocation facilities including Washington DC, Las Vegas, Hong Kong, Ireland, and London.<sup>175</sup>

**Transparency:** Ask.com received points for providing a detailed electricity footprint data for each of its data centers to Greenpeace. Ask.com has also published such data on its [company blog](#) and is committed to doing this on an ongoing basis. The company could also increase its transparency by publishing an annual sustainability report, or an annual filing to the Carbon Disclosure Project.

**Renewable Energy Commitment:** Ask.com received 5 points for committing to evaluate renewable energy usage as a leading criteria in siting new data center locations.

**Renewable Energy Championship:** Ask.com received 10 points for advocating for its Las Vegas provider, Switch, to increase their use of renewable energy and for its efforts to reduce energy consumption by replacing or virtualizing all of their servers.<sup>176</sup>

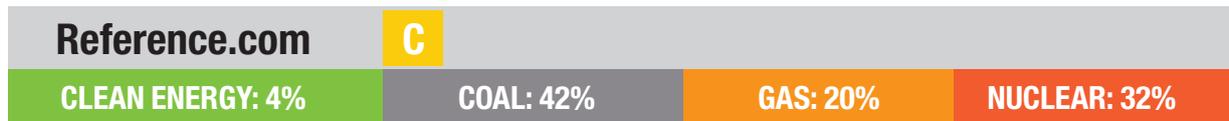


IMDB.com, the Internet Movie Database, is owned by Amazon and appears to be hosted by Amazon Web Services.<sup>177</sup> IMDB did not provide Greenpeace with information about its energy use.

**Energy Transparency:** IMDB does not provide any information about its energy footprint.

**Renewable Energy Commitment:** IMDB has not set any energy goals.

**Renewable Energy Championship:** IMDB has not offered evidence of renewable energy championship.

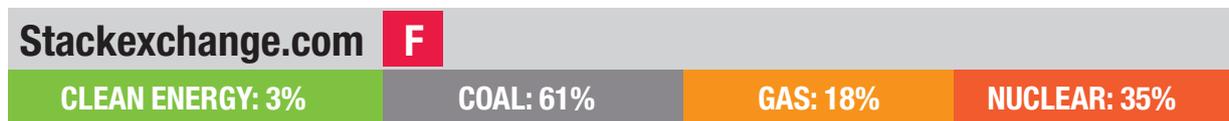


Reference.com, home to Dictionary.com and Thesaurus.com, is owned by IAC and operates its data centers in colocation facilities in Las Vegas and Washington, DC.<sup>178</sup>

**Energy Transparency:** Reference.com received 15 points for providing Greenpeace with a detailed electricity footprint data for each of its data centers, including location and energy usage information for each of its facilities.

**Renewable Energy Commitment:** Reference.com received 5 points for committing to power its data needs with 40% renewable energy by the end of 2016, and evaluate renewable energy usage as a leading criterion in siting new data center locations.

**Renewable Energy Championship:** Reference.com received 10 points for its work to reduce power consumption by 10x through virtualization of their servers and working collaboratively with its current providers to achieve its goal of 40% renewable energy by 2016.



Stackexchange.com, a Q&A community website, is hosted in a primary data center in New Jersey (QTS) and a secondary data center in Oregon (Peak Internet).<sup>179</sup>

**Energy Transparency:** Stackexchange.com received 5 points for providing the locations of its data centers to Greenpeace.

**Renewable Energy Commitment:** Stackexchange.com has not set any energy goals.

**Renewable Energy Championship:** Stackexchange.com has not offered evidence of renewable energy championship.



Stackoverflow.com, a Q&A website for programmers owned by Stack Exchange Networks, is hosted in a primary data center in New Jersey (QTS), and a secondary data center in Oregon (Peak Internet).<sup>180</sup>

**Energy Transparency:** Stackoverflow.com received 5 points for providing the locations of its data centers to Greenpeace.

**Renewable Energy Commitment:** Stackoverflow.com has not set any energy goals.

**Renewable Energy Championship:** Stackoverflow.com has not offered evidence of renewable energy championship.

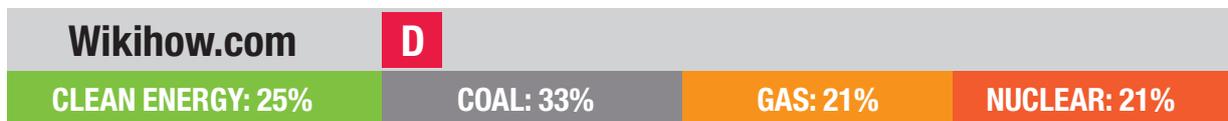


Wikia, a hosting service for wikis, appears to be hosted in data centers in Iowa, San Jose, Frankfurt and London.<sup>181</sup> Wikia did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Wikia does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Wikia has not set any energy goals.

**Renewable Energy Championship:** Wikia has not offered evidence of renewable energy championship.

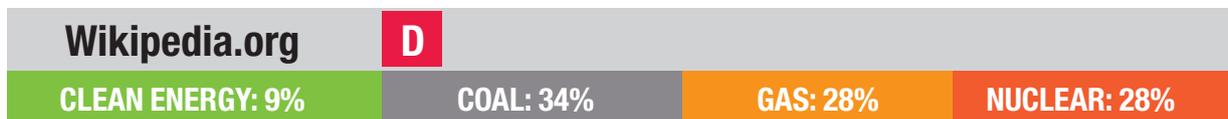


Wikihow.com, a popular how-to website, hosts its servers and databases with Rackspace.<sup>182</sup>

**Energy Transparency:** Wikihow received 15 points for disclosing its data center provider information to Greenpeace, and for publishing the carbon footprint of its servers on its website.<sup>183</sup>

**Renewable Energy Commitment:** Wikihow has not offered evidence of a renewable energy commitment.

**Renewable Energy Championship:** Wikihow received 5 points for offsetting its carbon footprint with carbon offsets. See page 13 for more information on carbon offsets.<sup>184</sup>



The Wikimedia Foundation operates data centers in colocation facilities in Ashburn, VA (Equinix), Dallas, TX (CyrusOne), San Francisco (UnitedLayer) and Amsterdam (EvoSwitch).<sup>185</sup>

**Energy Transparency:** Wikipedia received 15 points for providing electricity footprint data for each of its data centers to Greenpeace. It also offers real-time data about its servers' energy use to the public.<sup>186</sup>

**Renewable Energy Commitment:** Wikipedia received 5 points for making environmental impact an important criterion for site selection of its most recent data center.<sup>187</sup>

**Renewable Energy Championship:** Wikipedia has not yet shown evidence of renewable energy championship.

## Search & Email



AOL.com, the digital media company which owns top brands like the Huffington Post, TechCrunch and Engadget, has digital infrastructure residing in a mix of its own self-operated data centers (54%), colocation facilities via Digital Realty Trust (40%) and the public cloud via AWS (6%), according to information reported by AOL to Greenpeace. AOL says that it plans to have approximately 50% of its infrastructure in the public cloud by 2018.

**Energy Transparency:** AOL received 15 points for providing electricity consumption data for its owned and leased data centers to Greenpeace, for reporting the ratio of its operations with different vendors, and for reporting the resource mix of its owned facilities. AOL could improve transparency by reporting this information publicly, including its electricity and carbon usage via public cloud vendors like AWS, especially as AOL's footprint grows in those areas.

**Renewable Energy Commitment:** AOL has not made any public commitments about its energy use.

**Renewable Energy Championship:** AOL received 5 points for reducing its overall energy and carbon footprint. Its efforts in recent years to decommission and remove lightly used servers, replace hardware, and remodel rack layouts resulted in a ~4.3 MW reduction in overall power consumption. AOL achieved a carbon footprint reduction of 36.7K metric tons, or 35% of its overall critical load as of January 1, 2015.<sup>188</sup>



Bing.com, the search engine, is hosted by Microsoft, which operates a large global fleet of data centers. Greenpeace assessed Microsoft for its data center energy use in detail in the report "Clicking Clean: A Guide to Building the Green Internet."<sup>189</sup>

**Energy Transparency:** Microsoft received 5 points for reporting of its overall corporate energy and greenhouse gas footprint to CDP, and annually through its Global Citizenship report, but it continues to provide far less detail on its data center energy footprint than its peers.<sup>190</sup>

**Renewable Energy Commitment:** Microsoft received 5 points for its ongoing commitment to be carbon neutral. Microsoft currently relies heavily on the purchase of unbundled renewable energy credits (RECs) and carbon offsets to make good on that claim.<sup>191</sup>

**Renewable Energy Championship:** Microsoft received 10 points for implementing an internal carbon tax, and for large wind purchases that power its data centers in Texas and Illinois.<sup>192</sup>

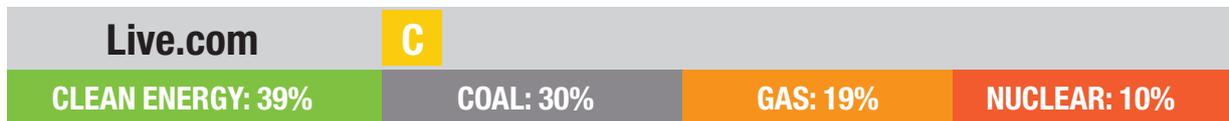


Google owns and operates a fleet of global data centers. Greenpeace assessed Google for its data center energy use in detail in the report *Clicking Clean: A Guide to Building the Green Internet.*<sup>193</sup>

**Energy Transparency:** Google received 15 points for its corporate-wide energy consumption and greenhouse gas footprint through CDP and the “Google Green” website.<sup>194</sup> Google does not provide facility-level energy and greenhouse gas data.

**Renewable Energy Commitment:** Google received 20 points for its long-term goal of being 100% renewably powered, and its clear reporting of progress toward the goal, indicating what percentage is a result of specific market purchases.<sup>195</sup>

**Renewable Energy Championship:** Google received 20 points for its use of PPAs to procure renewable energy, its investments in renewable energy, and its advocacy with utilities and policymakers for increased renewable energy.

