

Greenpeace

Cool IT Challenge

Explanation of Leaderboard Scoring Criteria

The Cool IT Challenge calls on leading Information Technology (IT) companies to be champions of 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 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 and pioneer a global shift to a clean energy economy.

The Cool IT Leaderboard continues to evaluate the progress of the world's largest IT companies towards the achievement of economy-wide greenhouse gas (GHG) emission reductions of at least 15% by 2020, based on performance in three principle areas: IT climate solutions, IT energy impact and political advocacy. The Leaderboard examines case studies and metrics associated with IT-enabled solutions offerings, evaluates the management of IT companies' operational energy footprints, and rewards proactive climate and energy related policy advocacy. The ranking is intended to facilitate comparison of IT climate leadership across the sector, recognising best practices and meaningful political advocacy leadership.

This methodology document transparently outlines Greenpeace's scoring of climate leadership within the IT sector. The scoring criteria were updated for Version 4 of the Cool IT Leaderboard (November 2010) to recognise evolving leadership in the IT industry and to differentiate efforts to a higher level of detail. The changes allow us to achieve greater specification in assessing a company's initiative to manage its energy footprint, account for variances in IT business models and better evaluate leadership as it pertains to the most current policy priorities for a clean energy transformation.

Out of 100 possible total points, three key areas of leadership have been weighted to best measure the efforts of IT companies to reduce global GHG emissions:

- **IT Climate Solutions**
Efforts to offer economy-wide technological climate solutions that contribute to global greenhouse gas reductions. (40/100)
- **IT Energy Impact**
Initiatives to reduce their own global warming emissions. (25/100)
- **Political Advocacy**
Active engagement in political advocacy and support for science-based climate and energy policies. (35/100)

