

Carbon Disclosure Project

CDP 2011 Investor CDP 2011 Information Request

Broadcom Corporation

Module: Introduction

Page: Introduction

0.1

Introduction

Please give a general description and introduction to your organization

Broadcom Corporation is a major technology innovator and global leader in semiconductors for wired and wireless communications. Broadcom's products enable the delivery of voice, video, data and multimedia to and throughout the home, the office, and the mobile environment. Broadcom provides the industry's broadest portfolio of state-of-the-art, system-on-a-chip, and software solutions to manufacturers of computing and networking equipment, digital entertainment, broadband access products, and mobile devices. These solutions support Broadcom's core mission: Connecting everything®. A FORTUNE 500® company, Broadcom is one of the world's largest wireless communications semiconductor companies with 2010 revenue of \$6.82 billion. It holds over 4,800 U.S. and 2,000 foreign patents, more than 7,800 additional pending patent applications, and one of the broadest intellectual property portfolios addressing both wired and wireless transmission of voice, video and data. Broadcom focuses on delivering semiconductor solutions for communications to the home, enterprise, and mobile markets. Broadcom was founded in 1991, became public in 1998 (stock symbol BRCM), and currently has close to 9,000 employees in 75 locations worldwide. Customers currently shipping communications equipment incorporating Broadcom's products include: Alcatel, Apple, Cisco, Dell, Echostar, HP, IBM, Juniper Networks, LG, Motorola, Nintendo, Nokia, Pace, Samsung, Siemens and Technicolor, among others. Broadcom has a significant presence in market sectors such as cable modems, digital set-top boxes, residential broadband gateways, servers, network switches and Gigabit Ethernet, providing key technology and products in emerging product areas such as Bluetooth, digital TV, wireless LAN, cellular, digital subscriber line (DSL), Voice over IP (VoIP), mobile multimedia, direct broadcast satellite (DBS), personal video recording (PVR), and broadband processors. Broadcom manufactures most of its products using a standard CMOS process, a technology for constructing integrated circuits that are power efficient and produce less waste heat. The standard nature of these processes permits Broadcom to engage independent silicon foundries to fabricate its integrated circuits. By subcontracting their manufacturing requirements, Broadcom is able to focus its resources on design and test applications where they will have greater competitive advantages. At Broadcom, Global Citizenship begins with good corporate governance, ethical business conduct, focus on product quality, and environmental consciousness. This includes the "Green by Design" approach to developing Broadcom's state-of-the-art communications semiconductors that are energy efficient, contain fewer materials, and are free of environmentally hazardous materials. Broadcom's commitment to Global Citizenship is also fulfilled through expanding their social responsibility initiatives to further enhance the lives of employees, customers, and other stakeholders.

0.2

Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year. Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed

Fri 01 Jan 2010 - Fri 31 Dec 2010

0.3

Country list configuration

Please select the countries for which you will be supplying data. This selection will be carried forward to assist you in completing your response

Select country
United States of America
United Kingdom
China
India
Taiwan
Singapore
Denmark
France
Belgium
Netherlands
Finland
Greece
Israel
Italy
Japan
Spain
Canada
Australia
South Korea

0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD(\$)

0.5

Please select if you wish to complete a shorter information request

0.6

Modules

As part of the Investor CDP information request, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors and companies in the oil and gas industry should complete supplementary questions in addition to the main questionnaire.

If you are in these sectors (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will be marked as default options to your information request. If you want to query your classification, please email respond@cdproject.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdproject.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

Module: Management [Investor]

Page: 1. Governance

1.1

Where is the highest level of direct responsibility for climate change within your company?

Senior Manager/Officer

1.1a

Please identify the position of the individual or name of the committee with this responsibility

The Sustainability Steering Group, which reports to the executive staff and contributes to the quarterly risk assessment report. Broadcom's Sustainability Steering Group is made of the following key personnel:

Bryce Mason, VP Global Real Estate
 Jason Weintraub, Senior Policy & Compliance Counsel
 Darren Habermehl, Manager of Critical Infrastructure
 Karen Kahn, VP Global Communications
 Paula Golden, Executive Director of Broadcom Foundation & Community Affairs

1.2**Do you provide incentives for the management of climate change issues, including the attainment of targets?**