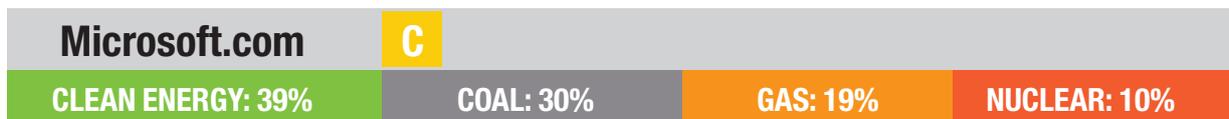


Live.com, the portal for Microsoft Outlook, is hosted by Microsoft, which operates a large global fleet of data centers. Greenpeace assessed Microsoft for its data center energy use in detail in the report *“Clicking Clean: A Guide to Building the Green Internet.”*<sup>196</sup>

**Energy Transparency:** Microsoft received 5 points for reporting its overall corporate energy and greenhouse gas footprint to CDP, and annually through its Global Citizenship report, but it continues to provide far less detail on its data center energy footprint than its peers.<sup>197</sup>

**Renewable Energy Commitment:** Microsoft received 5 points for its ongoing commitment to be carbon neutral. Microsoft currently relies heavily on the purchase of unbundled renewable energy credits (RECs) and carbon offsets to make good on that claim.<sup>198</sup>

**Renewable Energy Championship:** Microsoft received 10 points for implementing an internal carbon tax, and for two large wind purchases that power its data centers in Texas and Illinois.<sup>199</sup>

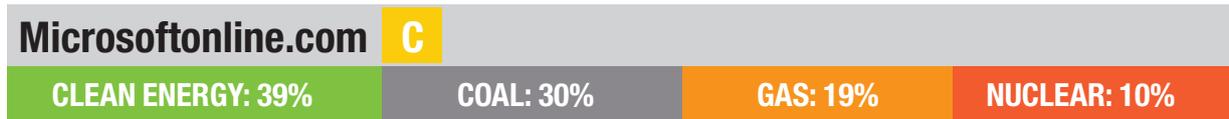


Microsoft operates a large global fleet of data centers. Greenpeace assessed Microsoft for its data center energy use in detail in the report *“Clicking Clean: A Guide to Building the Green Internet.”*<sup>200</sup>

**Energy Transparency:** Microsoft received 5 points for reporting its overall corporate energy and greenhouse gas footprint to CDP, and annually through its Global Citizenship report, but it continues to provide far less detail on its data center energy footprint than its peers.<sup>201</sup>

**Renewable Energy Commitment:** Microsoft received 5 points for its ongoing commitment to be carbon neutral. Microsoft currently relies heavily on the purchase of unbundled renewable energy credits (RECs) and carbon offsets to make good on that claim.<sup>202</sup>

**Renewable Energy Championship:** Microsoft received 10 points for implementing an internal carbon tax, and for two large wind purchases that power its data centers in Texas and Illinois.<sup>203</sup>

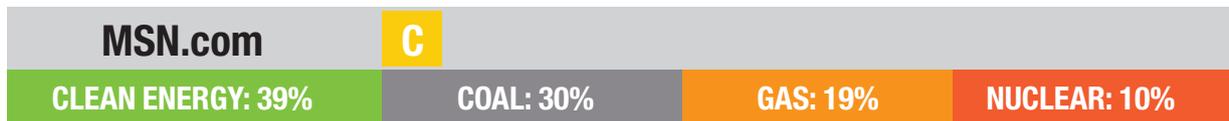


Microsoftonline.com is the portal for Office 365 accounts and is hosted by Microsoft, which operates a large global fleet of data centers. Greenpeace assessed Microsoft for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>204</sup>

**Energy Transparency:** Microsoft received 5 points for reporting of its overall corporate energy and greenhouse gas footprint to CDP, and annually through its Global Citizenship report, but it continues to provide far less detail on its data center energy footprint than its peers.<sup>205</sup>

**Renewable Energy Commitment:** Microsoft received 5 points for its ongoing commitment to be carbon neutral. Microsoft currently relies heavily on the purchase of unbundled renewable energy credits (RECs) and carbon offsets to make good on that claim.<sup>206</sup>

**Renewable Energy Championship:** Microsoft received 10 points for implementing an internal carbon tax, and for two large wind purchases that power its data centers in Texas and Illinois.<sup>207</sup>

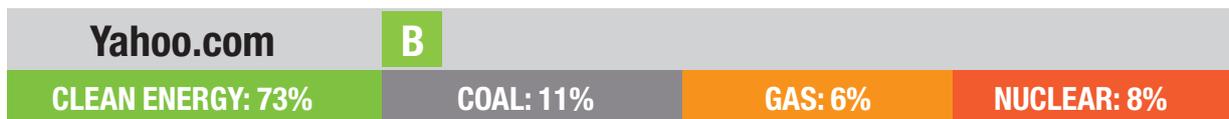


MSN.com, the news and search portal, is owned by Microsoft, which operates a large global fleet of data centers. Greenpeace assessed Microsoft for its data center energy use in detail in the report Clicking Clean: A Guide to Building the Green Internet.”<sup>208</sup>

**Energy Transparency:** Microsoft received 5 points for reporting its overall corporate energy and greenhouse gas footprint to CDP, and annually through its Global Citizenship report, but it continues to provide far less detail on its data center energy footprint than its peers.<sup>209</sup>

**Renewable Energy Commitment:** Microsoft received 5 points for its ongoing commitment to be carbon neutral. Microsoft currently relies heavily on the purchase of unbundled renewable energy credits (RECs) and carbon offsets to make good on that claim.<sup>210</sup>

**Renewable Energy Championship:** Microsoft received 10 points for implementing an internal carbon tax, and for two large wind purchases that power its data centers in Texas and Illinois.<sup>211</sup>



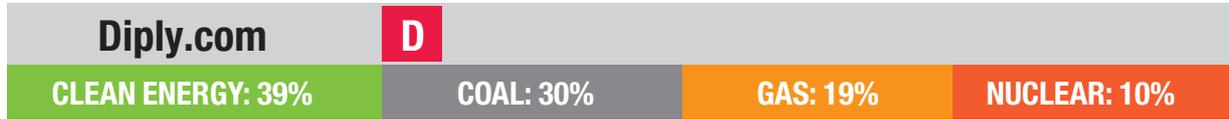
Yahoo.com, the search engine and portal, is owned and hosted by Yahoo, which operates a fleet of data centers. Greenpeace assessed Yahoo for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>212</sup>

**Energy Transparency:** Yahoo received 15 points for reporting its energy footprint and sustainability efforts to CDP, including consumption and energy performance data for its data centers. Despite a high percentage of clean energy, Yahoo has fallen behind other sector leaders in providing energy performance information outside of CDP.

**Renewable Energy Commitment:** Yahoo received 10 points for its intention to become sustainable through a long-term focus on energy efficiency and renewable energy. Despite not having a goal to be 100% renewable, Yahoo is procuring a high amount of renewable energy with a 73% clean energy index.

**Renewable Energy Championship:** Yahoo received 20 points for its absolute carbon reductions, for shifting data center space from a long-term lease in coal-heavy Virginia to its own data centers powered mostly by clean energy, for a wind power purchase for its Nebraska data center, and for policy advocacy.<sup>213</sup>

# Social

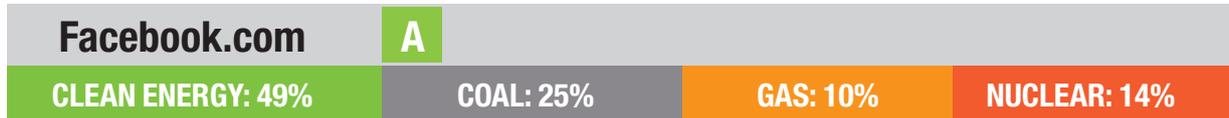


Diply.com, a content sharing platform, hosts its data centers with Microsoft.<sup>214</sup>

**Energy Transparency:** Diply received 5 points for providing Greenpeace with information about its cloud computing provider.

**Renewable Energy Commitment:** Diply has not offered evidence of renewable energy commitment.

**Renewable Energy Championship:** Diply has not offered evidence of renewable energy championship.



Facebook.com, the social network, is hosted by Facebook, which operates its own data centers and also has servers in colocation facilities. Greenpeace assessed Facebook for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>215</sup>

**Energy Transparency:** Facebook received 25 points for reporting its energy consumption and greenhouse gas footprint, broken down by facilities including its colocation footprint, in an easily accessible “Green on Facebook” page.<sup>216</sup>

**Renewable Energy Commitment:** Facebook received 25 points for its long-term goal of being 100% renewably powered. Facebook has set an interim goal of powering with 25% renewable energy by the end of 2015.<sup>217</sup>

**Renewable Energy Championship:** Facebook received 20 points for actively pushing the utilities serving its North Carolina and Oregon data centers to create new options for purchasing renewable electricity, and for following through with its data center siting policy, which has led it to invest in locations like Iowa, where it powers its facilities with wind energy.<sup>218</sup>



Hootsuite, the rapidly growing social relationship management platform, is hosted by Amazon Web Services.<sup>219</sup>

**Energy Transparency:** Hootsuite received 10 points for providing Greenpeace with information about its hosting with AWS, including high-level server counts by region, which it used to estimate its overall energy resource mix. AWS did not provide Hootsuite with energy consumption or carbon footprint data that it could use publicly.

**Renewable Energy Commitment:** Hootsuite has not set any renewable energy goals.

**Renewable Energy Championship:** Hootsuite received 20 points for joining a letter along with other Amazon Web Services customers urging the company to adopt greater energy transparency and to increase its supply of renewable energy.



Instagram.com, the photo and video sharing social network, is owned and hosted by Facebook, which operates its own data centers and also has servers in colocation facilities. Greenpeace assessed Facebook for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>220</sup>

**Energy Transparency:** Instagram received 25 points for Facebook’s reporting its energy consumption and greenhouse gas footprint, broken down by facilities including its colocation footprint, in an easily accessible “Green on Facebook” page.<sup>221</sup>

**Renewable Energy Commitment:** Instagram received 25 points for Facebook’s long-term goal of being 100% renewably powered. Facebook has set an interim goal of powering with 25% renewable energy by the end of 2015.<sup>222</sup>

**Renewable Energy Championship:** Instagram received 20 points for Facebook’s actively pushing the utilities serving its North Carolina and Oregon data centers to create new options for purchasing renewable electricity, and for following through with its data center siting policy, which has led it to invest in locations like Iowa, where it powers its facilities with wind energy.<sup>223</sup>

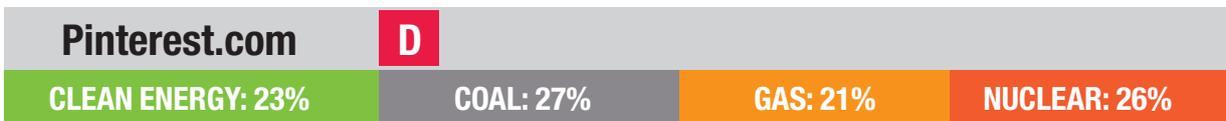


LinkedIn operates data centers in Ashburn, VA, Texas, California and Georgia.<sup>224</sup>

**Energy Transparency:** LinkedIn received 20 points for providing electricity footprint and carbon data for each of its data centers and for its overall data center operations to Greenpeace.

**Renewable Energy Commitment:** LinkedIn received 5 points for a data center siting policy that prioritizes sustainability. For new data centers, LinkedIn has committed to sustainability being one of five primary factors in the siting decision-making process.<sup>225</sup>

**Renewable Energy Championship:** LinkedIn received 10 points for writing PUE expectations into its contracts with data center vendors.<sup>226</sup> LinkedIn also operates real-time energy monitoring equipment to monitor and adjust to its energy usage, and manages utilization with a goal of using 100% of its rack space.<sup>227</sup> LinkedIn is actively investigating options to secure increased amounts of renewable energy at its existing data center locations.<sup>228</sup>



Pinterest, one of the largest and fastest growing social media platforms in the world, is still privately held and relies heavily on Amazon Web Services for delivering its content to its customers.<sup>229</sup>

**Energy Transparency:** Pinterest received 5 points for disclosing that it is hosted by AWS.

**Renewable Energy Commitment:** Pinterest has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** Pinterest has not offered any evidence of renewable energy leadership or made investments to increase the amount of renewable energy it uses.

