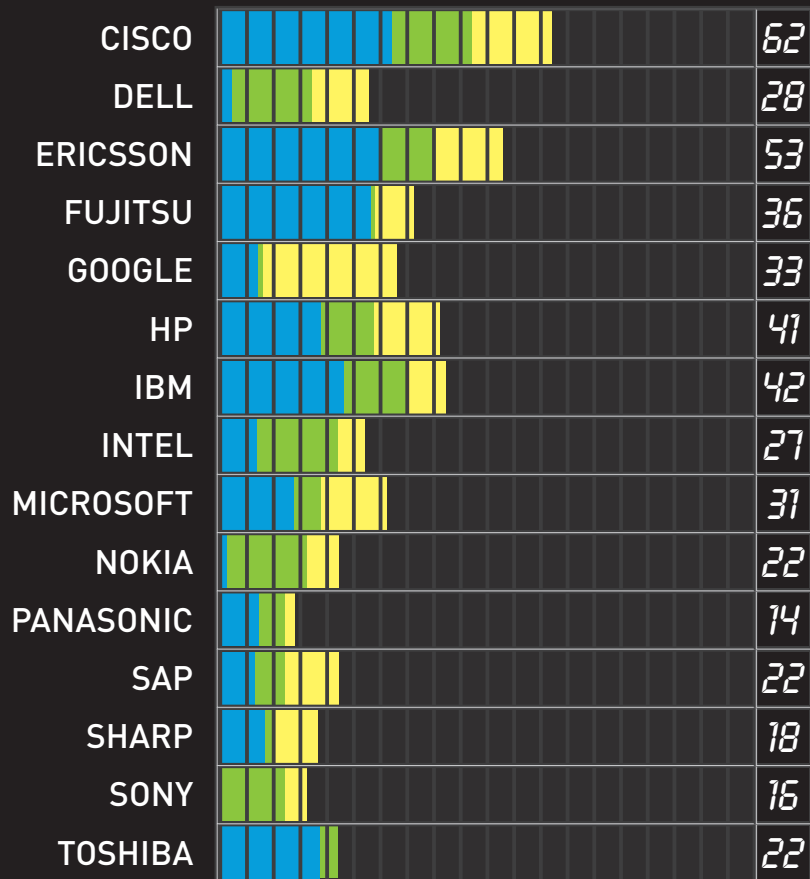


COOL IT LEADERBOARD

VERSION 3: April 2010



SOLUTIONS



FOOTPRINT



ADVOCACY

The Cool IT leaderboard evaluates top IT companies on their efforts to provide economy-wide climate solutions, reduce emissions from their own operations, and lobby for science-based climate and energy policies.

GREENPEACE

www.greenpeace.org/coolit

INTRODUCTION TO THE COOL IT LEADERBOARD

Greenpeace's Cool IT Challenge calls on leading Information Technology (IT) companies to be champions in the fight to stop climate change. The IT sector possesses the innovative spirit, technological know-how, and political influence to bring about a rapid clean energy revolution. The IT industry must boldly step out in front of older, entrenched energy companies to develop a robust business model that helps the world achieve critical emissions reductions — a win-win for the IT industry as it pioneers a global shift to a clean energy economy.

Companies such as Google, IBM and Microsoft have already redefined many parts of the global economy with business that emphasizes rapid innovation, iteration and unprecedented gains in productivity. These companies must now apply their strengths to offer cutting edge, technological solutions that can rapidly achieve the significant reductions in global warming pollution that scientists tell us are needed in order to avoid the worst effects of climate change, while simultaneously boosting economic prosperity.

The Cool IT Leaderboard evaluates global IT companies on their leadership toward fulfilling the significant potential of IT-enabled emissions reductions across the rest of the economy, as quantified by [Smart 2020: Enabling the Low Carbon Economy in the Information Age](#), a 2008 report. In addition to measuring case studies and metrics associated with these IT-enabled solutions offerings, the Leaderboard examines companies' performance in two other key climate leadership areas: management of their operational footprint, and climate and energy related policy advocacy.

COOL IT LEADERBOARD: VERSION 3

The current version of the Leaderboard is Greenpeace's third evaluation of the IT sector's climate leadership. Companies have been and will be added or removed from the Leaderboard in accordance with their leadership performance. The Leaderboard includes a cross-section of the most significant and influential companies in the sector, and those which have previously demonstrated their ability to drive innovative change. In this third version of the Leaderboard, two companies have been added - SAP and Ericsson. Sun Microsystems, previously included in the Leaderboard, will be replaced in Version 4 by Oracle, which bought the company last year.

Based on new analysis from Leaderboard companies, the greenhouse gas reduction potential of their current IT solutions appears much stronger in this assessment. However, there is significant room for companies to further demonstrate climate solutions and provide specific metrics for new solutions development. Companies such as Cisco and Ericsson, which have provided more informative case studies, have witnessed an improvement to their scores. Many companies have yet to demonstrate meaningful examples of IT climate solutions.

Across the board, companies must remain attentive to their growing carbon footprint and demonstrate plans to measure and limit overall emissions. The recently released Greenpeace report, [Make IT Green: Cloud Computing and its Contributions to Climate Change](#), outlines the threat of increasing energy usage associated with cloud computing, a rapidly expanding IT business model. IT companies will need to rectify an inevitable increase in their demand for electricity to fuel the "cloud" by proactively advocating for policies that increase the supply of renewable energy. The next version of the Leaderboard (Version 4, Fall 2010) will be expanded to include criteria that captures the leadership of companies in managing the carbon impacts of their data centers.

Each of the companies evaluated must additionally go further in their advocacy efforts. Some Leaderboard companies participated in the international climate negotiations in Copenhagen in December 2009 for the first time. However, both in Copenhagen and back in national capitols, there has been little improvement to the comprehensiveness and depth of advocacy regarding carbon regulation, renewable energy deployment, or other climate policy positions amongst leading IT companies.

LEADERBOARD SCORING CRITERIA

The Cool IT Leaderboard is updated regularly to track the climate leadership of the most influential IT brands in three key areas:

- Efforts to offer economy-wide technological climate solutions that contribute to global greenhouse gas reductions;
- Initiatives to reduce their own global warming emissions;
- Active engagement in political advocacy and support for science-based climate and energy policies.