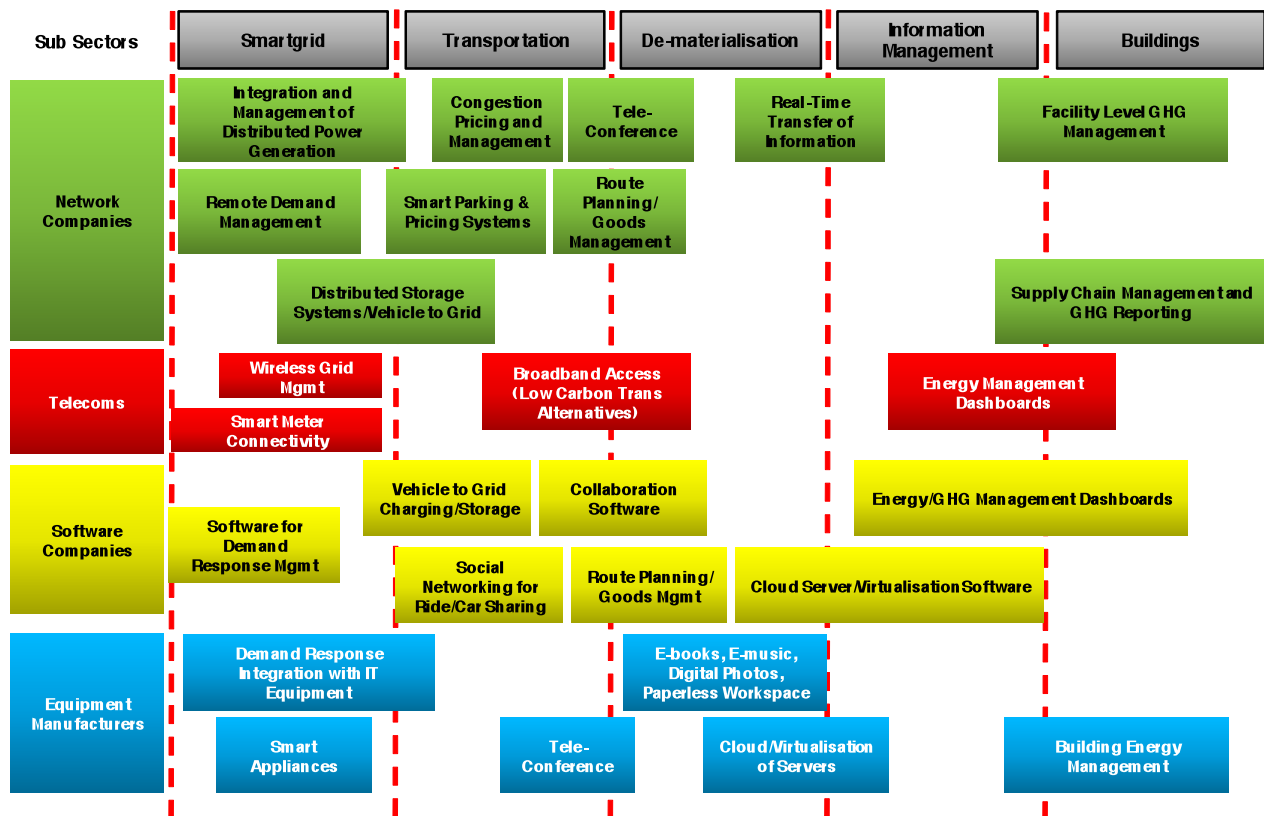
IT Climate Solutions

The Cool IT Leaderboard compares the efforts of global IT brands to fulfil the significant potential of IT-enabled emissions reductions across the economy, as quantified by SMART 2020: Enabling the Low Carbon Economy in the Information Age. The Climate Group's SMART 2020 report illustrates the potential of the IT sector to direct its notoriously rapid technological innovation toward solutions that cut emissions and improve efficiency across the economy. The criteria used to score leadership in this area are designed to evaluate the efforts of IT companies to build technological solutions that help fight climate change and quantify the potential reductions of those innovations.

IT Energy Solutions will play a critical role in driving the development of the smart grid, in enabling a significant increase in distributed renewable energy to meet electricity demand, and in enabling real-time management of the grid to allow retirement of dirty base load and peak generation capacity. IT technologies empower end users to measure energy use and emissions in real time, which will ultimately help consumers reduce their usage.

State-of-the-art IT solutions can make societies more efficient and maximise economy-wide energy savings, thus spurring estimated cost savings of \$646.5 billion US dollars¹, which make IT solutions a win-win for the climate and the economy.

IT Climate Solution Opportunities



Greenpeace looks for companies to make information available on emissions saved by the solutions they provide. This information should be provided as a net emissions reduction figure. This figure is arrived at by calculating the total emissions saved, and then subtracting from them the (best-available estimate or actual) GHG emissions generated by the solution itself. For example, to calculate the net emissions reductions of a solution, a company should be able to provide evidence of the following:

$$\text{Total Emissions Saved} - \text{Lifecycle Emissions of Solution} = \text{Net Emissions Reduction}$$

Alternative methods of calculation will be assessed depending on the specifics of the solution offered, assuming the aim of the calculation is to produce net emissions reduction figures. In the case of software-based solutions, company projections of reductions achieved as a result of behavioural change by the end user must be supported by actual experience or credible science that indicates a comparable rate of reduction. If company data is incomplete for all solutions offered, individual case study examples will be accepted for assessment.

In the case of specific solutions, 'lifecycle emissions of solution' should include those GHG emissions generated during the production, use and recycling/disposal of the required hardware and software.

Clean Energy Investment Leadership

In addition to savings calculations and associated metrics, companies will be evaluated on their financial investments in existing solutions offerings, as well as allocation of R&D for climate solutions innovation. Private sector investments in clean technologies are required to make an economy-wide shift from polluting to renewable energy. Under the Energy [R]evolution scenario, a clean energy blueprint released in June 2010, by Greenpeace and the Institute of Technical Thermodynamics at the German Aerospace Centre (DLR), the average annual investment needed in the power sector between 2007 and 2030 is an approximate \$782 billion. This is equal to the current amount of subsidies paid for fossil fuels globally in under three years.

The Leaderboard measures a company's commitment to climate solutions through the scale of its investments in the solutions portion of its business model, and further recognises the leadership of companies that invest in third-party clean energy development and deployment. A company's investments in its own technological solutions and those of others exhibit direct financial interest in expanding clean energy infrastructure, and connote a likelihood of support for policies that will help that infrastructure and the company's clean energy investments grow in value.

Lastly, a '*Future Savings Goal*' is an indicator of a company's enduring commitment to the development of climate solutions and its interest in measuring the efficacy of those technologies in reducing greenhouse gas emissions across the economy.