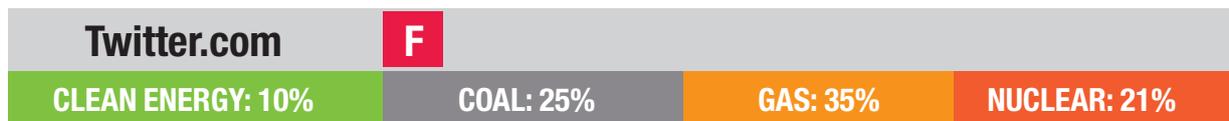


Reddit, the social networking and news site, appears to be hosted by Amazon Web Services.<sup>230</sup> Reddit did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Reddit does not provide any information about its energy footprint

**Renewable Energy Commitment:** Reddit has not set any energy goals.

**Renewable Energy Championship:** Reddit has not offered evidence of renewable energy championship.



Twitter hosts its growing digital footprint in colocation data centers in Georgia, California and Virginia, where it recently expanded with a 21 MW lease in 2014.<sup>231</sup> Twitter's new video products, Vine and Periscope, appear to run on Amazon Web Services infrastructure (see Vine, p55).<sup>232</sup> Twitter has not provided Greenpeace or the public with any information about its energy footprint.

**Energy Transparency:** Twitter does not provide information about its energy footprint.

**Renewable Energy Commitment:** Twitter has not set any energy goals, or shown that it is factoring in its energy footprint when it chooses where to lease wholesale data center space.

**Renewable Energy Championship:** Twitter has not offered evidence of renewable energy championship.

# Sports

## BleacherReport.com

F

CLEAN ENERGY: 23%

COAL: 27%

GAS: 21%

NUCLEAR: 26%

Bleacherreport.com, a network of sports blogs, appears to be hosted by Amazon Web Services.<sup>233</sup> Bleacher Report did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Bleacher Report does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Bleacher Report has not set any energy goals.

**Renewable Energy Championship:** B: Bleacher Report has not offered evidence of renewable energy championship.

## ESPN.com

D

CLEAN ENERGY: 14%

COAL: 36%

GAS: 48%

NUCLEAR: 1%

ESPN.com is owned and operated by The Walt Disney Company, which operates a data center in North Carolina, but told Greenpeace that it hosts ESPN.com in an unnamed colocation data center.<sup>234</sup> Disney did not provide Greenpeace with information about the energy use of its data centers.

**Energy Transparency:** ESPN.com received 5 points for Disney's publication of corporate-wide carbon and electricity goals to CDP<sup>235</sup> and in its own sustainability report.<sup>236</sup> Disney does not break out any data for its data center operations.

**Renewable Energy Commitment:** ESPN.com received 5 points for Disney's goal of zero net greenhouse gas emissions, and to reduce greenhouse gas emissions by 50% by 2020, and for its hierarchy of meeting those goals via emissions avoidance and efficiency, then fuel switching, and then purchasing carbon offsets.<sup>237</sup> However, Disney to date has purchased mostly carbon offsets.<sup>238</sup>

**Renewable Energy Championship:** ESPN.com received 5 points for Disney's reduction of company-wide electricity consumption by 11.9% in 2013 compared to 2006 and its use of an internal carbon tax.<sup>239, 240</sup>

## MLB.com

F

CLEAN ENERGY: 21%

COAL: 22%

GAS: 24%

NUCLEAR: 28%

MLB is the online hub for Major League Baseball, which provides live streaming of audio and video broadcasts and is operated by MLB Advanced Media (MLBAM). MLBAM operates data centers in San Francisco, Omaha, and New York City, and also uses AWS.<sup>241</sup>

**Energy Transparency:** MLBAM does not provide any information on its energy footprint.

**Renewable Energy Commitment:** MLBAM has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** MLBAM has not offered any evidence of renewable energy leadership or made investments to increase the amount of renewable energy it uses.



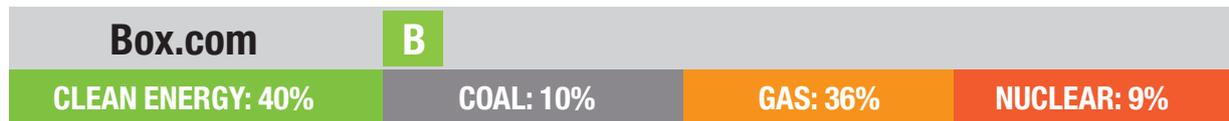
NBCsports.com, the online sports website owned by NBCUniversal, appears to host its cloud computing with Microsoft.<sup>242</sup> NBCUniversal did not provide Greenpeace with information about its energy use.

**Energy Transparency:** NBCsports.com does not provide any information about its energy footprint. NBCUniversal has a sustainability website, but it does not include information about the energy or environmental footprints of its data centers.<sup>243</sup>

**Renewable Energy Commitment:** NBCsports.com has not set any energy goals.

**Renewable Energy Championship:** NBCsports.com has not offered evidence of renewable energy championship.

## Storage

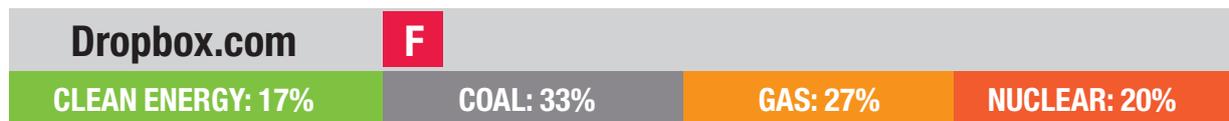


Box is one of the fastest growing cloud-based file sharing and enterprise collaboration platforms. Box is hosted by colocation data centers in San Jose (Equinix) and Las Vegas (Switch), and uses AWS.<sup>244</sup>

**Energy Transparency:** Box received 10 points for providing Greenpeace with details on its colocation operations and energy procurement, but has not begun publishing them regularly on its website. Box has recently become a public company, and reports its data center leases in its 10-K report.<sup>245</sup>

**Renewable Energy Commitment:** Box received 15 points for being one of the first colocation based companies to adopt a commitment to be 100% renewably powered.

**Renewable Energy Championship:** Box received 15 points for working with its California colocation company to secure high-value (compliance) renewable energy credits as a first step to its 100% renewable goal.



Dropbox is one of the largest cloud-based file sharing platforms, claiming to store over 35 billion documents online. Dropbox has data center space in several colocation data centers in the US for part of its operations, but relies on AWS for the processing and storing of its customers' files. Dropbox has indicated that it relies primarily on the US-East (Virginia) availability zone of AWS.<sup>246</sup>

**Energy Transparency:** Dropbox does not provide any information on its energy footprint, though it has provided details on its data center infrastructure.<sup>247</sup>

**Renewable Energy Commitment:** Dropbox has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** Dropbox has not offered any evidence of renewable energy leadership or made investments to increase the amount of renewable energy it uses.

# Streaming Audio

<b>Apple.com (iTunes)</b>	<b>A</b>			
<b>CLEAN ENERGY: 100%</b>	<b>COAL: 0%</b>	<b>GAS: 0%</b>	<b>NUCLEAR: 0%</b>	

Apple continues to lead major technology companies in the effort to power with 100% renewable energy. It owns and operates data centers in North Carolina, California, Oregon and Nevada, with plans to expand its data center footprint in Ireland, Denmark and Arizona.

**Energy Transparency:** Apple received 25 points for reporting a detailed breakdown of its energy and greenhouse gas footprint in its 2014 Environmental Responsibility Report<sup>248</sup> and to CDP, including facility-level information of renewable energy supply that details the impact of its renewable investments and procurement.

**Renewable Energy Commitment:** Apple received 25 points for its long-term commitment to power with 100% renewable energy. Apple has continued to follow its commitment to prioritize delivering additional renewable electricity from either on-site or local sources for its data center operations.<sup>249</sup>

**Renewable Energy Championship:** Apple received 20 points for moving aggressively to secure renewable energy for each of its data centers in the US and abroad via investments, PPAs and partnerships with utilities. Apple has partnered with utilities to procure renewable energy in several states.<sup>250</sup>

<b>Pandora.com</b>	<b>F</b>			
<b>CLEAN ENERGY: 11%</b>	<b>COAL: 27%</b>	<b>GAS: 23%</b>	<b>NUCLEAR: 31%</b>	

Pandora is one of the largest online music streaming platforms, operating in North America, Australia and New Zealand. Pandora reports to have its main data centers San Jose (Equinix) Virginia (Equinix), and Chicago (Digital Realty Trust).<sup>251</sup>

**Energy Transparency:** Pandora does not provide any information on its energy footprint. Pandora is publicly held.

**Renewable Energy Commitment:** Pandora has not announced any commitment to renewable energy or goals to increase its supply of renewable energy.

**Renewable Energy Championship:** Pandora has not exhibited any renewable energy leadership or made investments in increasing the amount of renewable energy it uses.

<b>SoundCloud.com</b>	<b>F</b>			
<b>CLEAN ENERGY: 23%</b>	<b>COAL: 27%</b>	<b>GAS: 21%</b>	<b>NUCLEAR: 26%</b>	

SoundCloud is an online audio, social media and streaming platform that allows users to download and share music and other audio creations. SoundCloud relies heavily on AWS for the processing and storage of its audio recordings.<sup>252</sup>

**Energy Transparency:** SoundCloud does not provide any information on its energy footprint.

**Renewable Energy Commitment:** SoundCloud has not adopted a commitment to renewable energy or goals to increase its supply of renewable energy.

**Renewable Energy Championship:** SoundCloud has not offered any evidence of renewable energy leadership or made investments in increasing the amount of renewable energy it uses.



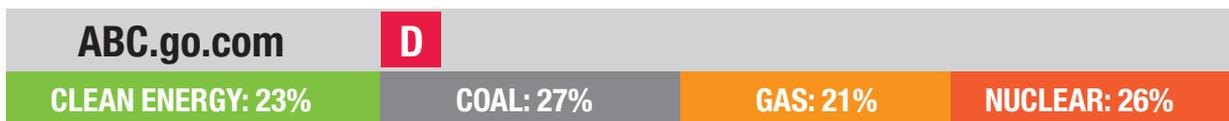
Spotify is one of the largest audio streaming companies in the world, with 40 million active users globally. Spotify has data centers in Stockholm, London, Virginia, and San Jose, and also relies upon AWS (EC2 & S3) to deliver its music.<sup>253</sup>

**Energy Transparency:** Spotify does not provide any information on its energy footprint.

**Renewable Energy Commitment:** Spotify has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** Spotify has not offered any evidence of renewable energy leadership or made investments in increasing the amount of renewable energy it uses.

## Streaming Video

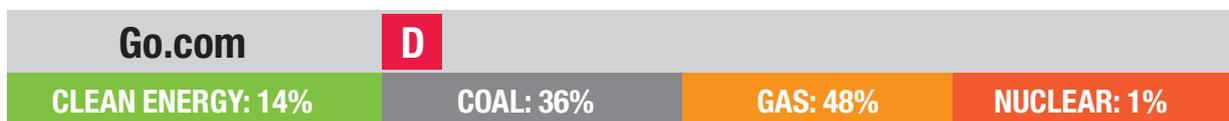


ABC.go.com, the website for the ABC broadcast television network, is owned and operated by The Walt Disney Company. ABC.go.com appears to host its web site with Amazon Web Services, based on its IP address. Disney did not provide Greenpeace with information about the energy use of ABC.go.com, other than to say it was hosted by a cloud and colocation provider.<sup>254</sup>

**Energy Transparency:** ABC.go.com received 5 points for Disney's publication of corporate-wide carbon and electricity goals to CDP<sup>255</sup> and in its own sustainability report.<sup>256</sup> Disney does not break out any data for its data center operations.