IT-ENABLED SOLUTIONS

The implementation of ICT solutions in five sectors - buildings, transport, manufacturing, power, and 'dematerialization' of services - has the potential to cut 7.8 metric GtCO₂ by 2020 - 15 percent of today's emissions. (McKinsey Quarterly Report, Oct. 2008)

IT has had a major impact on the way society communicates and produces goods and services. The sector must now rise to the opportunity and challenge of helping to solve the climate crisis by focusing new innovation on IT technologies such as smart grids, zero emissions buildings, and more efficient transport systems. These IT-enabled solutions are central to a clean energy economy.

IT technologies make it possible to measure energy use and emissions in real time, which will ultimately allow energy consumers to better manage and reduce their usage. State-of-the-art IT solutions can make societies more efficient and maximize energy savings across sectors. Energy savings also spur significant cost savings, thus IT solutions are a win-win for the climate and the economy. In economic terms, IT-enabled energy efficiency translates into approximately US\$646.5 billion¹ of cost savings.

Half of all points (50/100) that companies can earn on the Cool IT Leaderboard are based on the transparent demonstration of existing solutions offerings and the precision with which companies measure the actual net greenhouse gas emissions reductions of those solutions. Additionally, points are earned by companies that set economy-wide emissions reduction targets for their solutions.

Climate Solutions criteria represent 50 out of 100 points, divided as follows:

- **25 points:** Company makes public the calculations of current net GHG emissions savings provided by IT solution(s) to other parts of the economy via case study data.
- **15 points:** Company makes public the explanation of metrics and assumptions used to calculate the net GHG emissions savings of their solutions.
- **10 points:** Company sets ambitious short-term targets for growth of their net GHG emissions savings from IT solutions.

Note: points listed above represent the maximum number of points for given criteria.

In this third version of the Leaderboard, scoring results signified improvements to the development and quantification of the energy savings and greenhouse gas reductions potential of IT solutions. Cisco and Ericsson stand out for their reporting of methodologies used to determine the impacts of their technologies. IBM and Fujitsu also score well on these criteria, although their performance shows little improvement over the previous Leaderboard evaluation.

Stronger quantification of solutions by IT companies can drive efficiency standards and send policy signals needed to push investments that further deploy IT solution technologies under complimentary market conditions.

¹ Climate Group and the Global e-Sustainability Initiative (GeSI). SMART 2020: Enabling the low carbon economy in the information age, 2008.



IT'S CARBON FOOTPRINT

The IT industry is one of the most rapidly growing emitters of greenhouse gas pollution and industrial consumers of electricity. Without a significant increase in the use of renewable energy, the IT sector's carbon footprint will continue to grow at a concerning rate, increasing the demand for electricity produced from coal and other forms of dirty energy. Given the projected growth of the IT sector, companies must effectively tackle their own operational emissions and those associated with their products by setting goals to reduce absolute greenhouse gas emissions on a well-defined timeline.

In this Leaderboard, many companies that had previously established aggressive greenhouse gas reduction goals have demonstrated steady progress toward meeting them. Cisco, HP, and IBM are examples of companies that have continued to set more rigorous targets for their operational emissions footprints.

Certain companies have prioritized the purchasing of renewable energy credits and offsets as a means of achieving their greenhouse gas reduction goals. Intel and Dell are two of the largest purchasers of renewable energy credits in the United States². In future versions of the Leaderboard, however, greater credit will be granted to companies that attempt to directly purchase renewable energy for their operations and take direct responsibility for their environmental performance.

Company Footprint represent 15 out of 100 points, divided as follows:

- **10 points:** Company makes commitment to reduce absolute greenhouse gas emissions of its own operations on a defined timeline. Maximum points awarded to companies with absolute reduction goals of at least 20 percent by 2012 using a 2008 or earlier baseline.
- **5 points:** Amount of renewable energy used as proportion of total electricity use in own operation. Maximum awarded to renewable use greater than 25 percent of total, or has a target in excess of 25 percent by 2012.

Note: points listed above represent the maximum number of points for given criteria.

Companies that transparently report and measure their progress toward an absolute greenhouse gas reduction target receive higher credit in the operational footprint category. Google claims to be a carbon neutral company, but does not share either its emissions footprint or an overall emissions reduction target. Similarly, Microsoft has not established an absolute reduction target, despite greater transparency than Google in sharing its greenhouse gas emissions measurements.

Target-setting and disclosure are becoming increasingly important as companies like Google and Microsoft expand their operations to build data centers and increase electricity consumption, often increasing the demand for coal-fired power. Carbon neutrality can still result in higher pollution overall as the industry grows its net greenhouse gas pollution.

Greenpeace's report, *Make IT Green: Cloud Computing and its Contribution to Climate Change*³, illustrates growth in the IT sector's electricity consumption — expected to more than triple by 2020 — largely due to the expansion of cloud-based computing. Cloud computing, which relies on centralized data storage infrastructure to deliver real-time information from the internet, is quickly becoming a predominant IT business model.

All IT companies, but particularly IBM, Microsoft, Google and other major players in the cloud computing market, must set strong greenhouse gas reduction targets to ensure that, as their appetite for energy increases, so does their use of renewable sources.

2 Environmental Protection Agency, Green Power Partnership: National Top 50, January 2010. <http://www.epa.gov/greenpower/toplists/top50.htm>.

3 <http://www.greenpeace.org/international/press/reports/make-it-green-cloud-computing>



POLITICAL POLICY AND ADVOCACY

As the world struggles to define a pathway forward for addressing the climate crisis, the IT sector has a transformational role to play. IT companies must advocate for policies that create beneficial market conditions for IT-enabled climate solutions, thereby catalyzing a clean energy economy as they secure long-term profitability for their products and services. The implementation of these goods and services will require policy support and financing mechanisms in order to maximize their potential, and IT companies must apply their considerable political influence toward achieving these conditions.

The shift to an IT-enabled clean energy economy will not happen without a fight. Fossil fuel energy companies have benefited enormously from the status quo and are positioned to fight policies that would reduce demand for their primary products (i.e. oil and coal). Electric utilities are, at best, interested in a slow transition that maximizes profits without requiring costly changes to their infrastructure. If we hope to avert the worst social and economic repercussions of runaway climate change, IT companies must break away from these entrenched positions to deliver cutting edge solutions and bold advocacy leadership on a local, national, and international level.

The IT industry can drive fast progress toward both a profitable business model and a clean energy economy by aligning itself with lobbying efforts that support scientifically established greenhouse gas reduction targets as well as renewable energy and energy efficiency mandates and incentives programs.