IT Climate Solutions scoring criteria in detail:

Criterion	Description	Points*	To Receive Maximum Points
Current Savings Calculations	<ul style="list-style-type: none"> Company makes public its calculations of current net GHG emissions savings provided by IT solution(s) Company specifies reductions in 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 	10	<ul style="list-style-type: none"> Company provides case study demonstrating benefits of each IT solution with pre and post-intervention data, in which net emissions savings are calculated under sound and well-explained assumptions
Public Metrics	<ul style="list-style-type: none"> Company makes public the metrics and assumptions used to calculate net GHG emissions savings of IT solutions 	10	<ul style="list-style-type: none"> Company provides methodology used to calculate solutions benefits, supported by externally verified or scientifically supported assumptions Company pushes for adoption of methodology as industry standard
Investment	<ul style="list-style-type: none"> Company makes significant financial investment in clean tech 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 	10	<ul style="list-style-type: none"> Meaningful investment to be measured relative to other business units, solutions opportunities accessible to the company and investments made by peers in the sector Full points will be awarded for separate and specific data demonstrating investments in existing offerings as well as climate solutions R&D or clean energy deployment by others
Future Savings Goal	<ul style="list-style-type: none"> Company sets short to mid-term target for future net GHG savings based on current savings calculations, investment and growth 	10	<ul style="list-style-type: none"> Target expressed in net tonnes of GHGs saved and supported by credible business and investment plan to achieve it

* Point values represent maximum available

IT Energy Impact

The IT sector is experiencing unprecedented growth. As IT products and services become increasingly indispensable for running a modern economy, the industry's greenhouse gas pollution is also on the rise due to reliance on a dirty electricity grid, particularly in locations substantially powered by coal. IT's electricity consumption is expected to more than triple by 2020, largely attributable to cloud computing. Without a significant increase in the use of renewable energy, this tremendous growth in demand for electricity by the IT sector will be met by coal and other forms of polluting energy.

As was highlighted in Greenpeace's Make IT Green Report, at current growth rates, data centres and telecommunication networks will consume about 1,963 billion kilowatts hours of electricity in 2020. That is more than triple their current consumption and greater than the current electricity consumption of France, Germany, Canada and Brazil combined. Given this projected growth of energy use, 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 well-defined timeline.

All IT companies, particularly major players in the cloud computing market, must put policies and incentives in place to ensure that, as their energy use increases, so does energy efficiency and use of renewable energy sources.

Footprint Mitigation Leadership

Companies must provide evidence of their mitigation strategies and demonstrate measurable progress towards meeting an aggressive GHG reduction target for their own operations. Efforts to meet electricity demand with the direct application of renewable energy, and to conserve energy with higher efficiency, will receive highest marks. The purchasing of offsets and renewable energy credits will be recognised, but higher merits will be awarded to those companies that directly manage their environmental impact.

The relative scoring values of qualifying actions under this criterion are ordered from highest to lowest as follows:

1. Reductions from energy efficiency or avoided emissions.
2. Installation or purchase of renewable energy to directly supply electricity demand of company facilities.
3. Offsets directly secured in electricity load centre servicing data centre or major company infrastructure.
4. Renewable energy credits and/or offsets clearly proven to be additional.

Emissions from manufacturing and operating IT equipment are estimated to rise significantly over coming years as companies seek to meet rapidly growing international demand for products, particularly in emerging markets. While end-use is the majority contributor to IT products' energy impacts, the carbon generated from materials and manufacturing represents about one-quarter of the overall IT footprint.ⁱⁱ In addition to advancing product efficiency, efforts on behalf of company leadership to take responsibility for and manage the emissions of its supply chain footprint will be recognised.

Note: No Leaderboard points for the *Absolute Emissions Reduction Target* or *Mitigation Strategies* criteria are possible without disclosure of company GHG emissions footprint.

IT Energy Impact scoring criteria in detail:

Criterion	Description	Points*	To Receive Maximum Points
Absolute Emissions Reduction Target	<ul style="list-style-type: none"> Company makes commitment to reduce absolute GHG emissions of its own operations on a defined timeline 	5	<ul style="list-style-type: none"> Absolute reduction goal equivalent to 20% by 2014 using a 2008 or earlier baseline
Mitigation Strategies	<ul style="list-style-type: none"> Company demonstrates specific GHG mitigation strategy in the following order of importance: <ul style="list-style-type: none"> 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 	10	<ul style="list-style-type: none"> Proof of a comprehensive emissions reduction plan, which includes avoided emissions through energy efficiency and direct installation of renewable power 25% of company's own electricity use sourced from renewable energy
Infrastructure Siting Policy	<ul style="list-style-type: none"> 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 	5	<ul style="list-style-type: none"> Siting policy clearly maximises renewable energy as source of electricity and sets goal to eliminate fossil fuel energy to power company infrastructure If company does not have significant cloud-driven footprint, it will be evaluated for 10 maximum points under <i>Product Efficiency & Supply Chain Footprint</i>
Product Efficiency & Supply Chain Footprint	<ul style="list-style-type: none"> IT companies manufacture high-efficiency products and aggressively manage the carbon footprint of their product supply chains 	5	<ul style="list-style-type: none"> All new models of specified products must meet the latest Energy Star standard, and 30% of new models must exceed Energy Star by 50% or more in sleep and standby/no-load modes (where applicable) If company does not have significant energy-consuming products it will be evaluated for 10 maximum points under <i>Infrastructure Siting Policy</i>