**Renewable Energy Commitment:** ABC.go.com received 5 points for Disney's goal of zero net greenhouse gas emissions, and to reduce greenhouse gas emissions by 50% by 2020, and for its hierarchy of meeting those goals via emissions avoidance and efficiency, then fuel switching, and then purchasing carbon offsets.<sup>257</sup> However, Disney to date has purchased mostly carbon offsets.<sup>258</sup>

**Renewable Energy Championship:** ABC.go.com received 5 points for Disney's reduction of company-wide electricity consumption by 11.9% in 2013 compared to 2006 and its use of an internal carbon tax.<sup>259, 260</sup>



Go.com is owned and operated by The Walt Disney Company, which operates a data center in North Carolina, but told Greenpeace that hosts Go.com in an unnamed colocation data center.<sup>261</sup> Disney did not provide Greenpeace with information about the energy use of its data centers.

**Energy Transparency:** Go.com received 5 points for Disney's publication of corporate-wide carbon and electricity goals to CDP and in its own sustainability report.<sup>262</sup> Disney does not break out any data for its data center operations.

**Renewable Energy Commitment:** Go.com received 5 points for Disney's goal of zero net greenhouse gas emissions, and to reduce greenhouse gas emissions by 50% by 2020, and for its hierarchy of meeting those goals via emissions avoidance and efficiency, then fuel switching, and then purchasing carbon offsets.<sup>263</sup> However, Disney to date has purchased mostly carbon offsets.<sup>264</sup>

**Renewable Energy Championship:** Go.com received 5 points for Disney's reduction of company-wide electricity consumption by 11.9% in 2013 compared to 2006 and its use of an internal carbon tax.<sup>265, 266</sup>

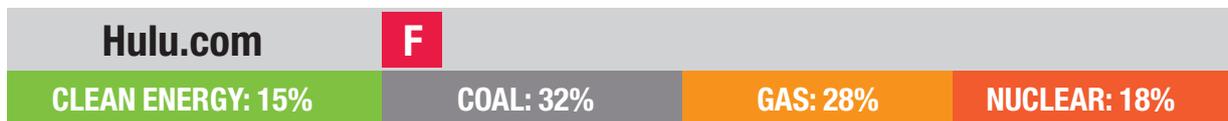


HBO delivers movies and its popular original programming through its HBO GO service, which is now apparently handled by MLB Advanced Media (MLBAM).<sup>267</sup> MLBAM operates data centers in San Francisco, Omaha, and New York City, and also uses AWS.<sup>268</sup>

**Energy Transparency:** HBO received 5 points for a disclosure by its parent company, Time Warner Inc., of its overall electricity consumption and carbon footprint to the CDP.<sup>269</sup> It's unclear whether Time Warner's submission accounts for HBO's energy footprint from its streaming via MLBAM.

**Renewable Energy Commitment:** HBO has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** HBO has not offered any evidence of renewable energy leadership or made investments to increase the amount of renewable energy it uses.

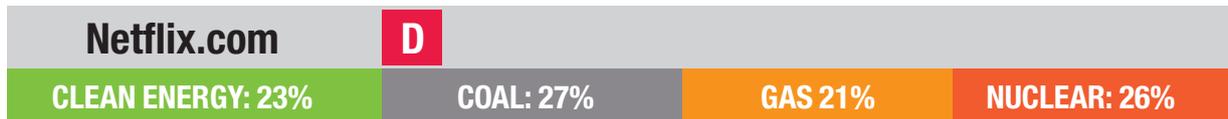


Hulu, an online video service, appears to be hosted in two data centers, one in the L.A. area and one on the East Coast.<sup>270</sup> Hulu appears to host its data in Equinix facilities.<sup>271</sup> Hulu did not respond to requests from Greenpeace for information about its energy use.

**Energy Transparency:** Hulu does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Hulu has not set any energy goals.

**Renewable Energy Championship:** Hulu has not offered evidence of renewable energy championship.



Netflix, one of the largest video streaming platforms in the world, accounts for over one-third of peak download traffic in North America. Netflix relies heavily on Amazon Web Services for delivering its content to its customers, and on Open Connect, the Netflix content delivery network.<sup>272</sup>

**Energy Transparency:** Netflix received ten points for publishing information stating that 36% of its energy consumption in 2014 came from renewable sources, along with carbon footprint information on a per customer basis.<sup>273</sup> Netflix does not yet provide comprehensive data on the total energy consumption and carbon footprint of its platform.

**Renewable Energy Commitment:** Netflix has not adopted a commitment to renewable energy or goals to increase its supply.

**Renewable Energy Championship:** Netflix received 5 points for hosting more of its AWS footprint in lower carbon regions, and for purchasing renewable energy credits for its footprint with Amazon Web Services. Renewable energy credits (RECs) do not fundamentally change the mix of electricity powering the areas where Netflix has operations via AWS or Open Connect.

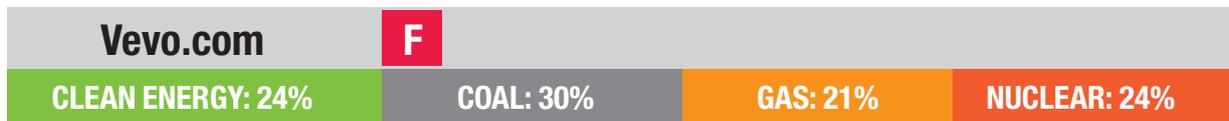


Twitch.tv, a video platform and community for gamers recently acquired by Amazon, appears to host its servers through multiple providers including Telx<sup>274</sup> and Equinix<sup>275</sup> in facilities in Hong Kong, Singapore, Taipei, Tokyo, Sydney, Amsterdam, Frankfurt, London, Paris, Prague, Stockholm, Dallas, Ashburn, Miami, New York, Los Angeles and San Francisco.<sup>276</sup> Twitch did not respond to requests from Greenpeace for information about its energy use.<sup>277</sup>

**Energy Transparency:** Twitch.tv does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Twitch.tv has not set any energy goals.

**Renewable Energy Championship:** Twitch.tv has not offered evidence of renewable energy championship.

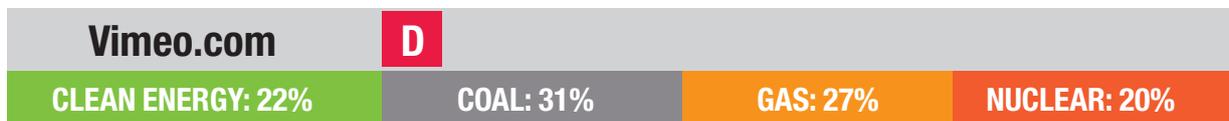


Vevo.com, a music video hosting service, appears to use both Rackspace and Amazon Web Services to host its content.<sup>278</sup> Vevo did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Vevo does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Vevo has not set any energy goals.

**Renewable Energy Championship:** Vevo has not offered evidence of renewable energy championship.

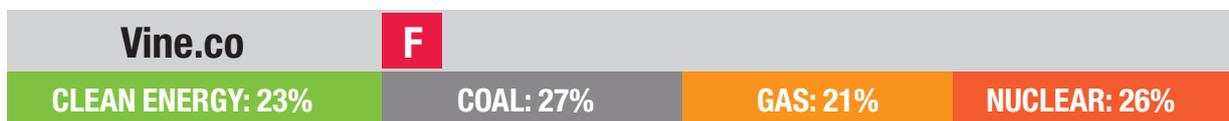


Vimeo.com, the online video sharing website owned by IAC, is hosted by Amazon Web Services for storage and transcoding; Google Cloud for video delivery, transcoding and storage; Akamai, Level3 and Fastly for Video delivery, and Dupont Fabros and Switch in Las Vegas for site hosting and on-site transcoding.<sup>279</sup>

**Energy Transparency:** Vimeo received 10 points for providing Greenpeace with information about its cloud, colocation and CDN providers.

**Renewable Energy Commitment:** Vimeo has not yet set any energy goals.

**Renewable Energy Championship:** Vimeo has not yet offered evidence of renewable energy championship.



Vine.co, the short-form video sharing service, is owned by Twitter but appears to be hosted by Amazon Web Services.<sup>280</sup> Vine did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Vine does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Vine has not set any energy goals.

**Renewable Energy Championship:** Vine has not offered evidence of renewable energy championship.



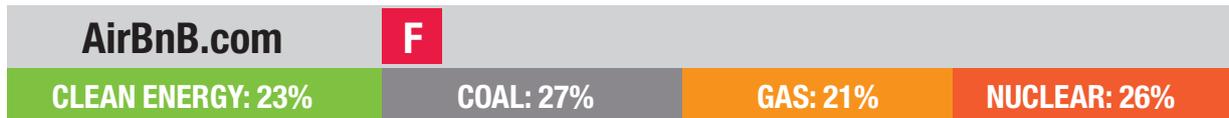
YouTube.com, the video streaming site, is owned and hosted by Google, which operates a fleet of global data centers. Greenpeace assessed Google for its data center energy use in detail in the report “Clicking Clean: A Guide to Building the Green Internet.”<sup>281</sup>

**Energy Transparency:** YouTube received 15 points for Google’s reporting its corporate-wide energy consumption and greenhouse gas footprint through CDP and the “Google Green” website.<sup>282</sup> Google does not provide facility-level energy and greenhouse gas data.

**Renewable Energy Commitment:** YouTube received 25 points for Google’s long-term goal of being 100% renewably powered and its clear reporting of progress toward the goal, indicating what percentage is a result of specific market purchases.<sup>283</sup>

**Renewable Energy Championship:** YouTube received 20 points for Google’s use of PPAs to procure renewable energy, its investments in renewable energy, and its advocacy with utilities and policymakers for increased renewable energy.

## Travel

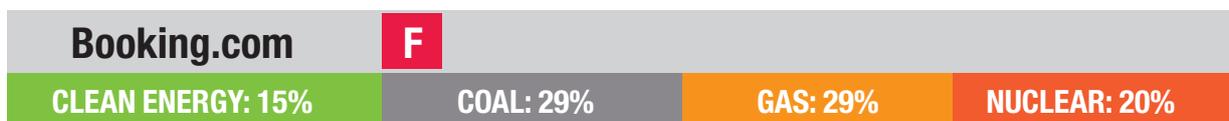


Airbnb.com, an online service for people to rent housing, is hosted by AWS.<sup>284</sup> Airbnb did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Airbnb does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Airbnb has not set any energy goals.

**Renewable Energy Championship:** Airbnb has not offered evidence of renewable energy championship.



Booking.com is owned by The Priceline Group, and appears to be hosted in data centers operated by Equinix.<sup>285</sup> The Priceline Group says that its data center operations are located in England, the Netherlands, Hong Kong, Switzerland and five locations in the United States.<sup>286</sup> The Priceline Group did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Booking.com does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Booking.com has not set any energy goals.

**Renewable Energy Championship:** Booking.com has not offered evidence of renewable energy championship.



Expedia.com, the online travel company, appears to operate its own data center in Chandler, Arizona, and is hosted by AWS<sup>287, 288</sup> Expedia did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Expedia does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Expedia has not set any energy goals.