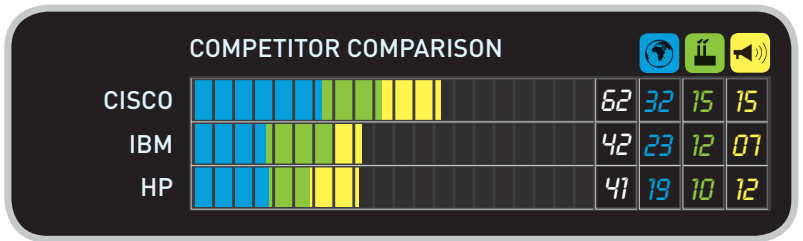
Political Advocacy represents 35 out of 100 points, divided as follows:

- **10 points:** Political Position: Public speech, preferably by the CEO, that references the need for science-based, mandatory greenhouse gas reduction cuts made to a relevant national or international audience.
- **15 points:** Political Advocacy: Demonstrated lobby for science-based, mandatory greenhouse gas reduction cuts at the national or international level.
- **10 points:** Repetition Bonus: Measures the the repetition of positive speech and advocacy.

Note: points listed above represent the maximum number of points for given criteria.

In the lead-up to Copenhagen, IT leaders, such as Ericsson, Dell, Microsoft, and Nokia, strengthened their engagement in the climate policy debate. IT companies arrived at the UN climate summit eager to highlight the potential of IT technologies to reduce emissions. However, IT companies failed to express a clear definition of specific policy goals and global reduction targets, which they must do if they truly hope to catalyze a market shift towards carbon-cutting technologies.

The Leaderboard rates companies on the depth, strength and quantity of positive advocacy work in pushing for strong global emissions reduction targets, energy efficiency and renewable energy deployment. Overall, Version 3 scores show some increased frequency in policy advocacy activity from the IT brands, most notably around the UN Climate Summit in Copenhagen. However, there has been little improvement in the quality of advocacy leadership, expressing a need for more robust policy positioning across the sector.



SUMMARY 62/100

Cisco replaces its partner and competitor IBM at the top of the Leaderboard in version three, propelled to the front on the basis of its thoroughness in documenting the impact of its solutions offerings, which reduce energy consumption in areas such as building design and energy management, telecommuting, and smart grid deployment.

Cisco is aggressively positioning itself as a central player in the development of a global smart grid. Though Cisco does not have the same brand profile as IBM or an elaborate “Smart Planet” marketing campaign to peddle its green tech solutions offerings, Cisco is rapidly developing a full suite of smart grid products and services that can empower its business partners and customers to become more effective energy managers. Much in the same way it played a critical role in the development of the standards and equipment that now constitute the backbone of the internet, Cisco hopes to play a role in the creation of an energy “network”, which will leverage the massive volume of data to be generated by smart meters, sensors, and other devices that will eventually make up the smart grid.

Cisco is also one of the most active companies in demonstrating leadership on climate and energy policy advocacy — particularly in the EU — and CEO John Chambers appears to appreciate the importance of the issue and the role that Cisco and others need to play in informing the policy debate. Hopefully we will see a similar jump in Cisco’s advocacy leadership as we review their solutions leadership for Version 4 of the Cool IT Leaderboard.

SOLUTIONS Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy. 32/50

Cisco is the top scoring company for offering IT solutions to curb greenhouse gas emissions, offering a number of solution services. The company provides various [calculators](#), which explain the metrics and assumptions as well as calculations of emissions savings in regards to the use of Cisco services, ranging from the company’s telepresence to connected buildings and workplace.

FOOTPRINT Greenpeace evaluates companies on reducing their greenhouse gas footprint. 15/15

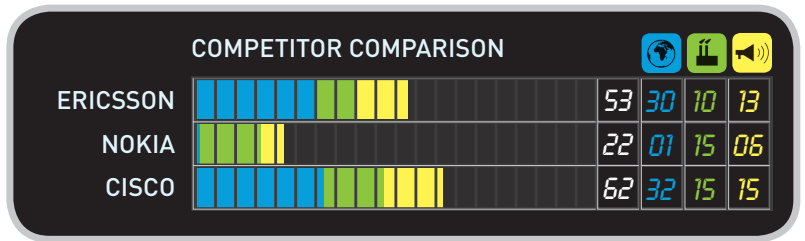
Cisco has an aggressive absolute emission reduction [targets](#) of 25 percent by 2012, from a 2007 baseline. The company also powered 37 percent of its electricity via a combination of onsite renewables and renewable energy credits.

ADVOCACY Greenpeace evaluates companies on their advocacy for strong climate and energy policy. 15/35

Cisco’s advocacy score rises, mainly due to its repetition score, from its advocacy during last year’s Copenhagen climate meetings. Cisco also gains points from it’s public [speech](#) on climate policy, and CEO [Chambers’ post Copenhagen Op-Ed](#) was among the best in capturing the fact that market opportunities and cost savings for businesses will only come with policies to reduce emissions and drive clean energy solutions, and corporations need to start making themselves vocal and politically relevant in order to push governments to take action.

PREVIOUS SCORES: v 1 **19** v 2 **31**

ERICSSON



SUMMARY

53/100

Ericsson is one of the world's largest telecommunications equipment companies, providing a significant part of the backbone for the explosive growth of mobile voice and data transmission. Ericsson makes a strong debut on the Cool IT Leaderboard, coming in second overall, largely on the strength of its solutions case studies and thorough methodology for measuring net emission reductions from mobile solutions.

Outgoing CEO Carl-Henric Svanberg was among the strongest corporate voices calling for governments to act in the lead-up to Copenhagen, and this position will hopefully be retained under Ericsson's new CEO Hans Vestberg. Ericsson is well positioned to leverage its mobile communication technologies to provide transformative lower-carbon business models across a number of other sectors, and more specific engagement in the policy arena by Ericsson is needed to make these reductions real.

SOLUTIONS

Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

30/50

Ericsson scores very strongly on the solutions criteria, right behind Cisco and ahead of Fujitsu. It has rigorous [Life Cycle Assessments \(LCAs\)](#) of its equipment and solutions and strong public methodology, which also [accounts for the type of power](#) communications equipment it utilizes in different locations.

FOOTPRINT

Greenpeace evaluates companies on reducing their greenhouse gas footprint.

10/15

Ericsson scores top marks for a target of [40 percent emissions reductions by 2012](#). Ericsson does not have a public renewable energy target.

ADVOCACY

Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

13/35

Ericsson's CEO was the boldest CEO of all the tech companies [before](#) and [during](#) the Copenhagen Climate Summit, emphasizing the role of IT solutions in reducing emissions in a clean and prosperous economy. Ericsson could improve by providing more specific evidence of how it is pushing for stronger climate regulation with politicians.



