COOL IT LEADERBOARD
VERSION 4: DECEMBER 2010

Company	Score
CISCO	70
DELL	39
ERICSSON	57
FUJITSU	52
GOOGLE	47
HP	45
IBM	46
INTEL	31
MICROSOFT	29
NOKIA	37
ORACLE	12
PANASONIC	21
SAP	21
SHARP	27
SONY	34
TOSHIBA	25
WIPRO	38
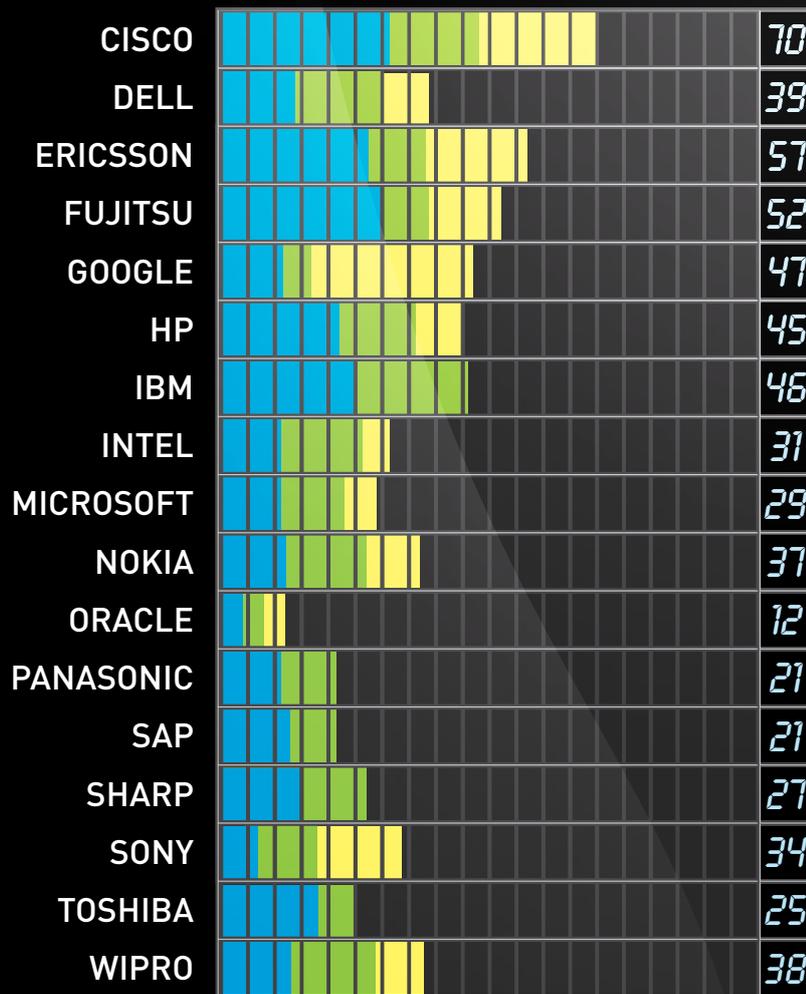
SOLUTIONS ENERGY IMPACT ADVOCACY

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.

www.greenpeace.org/coolit

GREENPEACE

EXECUTIVE SUMMARY

It has been two years since the Climate Group published "SMART 2020", a report that uncovered the IT sector's potential to reduce economy-wide greenhouse gas emissions to 15% of business as usual by 2020. Accordingly, this is the fourth semi-annual edition of the Cool IT Leaderboard, which ranks global IT brands on their efforts to build emission-slashing innovations, mitigate their own energy footprints, and support groundbreaking climate and energy policies. Each release of the Leaderboard reflects changing political and business realities and aims to capture a greater level of detail in measuring climate leadership across the IT sector.

While IT companies are increasingly taking advantage of industry conferences, corporate responsibility reports, and media interviews to discuss climate and energy matters, particularly as they relate to IT products and services, this latest assessment of IT leadership still reveals significant delay across the sector in turning potential into action.