**Renewable Energy Championship:** Expedia has not offered evidence of renewable energy championship.

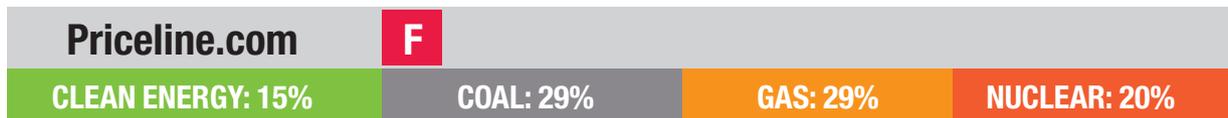


KAYAK.com, the online travel booking company, is hosted in two data centers, one in Europe and one in the United States.<sup>289, 290</sup>

**Energy Transparency:** KAYAK received 5 points for providing Greenpeace with limited information about its energy use. KAYAK says that its European data center is powered by 100% renewable energy consisting of hydropower and “alternative” energy sources. KAYAK offers a carbon footprint for its European web site, including its data center there.<sup>291</sup> KAYAK provided no information about the location or energy footprint of its US data center.<sup>292</sup>

**Renewable Energy Commitment:** KAYAK has not set any energy goals.

**Renewable Energy Championship:** KAYAK earned 5 points for several examples of ways in which it is reducing its data center energy footprint via server upgrades and virtualization.<sup>293</sup> KAYAK established its EU data center with a design goal of reducing power consumption. KAYAK purchases carbon offsets for its EU data center. See page 13 for more information on carbon offsets.<sup>294</sup>

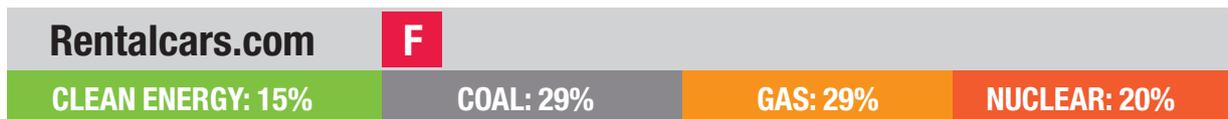


Priceline.com, the online hotel booking company, appears to be hosted in data centers operated by Equinix.<sup>295</sup> Priceline says that its data center operations are located in England, the Netherlands, Hong Kong, Switzerland and five locations in the United States.<sup>296</sup> Priceline did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Priceline does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Priceline has not set any energy goals.

**Renewable Energy Championship:** Priceline has not offered evidence of renewable energy championship.



Rentalcars.com is owned by The Priceline Group, and appears to be hosted in data centers operated by Equinix.<sup>297</sup> The Priceline Group says that its data center operations are located in England, the Netherlands, Hong Kong, Switzerland and five locations in the United States.<sup>298</sup> The Priceline Group did not provide Greenpeace with information about its energy use.

**Energy Transparency:** Rentalcars.com does not provide any information about its energy footprint.

**Renewable Energy Commitment:** Rentalcars.com has not set any energy goals.

**Renewable Energy Championship:** Rentalcars.com has not offered evidence of renewable energy championship.



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# Methodology

# 06

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In compiling the information included in this report, Greenpeace contacted all companies featured here and asked for information regarding the energy footprint powering their digital infrastructure, and for information on their energy transparency, renewable energy commitments, and any efforts to improve their renewable energy supply through procurement, investments or advocacy with suppliers or policymakers. Where clear and consistent information was not provided by the company, Greenpeace estimated the resource mix of electricity powering a company's operations using publicly available information. Greenpeace provided electricity resource mix estimates to companies for comment in advance of publication.

## Energy Transparency (25 Points)

Greenpeace evaluated companies on the scope and level of detail that they make publicly available about the energy consumption of their IT infrastructure. Comprehensive energy transparency allows stakeholders and customers to evaluate the energy-related environmental performance and impact of a company. Public information includes information from a company's website, annual reports, submissions to regulatory agencies or information clearinghouses such as the CDP.<sup>299</sup>

For corporate and facility-level reporting, key elements of information include: location of facilities; amount of electricity demand; generation mix and associated carbon content (including power purchase agreements specific to the facility); and carbon intensity of data delivery and storage. Reporting should include owned and rented facilities, as well as companies' footprints with cloud computing vendors and content delivery networks, if applicable.

Cloud and colocation vendors' regular reporting to customers should provide energy and carbon footprint information (pre-offset) associated with the customers' consumption, reported in a manner consistent with established reporting protocols.

Greenpeace awarded significant, though not full, credit to companies that reported comprehensive energy information to Greenpeace for publication in this report. Greenpeace encourages those companies to begin reporting that information publicly.

Greenpeace awarded partial credit to companies that report overall carbon or energy data publicly, without breaking out digital operations.

## Renewable Energy Commitment (25 Points)

Greenpeace assessed companies on the presence and relative strength of a commitment to power their digital operations with renewable energy.

High scoring companies demonstrate:

- Adoption of a 100% renewable energy commitment
- For companies that own and operate their data centers, adoption of renewable energy procurement guidelines that prioritize high-impact methods of powering with renewable energy that demonstrate additionality, proximity to demand, and sustainability, as opposed to purchase of unbundled renewable energy credits or carbon offsets.
- For companies that own and operate their data centers, a clean energy siting policy to prioritize IT infrastructure investments or procurements that rely primarily upon renewable energy as a source of electricity and discriminate against coal and nuclear power to meet infrastructure electricity demand.
- For companies that operate data centers in colocation facilities or use third-party cloud computing vendors, strong commitments include procurement policies that significantly weigh sustainability and availability of renewable energy.

To receive full credit for a 100% renewable energy commitment, companies also needed to display enough energy transparency so that customers and the public could effectively evaluate that commitment.

Greenpeace awarded partial credit to companies with renewable energy commitments of less than 100%, but that have procurement policies in place to meet their goals.

Greenpeace awarded minimal credit to companies with carbon neutral goals that meet their goals through the purchase of carbon offsets or renewable energy credits.

## Renewable Energy Championship (20 Points)

Greenpeace evaluated companies on whether they have taken steps to increase the supply of renewable energy powering their operations, either in the short-term or long-term.

Renewable energy championship can look dramatically different depending on the size, growth phase and digital architecture of each company assessed. Companies building their own data centers have different options from companies in a 100% cloud environment; Greenpeace scored companies based on the degree to which they are taking advantage of leadership opportunities at their disposal, not against other companies with different opportunities.

Examples of renewable energy championship include:

- Direct investment in or procurement of renewable energy to power a company's owned and operated data centers.
- Advocacy with state or federal policymakers for greater access to renewable energy.
- Advocacy with utilities for more renewable energy.
- Advocacy with colocation or cloud computing vendors for renewable energy offerings.
- For colocation or cloud computing customers, moving their operations within a company's footprint to a location with greater supply of renewable energy.
- For colocation or cloud computing customers, switching vendors to one with a greater supply of renewable energy
- Making noteworthy or innovative achievements to increase efficiency or utilization, decreasing overall energy demand.

Greenpeace awarded minimal credit for the purchase of carbon offsets or unbundled renewable energy credits.

In reporting any renewable energy procurement, companies should follow the guidance established in the recently adopted Scope 2 Guidance of the Greenhouse Gas Protocol, which established clear reporting requirements for reporting market-based purchasing of renewable electricity.<sup>300</sup>

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## Clean Energy Mix (30 points)

Greenpeace determined the mix of energy sources powering companies' digital operations based on the following sources:

- By direct submissions from companies to Greenpeace.
- Public submissions by companies to reporting entities or stakeholder publications
- If not provided by the company, Greenpeace used public reports to ascertain the locations of a company's data center footprints, its colocation providers, or its cloud computing hosts.
- For companies that host their data center operations with a cloud or colocation vendor like Amazon Web Services, Microsoft, Equinix, or Rackspace without an indication of specific facilities, Greenpeace estimated the company's resource mix to be equal to the total resource mix powering the vendor. Greenpeace estimated resource mixes for the most common colocation and cloud computing vendors using a facility by facility analysis, which can be found in Appendix III of the report "Clicking Clean: A Guide to Building The Green Internet."
- If not reported by the company, Greenpeace estimated the generation mix of the electricity of a given data center from one of the following sources, as available, in declining order of preference:
  - The most recent published generation mix of the local utility for that data center
  - Data from the regional grid operator.
  - In the U.S., the 2010 eGrid State level generation mix (9th Edition) as reported by US EPA, or if not applicable, reported subregional eGrid generation mix, or that reported by the state government.<sup>301</sup>
  - Outside the US, national data, then European Commission data, and then International Energy Agency 2010 – 2012 statistics.
- When companies operated multiple data centers without an indication of the proportional balance or distribution of energy demand between them, Greenpeace allocated each facility's contribution to the company's overall energy mix equally. When public reports indicated that one facility was primary and another is a backup facility, Greenpeace used the primary facility's resource mix to determine the company's overall mix.

No companies provided Greenpeace with adequate data to calculate their energy footprints from content delivery networks, so Greenpeace was not able to factor CDNs into estimates of any company's resource mixes at this time.

*Important Note: This analysis does not attempt to represent itself as a comprehensive snapshot of how much clean energy is being consumed on a company-wide level, but for data center operations only.*

*Greenpeace would welcome the opportunity to incorporate more detailed data to inform our analysis, as that would likely provide a more complete and refined picture of internet companies' energy use. As companies provide better data, Greenpeace will incorporate this into our evaluation and encourage other companies to follow.*

## Overall Grade

Greenpeace determined overall grades for companies based on the above criteria, with the clean energy mix counting for 30% of a company's grade, energy transparency for 25%, renewable energy commitment for 25%, and renewable energy championship for 20%.