SUMMARY 42/100

Home of the ubiquitous “Smarter Planet” marketing strategy, IBM continues to demonstrate climate leadership through its delivery of [IT solutions to reduce emissions](#) on a large scale, as evidenced most clearly by city-level solution projects. Despite high-level political access, particularly to the Obama Administration in the U.S., neither CEO Sam Palmisano nor IBM’s lobbying machine has put Big Blue’s weight behind pushing the policy solutions that are needed to drive the economy-wide transformation that would further drive IBM’s solutions business model.

IBM has been one of the sector leaders in demonstrating the ability and benefits of achieving significant reductions in GHG emissions from its own operations. But with IBM’s stated investment plans to ramp up cloud computing investments, and the associated increase in electricity consumption that that will bring, how the IBM cloud is built will become an increasingly important factor in subsequent Leaderboard evaluations of their continued leadership in managing their own carbon footprint. With a much stronger submission by partner / rival Cisco and the addition of Ericsson, both of which scored above IBM even in the solutions category, IBM has dropped to third place in this Leaderboard. We hope to see much more policy advocacy from IBM and an even stronger submission for its solutions work for the Fall 2010 Leaderboard.

SOLUTIONS 23/50
Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

IBM offers a wide range of climate solutions as part of its ‘Smarter Planet’ program and provides some case studies of savings achieved. IBM also provided case studies for traffic reduction in Stockholm and [Smart Grid data](#). While savings figures were provided, IBM needs to give more details on additional case studies with net emissions savings and solutions.

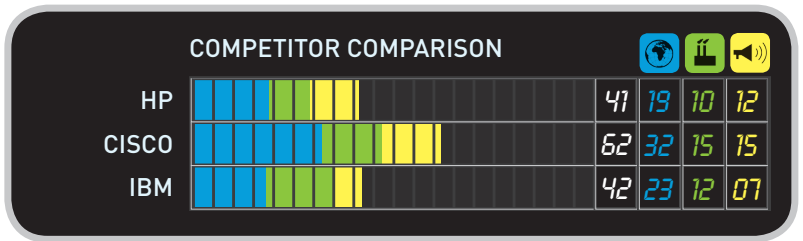
FOOTPRINT 12/15
Greenpeace evaluates companies on reducing their greenhouse gas footprint.

IBM has a proven track record of reducing its GHG emissions and provides very strong absolute emissions reductions [targets](#). IBM has achieved 8.6 percent [renewable energy use](#) by 2008, but it has not set a target to increase use by 2012.

ADVOCACY 07/35
Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

IBM is weak on taking a progressive position in the political debate on climate legislation. The best example is its letter to [Australian Prime Minister](#) before Copenhagen.

PREVIOUS SCORES: v 1 29 v 2 43



SUMMARY 41/100

As the largest PC manufacturer in the world, HP has been slowly and steadily building its branding and positioning as a solutions company that is concerned about the threat posed by climate change and the need for government action to reduce emissions. It has also taken notable measures to reduce its own greenhouse gas footprint. However, while HP is able to point to several examples of product and service solutions offerings that reduce emissions, it is a much smaller part of the HP business profile than some contemporaries in the sector, most notably IBM, which has established strong brand identity and a much more substantive product and service offerings to reduce emissions in other sectors.

HP's policy advocacy on climate and energy has been relatively frequent, though often muted, more typically lending its name to joint communiques or collaborative lobbying efforts, far below the volume and level of ambition that we would expect the [#1 Company in Newsweek's Green Ranking](#) to demonstrate.

SOLUTIONS 19/50
Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

HP has information on climate solutions including Halo virtual meeting, print on demand and building energy management. HP is also working on accounting for [Embedded Energy](#) used during production of hardware required for solutions. This will provide more [accurate estimations of emissions](#) reductions over the entire lifecycle of a solution.

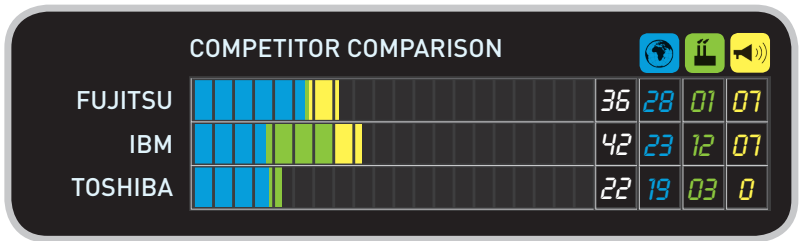
FOOTPRINT 10/15
Greenpeace evaluates companies on reducing their greenhouse gas footprint.

HP nearly scores top marks for its commitment to reduce the GHG emissions of HP-owned and HP-leased facilities 20 percent below 2005 levels by 2013 on an absolute basis. Voluntary renewable energy purchases (including credits and energy generated on-site) represented 3.6 percent of HP's electricity use in 2009 in addition to the renewable energy in the power grid. In 2008 HP set a [goal](#) to increase its purchases of electricity from renewable sources to 8 percent of total electricity usage by 2012. HP could improve by setting a more ambitious target.

ADVOCACY 12/35
Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

HP slightly improved its score by [participating](#) in the Copenhagen Climate summit. It also have signed onto multiple climate advocacy [letters](#) and [groups](#). However, to score more points, more prescriptive, detailed and engaged advocacy is needed, especially from the CEO, Mark Hurd.

PREVIOUS SCORES: v 1 **13** v 2 **42**



SUMMARY 36/100

Fujitsu is now the [third](#) largest IT solutions company in the world, and the largest in Japan. Fujitsu has begun to operationalize the findings of the Smart2020 analysis through its Green Policy Innovation division that specifically focuses on IT [services](#) to reduce emissions in other areas of the economy. The company showcases data from multiple [case studies](#) on the application of its solutions offerings but more detailed information is needed to analyze the assumptions and metrics used in these calculations. Fujitsu should be lauded as one of the first companies to announce a global target for emissions savings through IT solutions. Given this goal, and the understanding that business ‘possibilities are infinite’ for growth in IT climate solutions, Fujitsu needs to more aggressively articulate and advocate this message in the policy arena. This is especially the case in Japan where there is a strong need to counter the fossil fuel industry, which is lobbying against Prime Minister’s Hatoyama’s target of 25% reduction in greenhouse gases from 1990 levels by 2020.