A few companies stand out for the comprehensiveness of their approach to climate action, or have distinguished themselves in a key realm of leadership, and the remainder are simply market followers. Cisco, Ericsson and Fujitsu deserve praise for exhibiting the boldest and most encompassing industry efforts to address climate change to date, efforts which have earned them top scores on the Leaderboard.

Newsweek recently released its Green Rankings, which order the Top 100 global companies according to sustainability performance. The IT companies score well in Newsweek's assessment; six Leaderboard companies placed among the top fifteen when evaluated against all types of companies. But the world's climate and energy policy frameworks are still disproportionately and negatively influenced by companies at the bottom of Newsweek's ranking — utilities, fossil fuel companies, and other heavy polluters.

The stronghold of polluting companies, both in the U.S. and elsewhere, continues to dominate policy debate and protect the status quo, blocking a transition to a clean energy economy. Meanwhile, many IT companies, rated "greenest" by Newsweek for their own environmental performance, are still failing to pull their political weight in advocating for a clean energy transformation. This is one conclusion of the Leaderboard's Political Advocacy evaluation.

If IT companies want to drive transformation in the energy sector, they will need to further reduce their energy footprint, build wide-reaching solutions for society, and ultimately wake up to the importance of active policy engagement to overcome entrenched dirty energy interests. To unlock the economic potential of a low carbon economy, the rules of the game must be changed, but that won't happen without a fight. Winning this fight is good for business and helps us avoid the biggest ecological crisis the world has ever faced, climate change.

IT companies may fear that they will anger business partners, such as utilities and energy producers, if they were to take a bolder stance on energy and climate issues. Additionally, a competitive lack of cooperation across the IT sector may be impeding the emergence of a unified platform of policy support for laws and incentives that can best transform the economy and create a beneficial environment for IT solutions. But the risk of inaction is far greater than that of upsetting commercial relationships or losing a competitive edge. Absent strong climate and energy policies, there is no long-term market for clean technologies.

IT companies must work with more transformative sectors -- buildings, transportation, logistics, and clean energy developers -- to actively support policies that catalyze the global adoption of clean technologies; that, in combination with an enhanced commitment to reducing IT's own growing energy footprint, can transform the dirty energy economy into a renewable and prosperous system built on IT innovation.

Companies are scored out of 100 points, divided as follows:

a. Efforts to offer economy-wide technological climate solutions that contribute to global greenhouse gas reductions .... **(40 points)**

b. Initiatives to reduce their own global warming emissions .... **(25 points)**

c. Active engagement in political advocacy and support for science-based climate and energy policies .... **(35 points)**

IT CLIMATE SOLUTIONS

If zero emission buildings, electric vehicles, and renewable energy are the bricks of the clean energy economy, then IT technologies are the mortar that hold it all together. IT climate solutions have the potential to drive transformational change in how we generate and manage energy across the economy. Two years ago, "SMART 2020: Enabling the Low Carbon Economy in the Information Age", quantified that IT solutions have the potential to drive at least 15 percent reduction in global greenhouse gas emissions by the year 2020.

Some progress has been made toward realizing this potential, particularly by companies directly involved in building clean energy infrastructure and energy management, such as smart grids, electric transportation, and energy use tools, but the sector as a whole is still not pursuing these opportunities with any sense of urgency. Attempts to measure and project the impacts of IT solutions are also improving company by company, but without the validation of recognized standards across the IT industry. Executives at leaderboard companies frequently vocalize the significance of IT climate solutions to their business models, but deployment and quantification must hasten in order to achieve savings commensurate with the threat posed by climate change.

Cisco, Fujitsu and Ericsson have set the bar in this category by prioritizing solutions development. Their case study submissions, supported by solid assumptions with pre- and post-intervention data on the greenhouse gas savings potential of their solutions, win them high marks. Cisco and Ericsson are also two of the companies demonstrating leadership in pushing for better standardization of metrics. Fujitsu and Wipro stand out for their future emissions savings goals, which all other companies have yet to establish.