# Endnotes

- 1 Cisco Visual Networking Index: Forecast and Methodology, 2013–2018(2014)
- 2 See [clickclean.org/#report](http://clickclean.org/#report)
- 3 Digital infrastructure electricity demand estimate from: GeSI SMARTer2020: The Role of ICT in Driving a Sustainable Future, <http://gesi.org/SMARTer2020>. Country data from: IEA: Electricity Information (2012 Edition) <http://www.iea.org/media/training/presentations/statisticsmarch/electricityinformation.pdf>
- 4 Corcoran and Andrae, Emerging Trends in Electricity Consumption for Consumer ICT, p44 - 48: <http://vmserver14.nuigalway.ie/xmlui/handle/10379/3563>
- 5 <http://www.alexa.com/topsites/countries/US>
- 6 <http://www.wsj.com/news/articles/SB10001424052702304851104579361201655365302>
- 7 Cisco Visual Networking Index: Forecast and Methodology, 2013–2018(2014)
- 8 <http://thenextweb.com/apps/2014/11/21/netflix-now-accounts-35-overall-us-internet-traffic/>
- 9 <http://www.google.com/green/energy/>
- 10 <https://www.srgresearch.com/articles/microsoft-cloud-revenues-leap-amazon-still-way-out-front>
- 11 See Dominion 2014 Integrated Resource Plan for Virginia and North Carolina <https://www.dom.com/library/domcom/pdfs/corporate/integrated-resource-planning/nc-irp-2014.pdf>, p25. Dominion lists 11% of its 2013 generation mix as Purchased Power. Greenpeace estimated that power to have the resource mix of the 2013 PJM generation mix, found here: <https://gats.pjm-eis.com/gats2/PublicReports/PJMSystemMix>. Dominion lists 9% of its 2013 generation mix as Non-Utility Generation, which Greenpeace allocated according to Dominion's list of NUG's with generation and capacity factor data from the same IRP document.
- 12 [http://images.apple.com/environment/reports/docs/apple\\_environmental\\_responsibility\\_report\\_0714.pdf](http://images.apple.com/environment/reports/docs/apple_environmental_responsibility_report_0714.pdf)
- 13 [http://www.ghgprotocol.org/scope\\_2\\_guidance](http://www.ghgprotocol.org/scope_2_guidance)
- 14 Reported directly to Greenpeace
- 15 [extfiles.etsy.com/Press/reports/Etsy\\_Values\\_ImpactReport\\_2013.pdf](http://extfiles.etsy.com/Press/reports/Etsy_Values_ImpactReport_2013.pdf)
- 16 [https://www.facebook.com/green/app\\_439663542812831](https://www.facebook.com/green/app_439663542812831)
- 17 <https://www.cdp.net/sites/2014/66/9366/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 18 Reported directly to Greenpeace
- 19 Reported directly to Greenpeace
- 20 See <http://www.wsj.com/articles/hbo-to-use-mlb-advanced-media-for-stand-alone-streaming-product-1418150584>  
HBO parent company Time Warner, Inc. reports energy data to CDP, but it's unclear whether that covers HBO's use of MLBAM digital infrastructure.
- 21 See Duke Energy Integrated Resource Plan, p 39: <http://starw1.ncuc.net/NCUC/ViewFile.aspx?id=c3c5cbb5-51f2-423a-9dfc-a43ec559d307>
- 22 <http://www.equinix.com/why-equinix/green-by-design/>
- 23 <http://www.azcentral.com/story/money/business/tech/2015/03/05/10-data-center-offers-renewable-energy-program/24465323/>
- 24 Arizona: <https://gigaom.com/2015/02/02/apple-to-build-2b-solar-powered-command-center-data-center-at-arizona-factory-site/>  
Nevada: [https://www.apple.com/environment/reports/docs/apple\\_environmental\\_responsibility\\_report\\_0714.pdf](https://www.apple.com/environment/reports/docs/apple_environmental_responsibility_report_0714.pdf)
- 25 Corporate renewable energy purchasers group: [http://assets.worldwildlife.org/publications/705/files/original/Corporate\\_RE\\_buyers\\_guide21715.pdf?1424182990&\\_ga=1.190816168.247287111.1426539016](http://assets.worldwildlife.org/publications/705/files/original/Corporate_RE_buyers_guide21715.pdf?1424182990&_ga=1.190816168.247287111.1426539016)
- 26 California policy advocacy noted in Adobe CDP filing.
- 27 Communicated by Adobe to Greenpeace
- 28 Communicated by Etsy to Greenpeace
- 29 Communicated by Ask.com to Greenpeace
- 29 Since Boing Boing's renewable energy provider could only guarantee that at least 50% of the electricity purchased by Boing Boing came from within Ontario, Greenpeace estimated Boing Boing's data center energy footprint by assuming that 50% of its electricity mix was 100% renewable, and 50% reflects the average Ontario resource mix.
- 30 [http://www.huffingtonpost.com/fanya-engler/post\\_9435\\_b\\_7267706.html](http://www.huffingtonpost.com/fanya-engler/post_9435_b_7267706.html)
- 31 See [www.clickclean.org](http://www.clickclean.org) (2015)
- 32 <http://www.google.com/green/>
- 33 <http://www.google.com/green/bigpicture/#beyondzero-grid>
- 34 See [www.clickclean.org](http://www.clickclean.org) (2015).
- 35 <http://www.google.com/green/>
- 36 <http://www.google.com/green/bigpicture/#beyondzero-grid>
- 37 Communicated by Boing Boing directly to Greenpeace.
- 38 Since Boing Boing's renewable energy provider could only guarantee that at least 50% of the electricity purchased by Boing Boing came from within Ontario, Greenpeace estimated Boing Boing's data center energy footprint by assuming that 50% of its electricity mix was 100% renewable, and 50% reflects the average Ontario resource mix.
- 39 Information reported to Greenpeace by AOL. Greenpeace estimated Engadget's energy mix using AOL's data.
- 40 AOL communication to Greenpeace
- 41 <http://www.wired.com/2012/10/hurricane-sandy-datagram/>
- 42 <http://www.datacenterknowledge.com/archives/2009/01/16/hosts-build-niche-powering-high-traffic-blogs/>
- 43 Greenpeace estimated TechCrunch's energy mix using AOL's data.
- 44 AOL communication to Greenpeace
- 45 Based on IP address lookup software.
- 46 <https://www.google.com/url?q=https%3A%2F%2Fwww.cdp.net%2Fsites%2F2014%2F19%2F19119%2FInvestor%2520CDP%25202014%2FPages%2FDisclosureView.aspx&sa=D&sntz=1&usq=AFQjCNEfMmCmZEL7bLSryaSF9BXG3UfA4A>
- 47 See [www.clickclean.org](http://www.clickclean.org) (2015)
- 48 Yahoo received 10 points in this category, but Tumblr received only 5 since Yahoo's commitment does not seem to currently apply to the majority of Tumblr's footprint, which is hosted by AWS.
- 49 <http://aws.amazon.com/solutions/case-studies/conde-nast/>
- 50 <http://www.condenast.com/content/about-us-social-responsibility>
- 51 Data provided by Automattic to Greenpeace.
- 52 See [www.clickclean.org](http://www.clickclean.org) (2015)
- 53 <http://aws.amazon.com/about-aws/sustainable-energy/>
- 54 <http://aws.amazon.com/about-aws/sustainable-energy/>
- 55 <http://aws.amazon.com/about-aws/sustainable-energy/>
- 56 [http://eraeng.com/files/8813/7649/2992/Data\\_Centers.pdf](http://eraeng.com/files/8813/7649/2992/Data_Centers.pdf)
- 57 <https://corporate.bestbuy.com/wp-content/uploads/2014/06/csr-2014-final.pdf>

- 58 <https://corporate.bestbuy.com/wp-content/uploads/2014/06/csr-2014-final.pdf>
- 59 See [www.clickclean.org](http://www.clickclean.org) (2015)
- 60 See eBay 2014 CDP Submission
- 61 See <http://tech.ebay.com/dashboard>
- 62 <http://www.forbes.com/sites/mindy lubber/2012/03/22/ebay-and-republican-lawmaker-score-clean-energy-win-in-utah/>
- 63 Information provided by Etsy to Greenpeace
- 64 [http://extfiles.etsy.com/Press/reports/Etsy\\_Values\\_ImpactReport\\_2013.pdf](http://extfiles.etsy.com/Press/reports/Etsy_Values_ImpactReport_2013.pdf)
- 65 <https://blog.etsy.com/news/2013/etsy-celebrates-earth-day/>
- 66 Etsy Communication with Greenpeace
- 67 <http://people.redhat.com/bhinson/customer-references/home-depot-IBM.pdf>
- 68 Greenpeace estimated Home Depot's energy footprint by assuming a 1:1 ratio of energy consumption from its data centers.
- 69 <https://corporate.homedepot.com/CorporateResponsibility/Environment/Pages/CarbonFootprint.aspx>
- 70 [https://corporate.homedepot.com/CorporateResponsibility/Environment/Documents/Sustainability\\_\\_Brochure\\_pages.pdf](https://corporate.homedepot.com/CorporateResponsibility/Environment/Documents/Sustainability__Brochure_pages.pdf)
- 71 Santa Clara data center described here in company SEC filing: <http://investor.groupon.com/secfiling.cfm?filingID=1490281-15-14&CIK=1490281>. AWS usage described here: <http://mashable.com/2011/03/24/groupon-cloud-computing/>.
- 72 Without information describing the location of Groupon's international data centers or the amount of AWS usage, Greenpeace estimated its energy mix to be that of its Santa Clara data center.
- 73 Provided by Slickdeals.net and <http://www.datacenterknowledge.com/archives/2011/06/14/phoenixnap-lines-up-expansion-funding/>
- 74 Information provided by Slickdeals.net to Greenpeace.
- 75 <http://www.automatedlogic.com/branch/twincities/project/target-data-centers/>
- 76 Greenpeace assumed a 1:1 split between energy footprints of Target's data centers.
- 77 [https://corporate.target.com/\\_media/TargetCorp/csr/pdf/2013-corporate-responsibility-report.pdf](https://corporate.target.com/_media/TargetCorp/csr/pdf/2013-corporate-responsibility-report.pdf)
- 78 <https://corporate.target.com/corporate-responsibility/environment/efficient-operations>
- 79 <https://corporate.target.com/corporate-responsibility/environment/efficient-operations>
- 80 Information provided by Adobe. Adobe  
AWS: <http://aws.amazon.com/solutions/case-studies/adobe/>  
Oregon data center: <http://www.images.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-10K-FY14-FINAL-CERTIFIED.pdf>  
Colocation facilities: <http://blogs.adobe.com/digitalmarketing/analytics/2-new-data-centers-bring-faster-global-page-load-times/>
- 81 <https://www.cdp.net/sites/2014/33/333/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 82 See Adobe CDP filing: <https://www.cdp.net/sites/2014/33/333/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 83 See Adobe CDP filing: <https://www.cdp.net/sites/2014/33/333/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 84 See Adobe CDP filing: <https://www.cdp.net/sites/2014/33/333/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 85 See Adobe CDP filing: <https://www.cdp.net/sites/2014/33/333/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 86 Communicated by Adobe to Greenpeace.
- 87 See [www.clickclean.org](http://www.clickclean.org) (2015)
- 88 <http://aws.amazon.com/about-aws/sustainable-energy/>
- 89 <http://aws.amazon.com/about-aws/sustainable-energy/>
- 90 <http://aws.amazon.com/about-aws/sustainable-energy/>
- 91 <https://github.com/blog/493-github-is-moving-to-rackspace>
- 92 <http://www.datacenterknowledge.com/inside-go-daddys-data-center/>
- 93 <http://www.sec.gov/Archives/edgar/data/1609711/000119312514230425/d728713ds1.htm>
- 94 Without more detailed information of GoDaddy's colocation data centers, Greenpeace estimated its energy mix to be that of its Phoenix data center.
- 95 <http://www.internap.com/2014/12/09/1000-servers-48-hours-outbrain-data-center-migration/>
- 96 Greenpeace estimated Outbrain's energy footprint by assuming a 1:1:1 ratio of energy consumption from Internap's data centers.
- 97 See [www.clickclean.org](http://www.clickclean.org).
- 98 [http://www.salesforce.com/assets/pdf/misc/salesforce\\_sustainability\\_report\\_fy13-14.pdf](http://www.salesforce.com/assets/pdf/misc/salesforce_sustainability_report_fy13-14.pdf)
- 99 Salesforce 2014 CDP submission, ICT1.10a.
- 100 Salesforce 2014 CDP submission  
<http://www.wri.org/publication/corporate-renewable-energy-buyers-principles>
- 101 <http://www.datacenterknowledge.com/archives/2011/06/02/report-disney-buys-land-for-nc-data-center/>; Greenpeace estimated Go.com's footprint to be from Las Vegas, Nevada from IP trace info.
- 102 <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 103 <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p 60
- 104 <http://thewaltdisneycompany.com/sites/default/files/envirogoalsandtargets.pdf>, p7
- 105 <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p7
- 106 <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p61
- 107 <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 108 <http://www.businessinsider.com/sponsor-post-datapipe>
- 109 <http://www.businessinsider.com/sponsor-post-datapipe>
- 110 <http://www.buzzfeed.com/mattbuchanan/how-buzzfeed-came-back-online>
- 111 <https://www.io.com/customers/cbs-interactive/>
- 112 <https://www.cdp.net/sites/2014/42/2942/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 113 [http://www.ttvanguard.com/embracingblur\\_fieldtrip/](http://www.ttvanguard.com/embracingblur_fieldtrip/)  
[http://www.barco.com/projection\\_systems/downloads/BCD\\_apl\\_tbs\\_1.pdf](http://www.barco.com/projection_systems/downloads/BCD_apl_tbs_1.pdf)
- 114 <https://www.google.com/url?q=https%3A%2F%2Fwww.cdp.net%2Fsites%2F2014%2F19%2F19119%2FInvestor%2520CDP%25202014%2FPages%2FDisclosureView.aspx&sa=D&sz=1&usq=AFQjCNEfMmCmZEL7bLSryaSF9BXG3Ufa4A>
- 115 <http://aws.amazon.com/solutions/case-studies/newsweek/> and IP software
- 116 [http://www.business.att.com/content/article/Hosting-Content-Distribution-Forbes\\_.pdf](http://www.business.att.com/content/article/Hosting-Content-Distribution-Forbes_.pdf)