SOLUTIONS 28/50

Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

Fujitsu has a comprehensive system to measure the [before-and-after impacts](#) of its solutions. It also provides the metric for emissions savings, including the energy consumption of these solutions. To improve its score, Fujitsu also needs to include emissions generated throughout the complete lifecycle of its products, especially those from manufacturing. Fujitsu is the only company to have a credible [target for carbon savings](#) provided to customers; the goal of 12 million metric tons from 2009 to 2012 needs further clarification as to how it will be achieved.

FOOTPRINT 01/15

Greenpeace evaluates companies on reducing their greenhouse gas footprint.

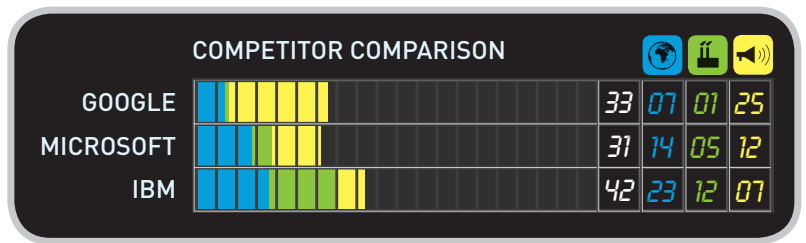
Fujitsu has a [relative emissions reduction target](#) and no global target for [renewables purchasing](#). Fujitsu should follow the lead of IBM and HP and commit to absolute emission reduction targets.

ADVOCACY 07/35

Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

Fujitsu provided limited examples of climate advocacy in Japan and globally by joining the [Japanese Climate Leaders Partnership](#) and signing the [Copenhagen Communiqué](#) but the company could be far more active on both a national and international scale.

PREVIOUS SCORES: v 1 **18** v 2 **33**



SUMMARY 33/100

Google is one of the largest “cloud” based IT companies. Its business model is to put all of the world’s information online, an endeavor requiring large and energy voracious data centers. With the self-chosen motto, “Don’t Be Evil,” Google knows it has a huge carbon problem if the current electricity grid remains heavily dependent on fossil fuels. Google continues to be among the strongest of the IT companies in [advocating government policy changes](#) to drive low carbon sources of electricity, including support for national renewable electricity and energy efficiency standards. Google has also shown recent leadership in [calling for the need for consumer access to information on their energy consumption](#), such as the data to be generated from smart meters.

However, Google has steadfastly refused to release any meaningful data on its own energy use or carbon emissions, citing concerns over disclosing information that could be used by its competitors, even though its arch-rival Microsoft is transparent on this issue. Google’s explosive growth through Gmail, YouTube, and its soon-to-be online library are ultimately driving emissions higher, not lower, and creating a greater demand for coal and other fossil fuels. While it has been one of the most thoughtful policy advocates among IT companies, Google’s advocacy would be much more credible if it admitted that it has a carbon problem and made policy changes to solve it.

SOLUTIONS Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy. 07/50

Google’s solutions offering remains unchanged since the October 2009 version. PowerMeter provides real-time data to better manage home energy use but to date Google has not released any significant case studies on how this can reduce overall GHG emissions. In-depth analysis of possible savings from plug-in hybrids under the Recharge IT program provides a good example of how to measure actual overall impacts of climate solutions. Google can improve its score by applying a rigorous methodology to future case studies on the impact of PowerMeter.

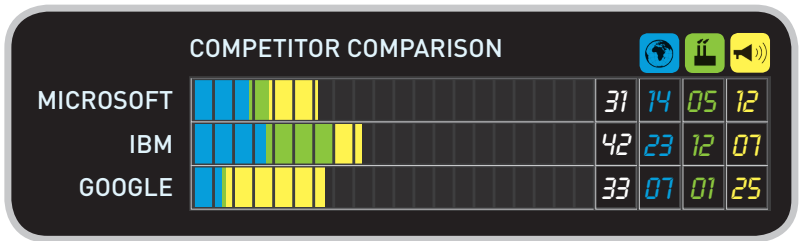
FOOTPRINT Greenpeace evaluates companies on reducing their greenhouse gas footprint. 01/15

Google has [no emission reduction targets](#) and does not release or disclose its own emissions. This lack of transparency puts Google significantly out of step with most other technology companies. Google claims to be carbon neutral, buying offset credits to compensate. Carbon neutral or not, the lack of transparency and the fact that its current investments in infrastructure are changing energy policy in the communities where they are built threaten to undermine the company’s credibility as a climate leader. Google scores one out of five for [investments in renewable energy research](#). It does not, however, have an overall target to increase renewables use.

ADVOCACY Greenpeace evaluates companies on their advocacy for strong climate and energy policy. 25/35

Google remains the top scoring company on political advocacy thanks to a clear political position. [Google’s CEO Eric Schmidt](#) spoke at length in November 2008 about the failure of the current political system and the need to get the right policies to drive transformative investment in clean energy technologies. Such technologies will create long-term economic growth while drastically reducing GHG emissions and dependence on foreign oil, as well as help to avoid the dangerous distractions of so-called clean coal and nuclear power, which take funding away from true renewables.

PREVIOUS SCORES: v 1 - v 2 **32**



SUMMARY 31/100

As the largest software company in the world, Microsoft has unparalleled reach into homes, businesses, and governments. Microsoft has only recently begun to show an interest in leveraging this reach to empower significant energy savings beyond the operational footprint of the PC. While Microsoft has traditionally had a lower greenhouse footprint than others in the sector due to its focus on software development, the rapid shift Microsoft is making to “cloud” based software solutions, in competition with Google, will fundamentally change its emissions profile and is likely a significant reason behind its refusal to adopt an absolute emissions reduction target.

Microsoft has [become one of the largest contributors](#) to political campaigns over the last 10 years, and has averaged nearly [US\\$9 million in lobbying expenses each year since 2003](#). Despite its significant political influence and access, Microsoft has not demonstrated regular leadership in calling for policymakers to adopt the policies necessary to reduce emissions and drive deployment of renewable energy solutions or energy efficiency technologies. Microsoft did take a small step forward in advance of the UN Climate negotiations in Copenhagen last year, [supporting a call to President Obama to reach a deal in Copenhagen that would have resulted in a legally binding agreement](#).

SOLUTIONS Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy. 14/50

Microsoft has [case studies](#) on the net lifecycle emissions reductions of its digital music and digital software distribution. Recently, more [information](#) has been provided on how Microsoft’s Holm energy management software will empower electric vehicle owners to better manage their electric vehicle charging.