While Google's solutions offerings are limited, it receives notice under the new scoring criterion — investment — for backing offshore wind transmission and renewable energy technologies. IBM stands out in this scoring round for the breadth of its solutions work and some increased quality of case study data, but needs to improve its explanation of assumptions and metrics to keep pace with the current frontrunners.

IT Climate Solutions Scores		
Company Ranking		**Score**
1st	Cisco	31
2nd	Fujitsu	30
3rd	Ericsson	27
4th	IBM	25
5th	HP	22
6th	Toshiba	18
7th	Sharp	15
8th	Dell	14
9th	Wipro	13
10th	Nokia	12
11th	Google	11
12th	Intel	11
13th	Microsoft	11
14th	Panasonic	11
15th	SAP	8
16th	Sony	7
17th	Oracle	4

Across the board IT companies need to work on demonstrating the impact of their climate solutions with calculations that testify to the potential for greenhouse gas emissions savings in five key sectors: buildings, transport, manufacturing, power and the dematerialization of services. "SMART 2020" estimates that the energy savings of IT solutions can produce cost savings of US 646.5 billion while cutting 7.8 Gt of CO_2 by 2020, a win-win for the climate and the economy.

Additional investment in third-party solutions and renewable energy reveal the extent to which IT companies are participating in the deployment and growth of the clean energy sector. The updated criteria in this category marks the first attempt to garner such information from Leaderboard companies. Greater disclosure on the topic will warrant increased scores in the future, as companies demonstrate a deeper level of commitment to lead the world in transformative clean energy solutions.

> "With a couple of exceptions, the industry is hobbled by the short-term incremental sustainability-related goals that it is setting for itself, rather than setting more-challenging, longer-term goals that could result in transformative solutions... The industry continues to bask in the afterglow of the "SMART 2020" report, when it should really be moving that thinking forward at a much faster pace. "
>
> *Simon Mingay, research vice president, Gartner Research*

IT ENERGY IMPACT

IT's growing energy footprint threatens to undo the positive impacts of its solutions and advocacy. IT's unprecedented growth as its products and services become increasingly indispensable for running a modern economy are rapidly accelerating the industry's greenhouse gas pollution, particularly as IT operations and cloud-computing infrastructure are located in regions heavily reliant on a coal-powered electricity.

IT's electricity consumption is expected to more than triple by 2020. Greenpeace's "Make IT Green" Report shows that at current growth rates, data centers and telecommunication networks will consume an estimated 1,963 billion kilowatts hours of electricity in 2020. Given this projected increase, IT companies must effectively tackle their own operational emissions and those associated with their products by setting goals to reduce absolute GHG emissions on a detailed timeline.

To achieve these emission reduction goals, IT companies must craft a progressive mitigation strategy. Top scores in this criterion have been awarded to companies that directly manage their environmental impact through energy efficiency and avoided emissions, the direct installation or purchase of renewable energy, efficiency offsets secured in the electricity load center that services major company infrastructure, and renewable energy credits or offsets clearly proven to be additional, in that order of priority.

Most companies in the Leaderboard have established an absolute greenhouse gas reduction target. Dell, IBM, and Cisco have strong targets, but greater value is placed on how companies plan to achieve those goals. Cisco and IBM set a good example for providing a comprehensive plan to reduce its emissions, which does not include offsets. IBM has increased its renewable energy use since the last scoring, and its energy efficiency measures are among the strongest in the industry. Wipro also scores high for its transparent mitigation plan that front loads energy efficiency and direct renewable energy purchase and installation.