- 117** [http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle\\_Print&ID=1461313](http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle_Print&ID=1461313);  
<http://aws.amazon.com/solutions/case-studies/dow-jones/>;  
<http://www.itworld.com/article/2702750/cloud-computing/amazon-web-services-grudgingly-accepts-hybrid-cloud.html>
- 118** [http://impact.21cf.com/sustainability.html#carbon\\_analysis-tab](http://impact.21cf.com/sustainability.html#carbon_analysis-tab);  
<https://www.cdp.net/sites/2013/26/13126/Investor%20CDP%202013/Pages/DisclosureView.aspx>
- 119** <https://www.cdp.net/sites/2013/26/13126/Investor%20CDP%202013/Pages/DisclosureView.aspx>
- 120** <http://impact.21cf.com/sustainability.html#targets-tab>
- 121** <https://www.cdp.net/sites/2013/26/13126/Investor%20CDP%202013/Pages/DisclosureView.aspx>
- 122** <http://www.datacenterknowledge.com/archives/2009/01/16/hosts-build-niche-powering-high-traffic-blogs/>
- 123** See [http://www.huffingtonpost.com/fanya-engler/post\\_9435\\_b\\_7267706.html](http://www.huffingtonpost.com/fanya-engler/post_9435_b_7267706.html). The Huffington Post did not have enough energy data from its use of Akamai's network for Greenpeace to factor Akamai into its estimates.
- 124** [http://www.huffingtonpost.com/fanya-engler/post\\_9435\\_b\\_7267706.html](http://www.huffingtonpost.com/fanya-engler/post_9435_b_7267706.html)
- 125** [http://www.huffingtonpost.com/fanya-engler/post\\_9435\\_b\\_7267706.html](http://www.huffingtonpost.com/fanya-engler/post_9435_b_7267706.html)
- 126** [http://www.huffingtonpost.com/fanya-engler/post\\_9435\\_b\\_7267706.html](http://www.huffingtonpost.com/fanya-engler/post_9435_b_7267706.html)
- 127** Communicated from Mashable to Greenpeace. Without knowing the specific data centers where Mashable is hosted, Greenpeace estimated Mashable's energy footprint based on our estimate of Rackspace's overall resource mix.
- 128** <http://www.subzeroeng.com/containment/projects/nbc>
- 129** <http://www.greenisuniversal.com/learn/about-us/facilities/>
- 130** [https://s3.amazonaws.com/aws001/trailhead/CustomerPresentations\\_NY\\_Times\\_NY.pdf](https://s3.amazonaws.com/aws001/trailhead/CustomerPresentations_NY_Times_NY.pdf), see p30. Greenpeace estimated Nytimes.com's energy footprint by assuming that its resource mix came from Seattle for 28%, New York City for 46%, and from AWS for 26%, using the cost ratios in that presentation as a guide. In that 2011 presentation, The Times noted that it was expanding its AWS footprint.
- 131** <http://gannettblog.blogspot.com/2008/07/why-we-never-understand-those-e-mails.html>
- 132** Greenpeace estimated USA Today's energy footprint by assuming a 1:1 ratio of energy consumption from its data centers.
- 133** <http://aws.amazon.com/solutions/case-studies/dow-jones/>
- 134** <https://www.cdp.net/sites/2014/74/50074/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 135** <https://www.cdp.net/sites/2014/74/50074/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 136** <https://www.cdp.net/sites/2014/74/50074/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 137** From Washington Post communication to Greenpeace.
- 138** <http://about.van.fedex.com/newsroom/global-english/fedex-unveils-green-data-center-in-colorado-springs/>
- 139** <http://csr.fedex.com/>
- 140** <http://csr.fedex.com/environment/>
- 141** <http://about.van.fedex.com/newsroom/global-english/fedex-unveils-green-data-center-in-colorado-springs/>
- 142** For more information, see <http://www.greenpeace.org/international/en/campaigns/climate-change/cool-it/Green-IT-at-Greenpeace/>
- 143** <http://www.greenpeace.org/international/en/campaigns/climate-change/cool-it/Green-IT-at-Greenpeace/>
- 144** <http://www.greenpeace.org/international/Global/international/publications/greenpeace/2014/472-AnnualReport2013.pdf> see p47
- 145** According to information provided by Indeed to Greenpeace. Greenpeace estimated Indeed.com's footprint using figures for IBM in Seattle and Virginia and Rackspace in Chicago. Rackspace contracts for 100% renewable energy for its London facility. See Clicking Clean report (2015) for more information: [www.clickclean.org](http://www.clickclean.org).
- 146** Communication from Indeed to Greenpeace
- 147** Information provided to Greenpeace by Intuit.
- 148** <http://www.intuit.com/company/social-responsibility/sustainability/consider/>
- 149** Assessment is based on Paypal before its expected 2015 split with eBay.
- 150** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 151** See eBay 2014 CDP Submission
- 152** See <http://tech.ebay.com/dashboard>
- 153** <http://www.forbes.com/sites/mindylubber/2012/03/22/ebay-and-republican-lawmaker-score-clean-energy-win-in-utah/>
- 154** <http://pressroom.ups.com/Fact+Sheets/UPS+Data+Centers+Fact+Sheet>
- 155** Greenpeace estimated UPS's energy footprint by assuming a 1:1 ratio of energy consumption from its data centers.
- 156** <http://www.sustainability.ups.com/sustainability-reporting/>
- 157** <http://www.sustainability.ups.com/sustainability-reporting/>
- 158** <http://pressroom.ups.com/Fact+Sheets/UPS+Data+Centers+Fact+Sheet>
- 159** <http://about.usps.com/what-we-are-doing/green/report/2009/supplychain.htm>
- 160** [http://about.usps.com/what-we-are-doing/green/report/2009/key\\_indicators.htm](http://about.usps.com/what-we-are-doing/green/report/2009/key_indicators.htm)
- 161** <http://about.usps.com/what-we-are-doing/green/report/2009/supplychain.htm>
- 162** Communicated by The Weather Company to Greenpeace.
- 163** <http://www.ceres.org/declaration/sign/who-has-signed>
- 164** Communicated to Greenpeace by The Weather Company.
- 165** Communicated by The Weather Company to Greenpeace.
- 166** <http://www.ceres.org/declaration/sign/who-has-signed>
- 167** Communicated to Greenpeace by The Weather Company.
- 168** <http://www.sec.gov/Archives/edgar/data/1345016/000119312511315562/d245328ds1.htm>  
<http://engineeringblog.yelp.com/2014/10/scaling-traffic-from-0-to-139-million-unique-visitors.html>  
<http://aws.amazon.com/solutions/case-studies/yelp/>  
Greenpeace estimated Yelp's energy mix by assuming a 50/50 split between Yelp's San Francisco data center and the energy mix powering Amazon Web Services.
- 168** <https://developer.amazon.com/appsandservices/community/post/Tx3MOAFEMNBXZQI/Zillow-Uses-the-Power-of-Amaon-Amazon-Web-Services-and-Kindle-Fire.html>  
<http://blogs.wsj.com/cio/2012/11/15/zillow-is-right-at-home-in-the-cloud/>  
<http://engineering.zillow.com/image-processing-at-zillow-out-with-the-old-and-in-with-the-aws/>  
Without information from Zillow or in the public domain about Zillow's data center, Greenpeace estimated its energy footprint to be the same as Amazon Web Services'.

- 170** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 171** See "Clicking Clean: A Guide to Building the Green Internet" for more detail at [www.clickclean.org](http://www.clickclean.org).
- 172** <http://imgur.com/blog/2013/06/04/tech-tuesday-our-technology-stack/>
- 173** provided to Greenpeace by About.com
- 174** <http://www.datacenterknowledge.com/archives/2010/02/09/answers-com-colos-with-c7-data-centers/>
- 175** Provided by Ask.com to Greenpeace
- 176** According to submission to Greenpeace, and here: <http://blog.ask.com/post/117091034201/ask-com-our-path-to-a-green-future>
- 177** Based on IP address lookup software.
- 178** According to information provided by Reference.com to Greenpeace.
- 179** provided to Greenpeace by Stackexchange.com
- 180** provided to Greenpeace by Stackexchange.com
- 181** [http://community.wikia.com/wiki/User\\_blog:Sannse/Site\\_speed\\_essentials](http://community.wikia.com/wiki/User_blog:Sannse/Site_speed_essentials)
- Greenpeace assumed a 1:1:1 split between electricity use in these four locations to estimate Wikia's electricity resource mix.
- 182** Communicated by Wikihow to Greenpeace.
- 183** <http://www.wikihow.com/wikiHow:Carbon-Neutral>
- 184** <http://www.wikihow.com/wikiHow:Carbon-Neutral>
- 185** Data provided by Wikimedia Foundation to Greenpeace.
- 186** [http://torrus.wikimedia.org/torrus/Facilities?path=/Power\\_usage/Total\\_power\\_usage/Power\\_per\\_site](http://torrus.wikimedia.org/torrus/Facilities?path=/Power_usage/Total_power_usage/Power_per_site)
- 187** [http://wikimediafoundation.org/wiki/RFP/2013\\_Datacenter](http://wikimediafoundation.org/wiki/RFP/2013_Datacenter)
- 188** AOL communication to Greenpeace
- 189** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 190** <http://www.microsoft.com/about/corporatecitizenship/en-us/reporting/>
- 191** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 192** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 193** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 194** <http://www.google.com/green/>
- 195** <http://www.google.com/green/bigpicture/#beyondzero-grid>
- 196** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 197** <http://www.microsoft.com/about/corporatecitizenship/en-us/reporting/>
- 198** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 199** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 200** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 201** <http://www.microsoft.com/about/corporatecitizenship/en-us/reporting/>
- 202** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 203** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 204** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 205** <http://www.microsoft.com/about/corporatecitizenship/en-us/reporting/>
- 206** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 207** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 208** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 209** <http://www.microsoft.com/about/corporatecitizenship/en-us/reporting/>
- 210** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 211** <http://www.microsoft.com/environment/our-commitment/our-footprint.aspx>
- 212** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 213** See "Clicking Clean: A Guide to Building the Green Internet" for more detail at [www.clickclean.org](http://www.clickclean.org).
- 214** According to information provided to Greenpeace by Dibly. Greenpeace estimated Dibly's energy mix using Microsoft Azure's data.
- 215** See [www.clickclean.org](http://www.clickclean.org) (2015)
- 216** [https://www.facebook.com/green/app\\_439663542812831](https://www.facebook.com/green/app_439663542812831)
- 217** <https://www.facebook.com/notes/green-on-facebook/our-carbon-footprint-for-2013/888969404451650>
- 218** <http://greenpeaceblogs.org/2013/11/18/apple-facebook-google-team-up-to-push-nations-largest-utility-to-clean-energy-offering/>
- 219** Information provided by Hootsuite to Greenpeace.
- 220** See [www.clickclean.org](http://www.clickclean.org) (2015).
- 221** [https://www.facebook.com/green/app\\_439663542812831](https://www.facebook.com/green/app_439663542812831)
- 222** <https://www.facebook.com/notes/green-on-facebook/our-carbon-footprint-for-2013/888969404451650>
- 223** <http://greenpeaceblogs.org/2013/11/18/apple-facebook-google-team-up-to-push-nations-largest-utility-to-clean-energy-offering/>
- 224** According to data provided to Greenpeace by LinkedIn.
- 225** According to data provided to Greenpeace by LinkedIn.
- 226** According to data provided to Greenpeace by LinkedIn.
- 227** According to data provided to Greenpeace by LinkedIn.
- 228** According to data provided to Greenpeace by LinkedIn.
- 229** <http://aws.amazon.com/solutions/case-studies/pinterest/>
- 230** <http://aws.amazon.com/solutions/case-studies/reddit/>
- 231** <http://nadatacenters.com/wp-content/uploads/NADC-Newsletter-20151.pdf>
- For information on California and Georgia facilities, see Clicking Clean 2014, p71
- 232** DNS server records for [www.vine.co](http://www.vine.co) and [www.periscope.tv](http://www.periscope.tv)
- 233** Based on IP address lookup software.
- 234** <http://www.datacenterknowledge.com/archives/2011/06/02/report-disney-buys-land-for-nc-data-center/>; Greenpeace estimated Go.com's footprint from the energy resource mix of Las Vegas, Nevada from IP trace info.
- 235** <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 236** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p 60
- 237** <http://thewaltdisneycompany.com/sites/default/files/envirogoalsandtargets.pdf>, p7
- 238** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p7