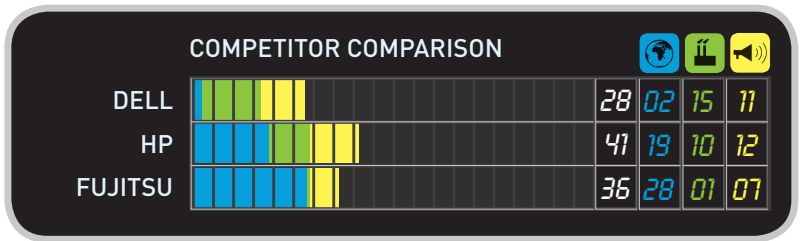
FOOTPRINT Greenpeace evaluates companies on reducing their greenhouse gas footprint. 05/15

Microsoft has set a goal to reduce its carbon emissions per unit of revenue at least 30 percent below 2008 levels by 2012. However, there is no commitment to absolute emissions cuts. Microsoft receives four points for providing 24 percent of its electricity via [renewable energy](#).

ADVOCACY Greenpeace evaluates companies on their advocacy for strong climate and energy policy. 12/35

Microsoft’s policy statement on climate needs strengthening, but it was notable that Microsoft was active at the Copenhagen Climate conference and in writing to President Obama in support of a global deal. Despite former CEO Bill Gates recently coming forward to speak forcefully in favor of a transformation to our energy system, Steve Ballmer has, thus far, failed to effectively articulate the importance of climate protection and clean energy transformation, or the need for strong government policy to drive this transformation.

PREVIOUS SCORES: v 1 07 v 2 23



SUMMARY 28/100

As one of the largest sellers of personal and enterprise servers and computers, Dell has invested resources in managing its own operational footprint, participating in pilot projects to reduce emissions along the long tail of the electronics supply chain, and investing in renewable energy. In terms of climate solutions potential, Dell's lack of portfolio diversity leaves the company playing catch up to competitors such as HP and front-runners like IBM. Dell's attempt to diversify its portfolio with the [acquisition](#) of Perot Systems, a company mainly focused on government and health care consultancy services, could be a harbinger that the company aims to expand its IT climate solutions offering. Despite its current lack of climate solutions, Dell still participates in climate and energy policy advocacy, but mainly in the form of signing onto other joint letters of [support](#). The company is often muted in its specific prescriptions for policy change. Michael Dell should continue to use his substantial bully pulpit to become a champion for stronger national and international clean energy, energy efficiency and climate legislation, just as Eric Schmidt has done at Google.

SOLUTIONS 02/50
Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

Dell lists a large number of technology [solutions](#), but does not release any information on actual emission savings, making it difficult to gauge how effective it may be in reducing greenhouse gas emissions in other sectors of the economy.

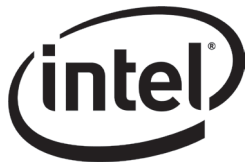
FOOTPRINT 15/15
Greenpeace evaluates companies on reducing their greenhouse gas footprint.




Dell scores full points for its ambitious greenhouse gas emission reduction [target](#) 40 percent by 2015 from a 2007 baseline. Dell also has a strong commitment to sourcing renewable energy, with 26 percent of its electricity coming from [renewable sources](#).


ADVOCACY 11/35
Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

In December, prior to the Copenhagen climate meetings, Michael Dell wrote a timely [opinion](#) piece in Forbes that focused on the need for governments and businesses to act urgently with science-based, climate policies to reduce emissions. Dell has signed onto industry letters of [climate](#) support. The company needs to increase both the substance and volume of its climate advocacy to earn more points.

PREVIOUS SCORES: v 1 **21** v 2 **23**



COMPETITOR COMPARISON   

INTEL  27 07 15 05

NO DIRECT COMPETITORS IN THE LEADERBOARD



SUMMARY

27/100

Though it does not sell solutions directly, as one of the largest chip manufacturers in the world, Intel has significant business opportunities associated with green IT technologies that address climate change. Significant investment in a new generation of computer chip technology is required to integrate and transform appliances, buildings, sensors and other devices and wire them into “smart” devices, which will allow us to more efficiently and dynamically manage our energy use.

Intel has taken management of its carbon footprint seriously. As the operator of a significant number of data centers, it has made some direct investments in renewable electricity generation, and has been the largest purchaser of renewable electricity in the U.S. for the past two years. Unfortunately, this same commitment has not been seen in its engagement approach to climate and energy policy development. This is quite surprising from a company that has built its brand identify around an ability to drive innovation. Strong domestic climate and energy policy is what is needed to spur innovation and drive demand for IT energy solutions in the U.S.



SOLUTIONS

Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

07/50

Intel scores for publishing one of the few detailed comparison studies on the overall energy savings of digital music delivery in place of traditional music distribution. More examples like this are needed to highlight the benefits of specific solutions.



FOOTPRINT

Greenpeace evaluates companies on reducing their greenhouse gas footprint.

15/15

Intel is strong on reducing its carbon footprint with the [top score for emissions reduction and renewables use](#) and is the largest purchaser of renewable electricity in the U.S.



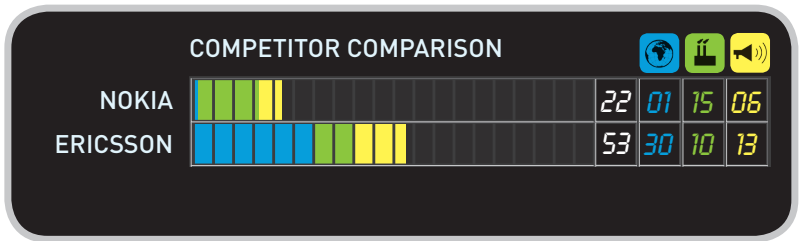
ADVOCACY

Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

05/35

Intel provides few examples of how it is effectively advocating for stronger climate policy. In fact, one of the few recent examples isolated Intel as the sole IT company to join a [letter](#) to key U.S. Senators along with large carbon intensive companies in pushing for a significant weakening of U.S. climate legislation by allowing more international “offsets” into the carbon trading system.

PREVIOUS SCORES: v 1 18 v 2 28



SUMMARY

22/100

As the world's largest mobile phone manufacturer, Nokia has excelled in producing [efficient](#) mobile devices, reducing its operational greenhouse gas emissions and [disclosing](#) the emissions of its products' lifecycle. Considering this leading work on climate change issues, it's surprising to see Nokia lag behind in the Cool IT Leaderboard. Nokia needs to be far more prescriptive in specifying the type of science-based reduction targets needed in international and national climate agreements. Nokia is expanding its core business to include more [cloud services](#) that will allow its Ovi software to better compete with Apple, Microsoft, Google and others. The company will need to ensure that the expansion of data centers will be met with a commitment to drive more renewable energy into the electricity grid.