IT Energy Impact Scores		
Company Ranking		**Score**
1st	IBM	21
2nd	Cisco	17
3rd	Dell	16
4th	Wipro	16
5th	Sony	16
6th	Nokia	15
7th	Intel	15
8th	HP	14
9th	SAP	13
10th	Sharp	12
11th	Microsoft	12
12th	Ericsson	11
13th	Panasonic	10
14th	Fujitsu	9
15th	Toshiba	7
16th	Google	6
17th	Oracle	4

Interestingly, Google's recent purchase of wind power from an Iowa clean energy company and investment in offshore wind may indicate that it is looking for ways to eventually mitigate its own carbon footprint with direct renewable purchases. However, the company still does not disclose the size of its carbon footprint, and it does not have a public absolute greenhouse gas reduction target. This is unacceptable from a company that prides itself on innovation and leadership, and ironic given Google's mission to put all of the world's information on-line.

Although IT companies seem to have generally invested more to manage the impacts of their own operations than to build solutions or advocate for policies, attention to responsible infrastructure siting is lacking across the board. Given the tremendous growth of cloud computing and associated data center construction, companies must have policies in place to avoid dramatically increasing demand for dirty energy. The infrastructure siting criterion requires cloud service companies to demonstrate policies that maximize clean energy sources and avoid growth in demand for coal or nuclear-powered electricity. IBM and Cisco fare best here, and Google's shadow price for carbon is also a good example.

Companies for which infrastructure siting does not apply were evaluated for supply chain energy management and product efficiency, where applicable. HP leads the industry on the supply chain side by working with key suppliers to measure and reduce emissions. Many companies scored well for meeting or exceeding the Energy Star standard for product efficiency due to a history of involvement in the program, and should continue to aim for a higher bar for product efficiency improvements.

Companies that have transparently demonstrated specificity on their mitigation strategies and progress toward meeting an ambitious greenhouse gas reduction target are doing the most to prove that their own footprint does not override positive efforts in other areas.

> "It's not a question of if (carbon regulation) will happen, it will definitely happen... As an industry, we are ill-prepared for this."
>
> *Mike Manos, Vice President, Service Operations, Nokia*

POLITICAL ADVOCACY

Political advocacy is a key differentiator of climate leadership among IT companies. Those that take frequent action to ensure the passage of climate protection, such as a cap on carbon emissions, renewable energy standards, and incentives for clean energy deployment, best exemplify a reliable and comprehensive commitment to transforming the global economy.

A clean energy revolution can be built on the innovations of Leaderboard companies, much as the industrial revolution was enabled by the fossil fuel industry. For a transformational shift to occur, the IT sector must work collectively and in partnership with other parts of the clean tech economy to overcome the political opposition of the old guard, dirty energy companies, which uses its strong political position to block a clean energy revolution. Strong and consistent engagement with government decision-makers is needed, but with a few exceptions, there is little evidence of this type of aggressive advocacy from the IT sector today.

In the wake of a failure to produce a fair, ambitious, and binding international climate agreement in Copenhagen, and in the absence of a major international climate forum during the present scoring period, this evaluation focuses more specifically on efforts to affect key national and regional policy priorities. In addition, advocacy scores now sunset after a twelve month period to best reward companies that show consistent leadership.

Recent political opportunities have produced a few clear advocacy leaders in this scoring round. The European Union's attempt to establish a target of 30% greenhouse gas emissions reduction by 2020 received the support of Leaderboard companies Google, Cisco, and Sony Europe. In California, an attempt by oil interests to derail the state's landmark global warming law was proactively countered by Google, Cisco and HP. Fujitsu scores high marks for its presentation of twelve specific climate and clean energy policy recommendations to the Japanese government.