*Point values represent maximum available

Political Advocacy

IT companies can drive fast progress towards a clean energy economy by aligning their policy advocacy with scientifically established greenhouse gas reduction targets, along with renewable energy and energy efficiency mandates and incentives. The implementation of IT product solutions and services will require policy support and financing mechanisms, and IT companies must apply their considerable political influence towards achieving these conditions.

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 maximises profits without requiring costly changes to their infrastructure. To demonstrate leadership, IT companies must deliver bold advocacy for policy change on a local, national and international level to break these entrenched positions and drive economic growth associated with the clean energy economy.

Greenpeace's Energy [R]evolution, a blueprint detailing how the world can avoid the worst effects of climate change, illuminates practical societal changes that could deliver a sustainable clean energy future. Energy [R]evolution calls for a phase out of subsidies for dirty energy and the immediate implementation of policies and investments to jumpstart renewable energy infrastructure, efficiency, and technological climate solutions.

The blueprint also outlines the need for sweeping reform of electricity markets in favour of renewable energy and energy efficiency, and it emphasises the need for the social and environmental costs of energy use and production to be better accounted for through bold policy changes. Critical pathways towards such a transformation must be paved by the bold support of powerful influencers. IT companies, which stand to gain much from the implementation of favourable clean energy and climate policies, need to vocally and proactively back these urgent clean energy policy priorities.

IT companies can use their considerable influence to show CEO-level support for strong global mandatory GHG emissions regulation, requiring cuts by industrialised countries as a group of at least 40% by 2020, of which at least three-quarters are domestic. Companies will also be scored on evidence of their advocacy work to support this target in coordination with relevant senior politicians.

Political Advocacy Priorities:

Greenpeace has identified key political advocacy priorities to measure leadership on the most important opportunities for IT companies to support a shift to a clean energy future. Priorities are updated with each new version of the Leaderboard to identify the most pressing points of intervention for IT advocacy at the time of evaluation (*see attached Policy Annex*). Political advocacy in areas outside the noted priorities will also be recognised. However, companies that fail to demonstrate action on at least two of the advocacy priorities identified in the Leaderboard will be eligible for no more than 18 of the 30 total points available for political advocacy.

Only advocacy conducted within the past 12 months will be factored into the Leaderboard scoring. Advocacy that occurred in advance of the prior 12 months, and which has not been repeated or sustained, shall not be included.

Political Advocacy scoring in detail:

Criterion	Description	Points*	To Receive Maximum Points
Political Speech	<ul style="list-style-type: none"> Public speech, preferably by the CEO, made before a relevant national or international audience, which references need for science-based, mandatory GHG reduction cuts 	10	<ul style="list-style-type: none"> Top-level representative made public speech in the past 12 months referencing mandatory global emissions cuts of 40% by 2020 (or 30% in the EU, 25% in the US or 25% in Japan) by 2020 Representative indicates that national legislation needs to support mandatory emission cuts through supporting policies, e.g. efficiency standards, RE feed-in tariffs, etc Political speech reflects current public policy priorities (see attachment)
Political Policy	<ul style="list-style-type: none"> Company takes public position in favour of specific and current policy advocacy priorities that support science-based mandatory GHG reduction cuts at the national or international level 	15	<ul style="list-style-type: none"> Maximum points awarded for demonstration of advocacy involvement with each of the identified political priorities (see attachment)
Repetition Bonus	<ul style="list-style-type: none"> Measures the repetition of high-quality speech and advocacy 	10	<ul style="list-style-type: none"> The company with the greatest amount of high-quality political advocacy will receive the full 10 points
Negative Lobby Penalty	<ul style="list-style-type: none"> 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 	-15 -10 -5	<ul style="list-style-type: none"> Companies that have not disassociated themselves from the position of the trade association/organisation or otherwise clearly and directly advocated in opposition to the negative lobbying position may receive a penalty Maximum deduction for evidence of active misrepresentation or lobbying against climate and clean energy policy

*Point values represent maximum available

ⁱ Climate Group and the Global e-Sustainability Initiative. SMART 2020: Enabling the low carbon economy in the information age, 2008
ⁱⁱ *Ibid.*

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