SOLUTIONS

Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

01/50

Nokia has provided some very simple calculations on the potential emissions-saving [benefits](#) of its mobile technology, but no actual case studies. Nokia needs to show how its products and services create measurable reductions in greenhouse gas emissions, much in way that Ericsson has done.



FOOTPRINT

Greenpeace evaluates companies on reducing their greenhouse gas footprint.

15/15

Nokia scores full marks for its emissions reduction [targets](#) of 18 percent from 2006 levels by 2010. The company gets 25 percent of its energy from [renewable](#) sources with plans to [expand](#) to 50 percent by 2010.



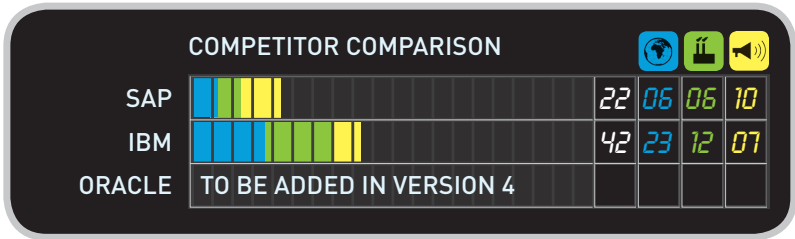
ADVOCACY

Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

06/35

Nokia's CEO Olli-Pekka Kallasvuo published an [opinion piece](#) prior to the Copenhagen climate meetings commenting on the role that IT can play in reducing emissions and stating that "the cost of doing nothing to mitigate climate change is too high". Nokia is also a member of [WWF's Climate Savers program](#).

PREVIOUS SCORES: v 1 16 v 2 20



SUMMARY 22/100

SAP's customer base provides it incredibly broad reach into some of the worlds largest corporations, as it offers enterprise-scale platforms to deliver increasingly granular levels of information on the operational systems of medium-size to multi-national businesses. Given its reach and relationships with such a broad swath of corporations around the world, SAP is well positioned to help its clients manage their energy and carbon footprint at an enterprise-wide level, and to help unlock areas of significant reduction potential. While SAP's leadership has seemingly recognized both the environmental threat and the business opportunities at stake in the climate debate, the company needs to aggressively convert its corporate client base into new customers for its climate related enterprise management software and show case studies of how this helps major customers cut emissions.

SOLUTIONS Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy. 06/50

SAP scores for an [overview](#) of its climate solutions on its websites and for case studies of actual implementation, but the company's case studies are much less detailed than those provided by other companies.

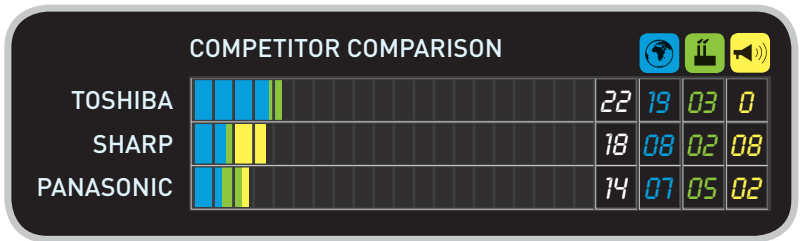
FOOTPRINT Greenpeace evaluates companies on reducing their greenhouse gas footprint. 06/15

SAP scores six points for progress on cutting its own emissions and having a 51 percent emissions reduction [target](#) from 2007 levels by 2020. SAP could improve its score by setting a strong 2012 reduction target. SAP has no public target for boosting additional renewable energy use.

ADVOCACY Greenpeace evaluates companies on their advocacy for strong climate and energy policy. 10/35

SAP, like many IT companies, signed on to the [Copenhagen Communiqué](#). Former SAP CEO Léo Apotheker made several [speeches](#) and interviews before and after Copenhagen, but SAP's new corporate leadership needs to show stronger company-wide support for climate regulation.

TOSHIBA



SUMMARY

22/100

As a conglomerate with diversified product and services ranging from consumer electronics and household appliances to energy management systems and social management infrastructure, Toshiba has potential to offer a number of emissions-reducing solutions to businesses, governments and consumers. Toshiba is currently light on the details of its solution offerings, and there is a need for clearer case study data from the company to showcase that it is providing real emissions savings now. Toshiba cannot claim to be a climate leader while it continues to produce components for nuclear power generators and a new [ABWR](#) plant design, pushing aggressively for a nuclear renaissance, which is a dangerous and costly distraction from real solutions to climate change. Toshiba has claimed that it supports the Japanese government's national greenhouse gas reduction goals of 25 percent from 1990 levels by 2020. This support is crucial and needs to be visible, vocal and repeated.



SOLUTIONS

Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

19/50

Toshiba has a number of interesting solutions, including [Feminity](#), a power management device, a burgeoning solar panel systems [division](#) and the promise of Toshiba's first [smartgrid](#) project on Miyako Island in Japan. Toshiba also provides basic [case studies](#) and [research](#) around its participation in life cycle assessment standards in Japan. However, for the company to score more points, it must provide more detail on the methodology and projected CO₂ savings of its solutions.



FOOTPRINT

Greenpeace evaluates companies on reducing their greenhouse gas footprint.

03/15

Toshiba scores three points for pledging to [peak](#) its greenhouse gas emissions by 2012, after a decade-long rise. Stronger absolute emissions reductions are needed from Toshiba.



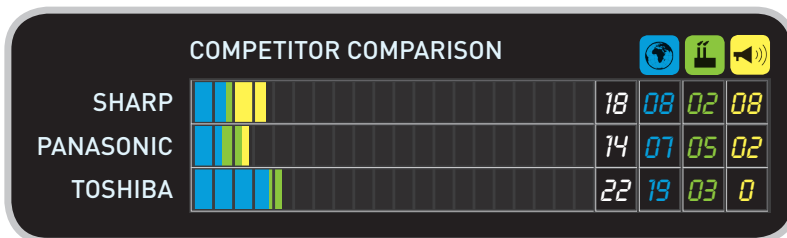
ADVOCACY

Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

0/35

Toshiba has not provided details of any positive climate or energy advocacy, in Japan or elsewhere.