Political Advocacy Scores		
Company Ranking		**Score**
1st	Google	30
2nd	Cisco	22
3rd	Ericsson	19
4th	Fujitsu	13
5th	Sony	11
6th	Nokia	10
7th	HP	9
8th	Dell	9
9th	Wipro	9
10th	Microsoft	6
11th	Intel	5
12th	Oracle	4
13th	IBM	0
14th	Toshiba	0
15th	Sharp	0
16th	Panasonic	0
17th	SAP	0

The sector needs to work together to project a common and clear voice to government on the essentiality of IT to the delivery of a clean energy economy. Many policymakers, at different levels of government, still do not see the IT sector as a partner for consultation in the development of policies and investments in the energy and transportation sectors. In order to increase their standing, IT companies must move beyond the macroeconomic potential of the "SMART 2020" report by advocating for specific and compelling solutions in a format that policymakers can utilize.

Although new leadership has emerged surrounding specific policy priorities, many of the companies that scored in Version 3 for advocacy before and during Copenhagen have not maintained a consistent level of advocacy engagement in this last period. Version 4 advocacy scores reflect an overall dip in political activity, even among previously high-scoring companies, like Google.

IT companies must continue to contribute their expertise to international climate forums, such as the upcoming negotiations in Cancun, while simultaneously staying involved in key policy debates across the globe, from which more immediate results can be expected. In the coming year, companies that remain active, speak out, and proactively support policy agendas such as carbon reduction goals, renewable electricity standards, infrastructure and grid investment, and other climate and energy policy mechanisms, will be acknowledged for the highest levels of leadership in this area.

" Addressing climate change and protecting California's environment are important business and societal priorities; not only affecting our quality of life, but also California's ability to attract and retain clean tech investment and jobs. Government, private industry and individuals are all responsible for safeguarding California's future. Passage of Prop 23 [which would roll back California's greenhouse gas law] would go against our state's innovative culture of investing for the future, jeopardize our leadership position in attracting clean tech investment, and vacate the possibility of doing both . . . Cisco urges Californians to vote No on Prop 23." *Laura Ipsen, Senior Vice President, Cisco*

	Previous Total	New Total	**Climate Solutions** (40 out of 100 points)					**Energy Impact** (25 out of 100 points)					**Political Advocacy** (35 out of 100 points)				
				Current Savings Calculations out of 20	Public Metrics out of 10	Investment out of 5	Future Savings Goal out of 5		Absolute Emissions Reduction Target out of 5	Mitigation Strategies out of 10	Infrastructure Siting Policy out of 5	Product Efficiency & Supply Chain Footprint out of 5		Political Speech out of 10	Political Policy out of 15	Repetition Bonus out of 10	Negative Lobby Penalty out of -15
Cisco	62	70	31	19	10	2	0	17	5	7	2	3	22	7	8	7	0
Dell	28	39	14	7	6	1	0	16	5	6	2	3	9	7	2	0	0
Ericsson	53	57	27	17	9	1	0	11	2	5	-	4	19	5	10	4	0
Fujitsu	36	52	30	17	7	1	5	9	3	2	1	3	13	2	10	1	0
Google	33	47	11	2	4	5	0	6	0	1	5	-	30	9	11	10	0
HP	41	45	22	12	8	2	0	14	4	4	2	4	9	2	6	1	0
IBM	42	46	25	16	6	3	0	21	5	8	4	4	0	4	4	0	-10
Intel	27	31	11	2	5	3	1	15	4	7	2	2	5	0	6	4	-5
Microsoft	31	29	11	5	6	0	0	12	1	7	4*	-	6	3	5	3	-5
Nokia	22	37	12	5	6	1	0	15	4	6	1	4	10	4	6	0	0
Oracle	n/a	12	4	3	1	0	0	4	1	2	1*	-	4	0	4	0	0
Panasonic	14	21	11	6	3	2	0	10	1	1	-	8*	0	0	2	0	-5
SAP	22	21	8	5	0	3	0	13	3	6	4*	-	0	0	0	0	0
Sharp	18	27	15	3	6	3	3	12	2	2	-	8*	0	2	0	0	-5
Sony	16	34	7	0	5	2	0	16	5	5	-	6*	11	5	11	0	-5
Toshiba	22	25	18	10	3	2	3	7	2	1	-	4*	0	0	2	0	-5
Wipro	n/a	38	13	9	0	1	3	16	4	9	0	3	9	3	5	1	0

* if a company does not have significant cloud driven footprint to warrant an Infrastructure Siting Policy, it will be evaluated for 10 maximum points under the Product Efficiency/Supply Chain Footprint criterion, and vice versa.