- 239** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p61
- 240** <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 241** Greenpeace estimated MLBAM to rely on AWS for 15% of its footprint: <http://forwardthinking.pcmag.com/none/326158-how-mlb-com-manages-400-000-video-streams>. Greenpeace split the remaining locations (Omaha, San Francisco, New York) evenly.
- 242** <http://www.datacenterknowledge.com/archives/2013/04/10/nbc-sports-to-use-windows-azure-media-services/>  
<http://azure.microsoft.com/blog/2015/02/05/microsoft-azure-supports-nbc-sports-digital-record-breaking-live-event-with-super-stream-sunday/>
- 243** <http://www.greenisuniversal.com/learn/about-us/facilities/>
- 244** Greenpeace estimated 45% of the data center footprint to the colocation space in Las Vegas, NV (Switch), and 45% to two colocation leases in San Jose, California. For one CA facility, we credited Box with 100% renewable energy for their purchase of Compliance Renewable Energy Credits. Greenpeace estimated the remaining 10% to be in the AWS US-West Oregon region.
- 245** Form 10-K filed by Box Inc, March 2015.
- 246** <https://blogs.dropbox.com/tech/2014/12/aws-reinvent-2014/>  
Greenpeace estimated that 70% of Dropbox' online footprint is supported by AWS, US East Availability Zone, and the remaining 30% is supported by Dropbox colocation leases in Virginia (2) and Santa Clara, CA.
- 247** <https://blogs.dropbox.com/tech/2014/12/aws-reinvent-2014/>
- 248** [https://www.apple.com/environment/pdf/Apple\\_Environmental\\_Responsibility\\_Report\\_2014.pdf](https://www.apple.com/environment/pdf/Apple_Environmental_Responsibility_Report_2014.pdf)
- 249** [https://www.apple.com/environment/pdf/Apple\\_Environmental\\_Responsibility\\_Report\\_2014.pdf](https://www.apple.com/environment/pdf/Apple_Environmental_Responsibility_Report_2014.pdf)
- 250** [https://www.apple.com/environment/pdf/Apple\\_Environmental\\_Responsibility\\_Report\\_2014.pdf](https://www.apple.com/environment/pdf/Apple_Environmental_Responsibility_Report_2014.pdf)
- 251** Pandora 2015 10-K Form.
- 252** <http://aws.amazon.com/solutions/case-studies/soundcloud/>
- 253** Data Center & Backend Buildout (Spotify presentation) <http://www.slideshare.net/davidpoblador/spotify-bcn2013slideshare>  
Greenpeace estimated that Spotify's data center footprint is equally allocated between AWS (US East) and its colocation facilities in Stockholm, London and San Jose.
- 254** Without specific knowledge of the colocation provider, Greenpeace estimated the ABC.go.com footprint from the AWS footprint.
- 255** <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 256** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p 60
- 257** <http://thewaltdisneycompany.com/sites/default/files/envirogoalsandtargets.pdf>, p7
- 258** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p7
- 259** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p61
- 260** <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 261** <http://www.datacenterknowledge.com/archives/2011/06/02/report-disney-buys-land-for-nc-data-center/>; Greenpeace estimated Go.com's footprint from the energy resource mix of Las Vegas, Nevada from IP trace info.
- 262** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p 60
- <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 263** <http://thewaltdisneycompany.com/sites/default/files/envirogoalsandtargets.pdf>, p7
- 264** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p7
- 265** <http://thewaltdisneycompany.com/sites/default/files/reports/FY13PerfSummary.pdf>, p61
- 266** <https://www.cdp.net/sites/2014/84/20384/Investor%20CDP%202014/Pages/DisclosureView.aspx>
- 267** <http://www.wsj.com/articles/hbo-to-use-mlb-advanced-media-for-stand-alone-streaming-product-1418150584>
- 268** Greenpeace estimated MLBAM to rely on AWS for 15% of its footprint: <http://forwardthinking.pcmag.com/none/326158-how-mlb-com-manages-400-000-video-streams>. Greenpeace split the remaining locations (Omaha, San Francisco, New York) evenly.
- 269** <https://www.google.com/url?q=https%3A%2F%2Fwww.cdp.net%2Fsites%2F2014%2F19%2F19119%2FInvestor%2520CDP%25202014%2FPages%2FDisclosureView.aspx&sa=D&sntz=1&usq=AFQjCNEfMmCmZEL7bLSryaSF9BXG3UfA4A>
- 270** <http://www.datastax.com/wp-content/uploads/2014/11/DataStax-CS-Hulu.pdf>  
<http://pivotal.io/big-data/case-study/leading-video-company-scales-to-serve-4-billion-videos-with-800-percent-query-performance-improvement-hulu>  
<http://www.colopulse.com/knowledge-base.php> (notes Los Angeles data center)
- 271** <http://www.datacenterknowledge.com/archives/2008/03/16/equinix-peering-powers-hulu-streaming-video/> Without evidence of the location of Hulu's East Coast data center, Greenpeace estimated Hulu's energy mix to be equal to Equinix'.
- 272** <http://aws.amazon.com/solutions/case-studies/netflix/> and <https://openconnect.netflix.com/>
- 273** <http://techblog.netflix.com/2015/05/netflix-streaming-more-energy-efficient.html>. Netflix did not provide comprehensive information on its energy resource mix or details on how its footprint is powered by 36% renewable energy, so Greenpeace estimated its mix to be equal to that of AWS.
- 274** <http://www.datacenterknowledge.com/archives/2013/10/07/customer-wins/>
- 275** <http://www.datacenterknowledge.com/archives/2014/05/30/equinix-ashburn-refining-old-testing-new/>
- 276** <http://twitchstatus.com/>
- 277** Greenpeace assumed an equal split of the energy footprints of all 14 data center locations when estimating Twitch's energy footprint.
- 278** Rackspace: [http://www.rackspace.com/knowledge\\_center/case-study/vevo-music-videos-run-on-rackspace-hybrid-cloud](http://www.rackspace.com/knowledge_center/case-study/vevo-music-videos-run-on-rackspace-hybrid-cloud)  
AWS: <http://www.slideshare.net/AmazonWebServices/ondemand-live-streaming-with-amazon-cloudfront-in-the-postpc-world-med305-aws-reinvent-2013>  
Greenpeace assumed a 1:1 split between energy footprints of AWS and Rackspace when estimating Vevo's energy footprint.
- 279** Information provided by Vimeo to Greenpeace.
- 280** <http://www.thehostingnews.com/amazon-data-center-incident-hits-netflix-instagram-29397.html>, plus IP software.
- 281** See [www.clickclean.org](http://www.clickclean.org) (2015)

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- 282** <http://www.google.com/green/>
- 283** <http://www.google.com/green/bigpicture/#beyondzero-grid>
- 284** <http://aws.amazon.com/solutions/case-studies/airbnb/>
- 285** <http://www.equinix.com/company/news-and-events/press-releases/platform-equinix-provides-priceline-with-significant-improvements-in-response-time-and-scaling/> Without further information about specific data center locations, Greenpeace estimated Priceline's electricity resource mix based on our fleetwide estimate of Equinix' footprint.
- 286** <http://ir.pricelinegroup.com/secfiling.cfm?filingID=1075531-15-7&CIK=1075531>
- 287** <http://aws.amazon.com/solutions/case-studies/expedia/>
- 288** Greenpeace estimated Expedia's energy footprint by assuming a 1:1 ratio of energy consumption from its Chandler, AZ data center and Amazon Web Services' footprint.
- 289** KAYAK communication to Greenpeace.
- 290** Greenpeace estimated Kayak's energy footprint by assuming a 1:1 ratio of energy consumption from its US and European data centers.
- 291** [http://cpol.climatepartner.com/pages/popup/verify.jsf?cpID=11619-1410-1001&locale\\_popup=1](http://cpol.climatepartner.com/pages/popup/verify.jsf?cpID=11619-1410-1001&locale_popup=1)
- 292** To estimate KAYAK's footprint, Greenpeace assumed that its US data center was located in Concord, Mass., based on published accounts. <http://data-informed.com/as-cloud-computing-grows-security-experts-cite-data-risks-to-manage/>
- Due to the deregulated nature of Massachusetts' electricity market, Greenpeace used New England ISO grid data to estimate the resource mix of KAYAK's Massachusetts footprint.
- 293** Communicated by KAYAK to Greenpeace.
- 294** [http://cpol.climatepartner.com/pages/popup/verify.jsf?cpID=11619-1410-1001&locale\\_popup=1](http://cpol.climatepartner.com/pages/popup/verify.jsf?cpID=11619-1410-1001&locale_popup=1)
- 295** <http://www.equinix.com/company/news-and-events/press-releases/platform-equinix-provides-priceline-with-significant-improvements-in-response-time-and-scaling/> Without further information about specific data center locations, Greenpeace estimated Priceline's electricity resource mix based on our fleetwide estimate of Equinix' footprint.
- 296** <http://ir.pricelinegroup.com/secfiling.cfm?filingID=1075531-15-7&CIK=1075531>
- 297** <http://www.equinix.com/company/news-and-events/press-releases/platform-equinix-provides-priceline-with-significant-improvements-in-response-time-and-scaling/> Without further information about specific data center locations, Greenpeace estimated Priceline's electricity resource mix based on our fleetwide estimate of Equinix' footprint.
- 298** <http://ir.pricelinegroup.com/secfiling.cfm?filingID=1075531-15-7&CIK=1075531>
- 299** Formerly the Carbon Disclosure Project
- 300** <http://www.wri.org/events/2015/01/ghg-protocol-scope-2-guidance-electricity-procurement-dc>
- 301** <http://www.epa.gov/cleanenergy/energy-resources/egrid/>

# GREENPEACE

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