PREVIOUS SCORES: v 1 02 v 2 21



SUMMARY 18/100

A leader in electronics manufacturing from LCD panels to household appliances, Sharp has invested in producing energy [efficient](#) products. Sharp is also one of the world's largest manufacturers of solar photovoltaic cells. Under its ['Super Green Strategy'](#) Sharp has goals for expanding the emissions savings it can provide to society, mainly in the form of increased solar use. As it is keenly aware of the business opportunities for technological solutions to climate change, Sharp should be at the forefront of strong climate advocacy in Japan, buttressing arguments that Sharp -- and Japan -- can prosper from implementing science-based climate and clean energy policies.

SOLUTIONS Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy. 08/50

Sharp scores points for publicly [detailing](#) the environmental impact of its solar panel production, including lifecycle analysis and estimates of resources used during manufacturing. To improve its score Sharp should provide more details on the figures used to generate these estimated savings, or other solar [case studies](#). Additionally, Sharp is beginning to engage in smart grid pilot [projects](#); and should supply the emissions savings in these projects.

FOOTPRINT Greenpeace evaluates companies on reducing their greenhouse gas footprint. 02/15

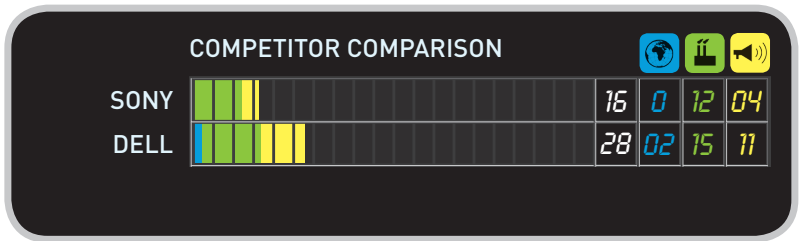
Sharp possesses a relative greenhouse gas emission reduction, rather than an absolute reduction target. However, the company scores points for an absolute [reduction](#) in 2008 from 2007 baseline. Sharp has made some improvements in its renewable energy supply, with some European and US sites utilizing over 80 percent, but the global percentage is still too low to score the company any points.

ADVOCACY Greenpeace evaluates companies on their advocacy for strong climate and energy policy. 08/35

Sharp has made [statements](#) cautiously supporting Prime Minister Hatoyama's plan to reduce greenhouse gas emissions 25 percent below 1990 levels by 2020. To continue to score these points and more, Sharp needs to provide more evidence that it continue to be an active supporter of strong climate and energy policies.

PREVIOUS SCORES: v 1 05 v 2 18

SONY



SUMMARY

16/100

As one of the largest consumer electronics companies in the world, Sony's strongest evidence of leadership has been the way in which it invested in reducing its own considerable greenhouse gas footprint. The company's recent announcement to increase its absolute greenhouse reduction target raises the bar for other Japanese manufacturers. Additionally, Sony is the largest renewable energy [purchaser](#) in Japan. Sony has unfortunately not developed climate solutions as part of its portfolio mix. Sony has branched out into modest climate advocacy outside of Japan in ways that other Japanese companies should emulate and exceed. Sony should point to its own work to reduce its footprint as a demonstration that Japan can implement Prime Minister Hatoyama's greenhouse gas reduction goals of 25 percent from 1990 levels by 2020.



SOLUTIONS

Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy.

0/50

Sony submitted no information on its IT solutions for climate change.



FOOTPRINT

Greenpeace evaluates companies on reducing their greenhouse gas footprint.

12/15

Sony has met its greenhouse gas emissions target early and has set as an updated [goal](#) of 30 percent reductions in emissions from operations by 2016 from a fiscal year 2000 baseline. Additionally, Sony recently announced other [targets](#) for efficiency gains in water usage, product efficiency, and chemicals use. Sony obtains approximately 8 percent of its electricity from renewable sources.



ADVOCACY

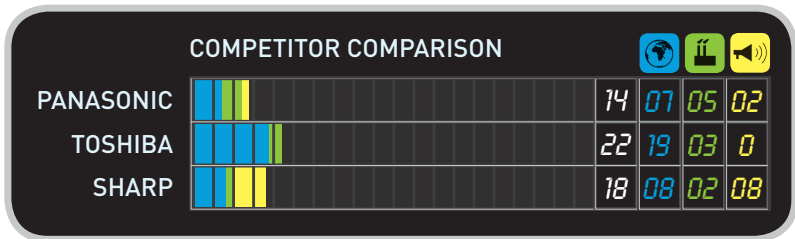
Greenpeace evaluates companies on their advocacy for strong climate and energy policy.

04/35

Sony is a member of the Digital Energy Solutions Campaign (DESC), which wrote to the [United States Senate](#) to push for efficiency measures in a number of energy related legislation. Sony also has participated in various Climate Savers [advocacy](#). For more points, Sony needs to be more prescriptive about the types of climate and energy policies it supports.

PREVIOUS SCORES: v 1 07 v 2 10

Panasonic



SUMMARY 14/100

With a diversified product portfolio ranging from televisions to household appliances, Panasonic's focus on climate change has concentrated on reducing its own footprint and producing energy efficient products. With the acquisition of Sanyo, Panasonic is positioned to expand its solar solutions and reduce greenhouse gases in other sectors of the economy. Panasonic has several opportunities to increase its Leaderboard score. It needs to be clearer about the solutions it offers beyond energy efficient products, and offer case study data for its solutions offerings. Panasonic needs to show leadership via proactive advocacy within Japan and abroad for strong climate and energy policies.

SOLUTIONS Greenpeace evaluates companies on the IT solutions they offer to reduce emissions in other parts of the economy. 07/50

Panasonic is looking at solutions in a number of areas, including [building energy management](#) and smart appliances. Panasonic needs to make public any case study data that showcases the emissions savings of these solutions.

FOOTPRINT Greenpeace evaluates companies on reducing their greenhouse gas footprint. 05/15

Panasonic has achieved a 7 percent [reduction](#) in greenhouse gas emissions from a 2007 baseline, with plans to further reduce its emissions in fiscal years 2010 and 2011. Panasonic only lists its renewable energy use in Japan, not globally, and does not list it as a percentage of overall electricity use.

ADVOCACY Greenpeace evaluates companies on their advocacy for strong climate and energy policy. 02/35

Panasonic professes to [support](#) Prime Minister Hatoyama's greenhouse gas reduction targets of 25 percent from 1990 levels by 2020, but this support needs to extend beyond words on its website.

PREVIOUS SCORES: v 1 - v 2 08