COOL IT LEADERBOARD SCORING CRITERIA

The Cool IT Leaderboard is updated regularly to track the progress of the world's largest IT companies towards the achievement of economy-wide greenhouse gas (GHG) emission reductions of 15% by 2020. Companies are evaluated for leadership in three key areas:

1. Efforts to offer **economy-wide technological climate solutions** that contribute to global greenhouse gas reductions. (40/100)

2. Initiatives to **reduce their own global warming emissions**. (25/100)

3. Active engagement in **political advocacy** and support for science-based climate and energy policies. (35/100)

IT CLIMATE SOLUTIONS
represent 40 out of 100 points, divided as follows:

- **Current Savings Calculations** (20 points): Company makes public calculations of current net GHG emissions savings provided by IT solution(s) in any of five key areas of the economy - buildings, transport, manufacturing, power and 'dematerialisation' of services - via case study data. In the case of software solutions, company projects reductions from associated behavioural change.

- **Public Metrics** (10 points): Company makes public the metrics and assumptions used to calculate net GHG emissions savings of IT solutions.

- **Investment** (5 points): Company makes significant financial investment in clean technology solutions, including specific investments in existing offerings and R&D for IT climate solutions and/or makes direct investments in external third-party clean energy opportunities.

- **Future Savings Goal** (5 points): Company sets short to mid-term target for future net GHG savings based on current savings calculations, investment and growth.

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

IT ENERGY IMPACT
represents 25 out of 100 points, divided as follows:

- **Absolute Emissions Reduction Target** (5 points): Company makes commitment to reduce absolute GHG emissions of its own operations on a defined timeline. Maximum points awarded to companies with absolute reduction goals of at least 20% by 2012 using a 2008 or earlier baseline.

- **Mitigation Strategies** (10 points): Company demonstrates specific GHG mitigation strategy in the following order of importance: energy efficiency and avoided emissions; direct installation of renewable energy; offsets directly secured in electricity load centre, servicing data centre or major company infrastructure; renewable energy credits and/or offsets clearly proven to be additional.

- **Infrastructure Siting Policy** (5 points): Cloud service companies have a cloud infrastructure siting policy that maximises clean energy sources and avoids growth in demand for coal or nuclear-powered electricity.

- **Product Efficiency & Supply Chain Footprint** (5 points): IT equipment companies manufacture high-efficiency products and aggressively manage the carbon footprint of their product supply chains.

Notes:
(1) No points for target / mitigation are possible without footprint disclosure.
(2) Points listed above represent the maximum number of points for given criteria.
(3) If company does not have significant cloud driven footprint to warrant an Infrastructure Siting Policy, it will be evaluated for 10 maximum points under Product Efficiency and/or Supply Chain Footprint, and vice versa.

POLITICAL ADVOCACY
represents 35 out of 100 points, divided as follows:

- **Political Speech** (10 points): Public speech, preferably by the CEO, made before a relevant national or international audience, which references need for science-based, mandatory GHG reduction cuts.

- **Political Policy** (15 points): Company takes public position in favour of specific and current policy advocacy priorities that support sciencebased, mandatory GHG reduction cuts at the national or international level.

- **Repetition Bonus** (10 points): Measures the repetition of positive speech and advocacy.

- **Negative Lobby Penalty** (-5 to -15, dependent on severity): Companies that directly undertake or are members of trade associations/organisations which engage in negative lobbying, defined as a policy position that undermines or negates a scientifically-achieved emissions reduction target and/or clean energy policies.

Notes:
(1) Only advocacy conducted within the past 12 months will be applied.
(2) Points listed above represent the maximum number of points for given criteria.