Yes

1.2a**Please complete the table**

Who is entitled to benefit from these incentives?	The type of incentives	Incentivised performance indicator
All employees	Monetary reward	Increased number of employees using alternative transportation methods. Employees are incentivized to carpool, bike or use public modes of transportation.
Facility managers	Monetary reward	Increased building operation efficiency.
Environment/sustainability managers	Monetary reward	Increased environmental performance resulting from initiatives suggested by employees. Employees receive spot awards such as gift certificates for coming up with ideas for creative programs that enhance the company's overall environmental performance, including those that result in greenhouse gas emissions reductions.
All employees	Recognition (non-monetary)	Reduced vehicle miles traveled. Incentivizing employees to avoid use of their personal vehicles by providing onsite amenities such as multiple eating establishments, fitness facility, basketball court, dry cleaning and a volleyball court, which reduces transportation-related emissions.

Page: 2. Strategy**2.1****Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities**

Integrated into multi-disciplinary company wide risk management processes

2.1a**Please provide further details (see guidance)**

i. Scope: Climate change risk is imbedded in the company-wide, multi-disciplinary risk management process and covers: economic, political, market, operational, financial, industry standards, and environmental issues.
 -Process: Corporate risk is assessed by Broadcom's executive management staff. Representatives from each business sector are asked to report on top potential risks for the company based on likelihood, severity, and ability to manage the potential risk. In 2011 the Sustainability Steering Group has been integrated into the risk assessment process. The scope and process of such assessments are at an organization-wide level and at an asset level. Risk assessment includes both the risks associated with GHG emissions (e.g. changing regulations, energy prices, manufacturing requirements and consumer demand) as well as with the impacts of climate change (e.g. natural disasters and resulting energy supply disruption).
 Scope of Risks: -General Economic & Political Conditions: Future legislation relating to energy and carbon emissions poses a risk to the technology and semiconductor industries by potentially increasing market

volatility, impacting availability of materials, and changing manufacturing processes. Potential increasing energy costs, disruption in supply, or regulation of GHG emissions all pose risk to hanging market trends and consumer demand. -Competitive Pressures: The availability and pricing of products offered by competitors affects the pricing and sales of Broadcom's products. For example, competitors may offer less environmentally friendly products that compete on price. As a result, Broadcom must continue to innovate and differentiate product offerings to maintain or grow market share and provide environmentally preferable products that are also cost competitive. -Evolving Industry Standards: Evolving industry standards impact Broadcom's ability to timely and accurately predict market requirements and to identify opportunities in new markets. Changes in laws or regulations pose a risk to the business model. This also applies to new or modified tax regulations which pose a budgetary risk. Standards that relate to climate change in the manufacturing of products are also monitored. -Operational Stability: Several factors may affect the stability of business operations, such as rapid changes in consumer demand for products and the availability and pricing of third-party suppliers. Changes in climate and catastrophic events resulting from climate change also pose a risk to facilities, energy supply, and availability of materials and components. -Scope of Opportunities: As climate change concerns become more widespread, and the need for energy efficient strategies increases, Broadcom stands ready to fill this need. Broadcom is driving innovation in communications technology and embracing the IEEE P802.3az Energy Efficiency Ethernet Standard as part of its framework to achieve high-performance, low-power technologies at an optimal cost point throughout its wired Ethernet portfolio. Broadcom goes beyond this standard with its Energy Efficient Networking (EEN) initiative that optimizes energy savings and reduces CO2 emissions. This is expected to save billions in energy costs for IT organizations, which translates to fewer carbon emissions. Broadcom delivers the industry's broadest portfolio of Energy Efficient Ethernet silicon solutions. ii. Assessed at a company level: Management staff and the Sustainability Steer Group aim to identify and prioritize risks and opportunities in each corporate division according to potential impacts to the company, employees, and the community. Decisions are made on the most effective strategies to mitigate risks and nurture opportunities. iii. Assessed at an asset level: the Company's GHG inventory data collection process has improved significantly over the last 2 years. In 2011, the consulting firm CTG was hired to prepare a more exhaustive and technically rigorous inventory. The inventory reports on emissions from Jan. 1, 2010 to Dec. 31, 2010, and includes Scope 1, 2 and 3 emissions from on-site stationary combustion, vehicle fleet, refrigerants, and electricity. In addition, Scope 3 emissions associated with solid waste generation and water consumption are included for a percentage of facilities. Data on emissions was drawn directly from facilities where possible. This will be expanded and monitored over time to continually improve the accuracy of its inventories. -Products/IP: Broadcom's primary asset is its products and intellectual property. With over 3,100 U.S. patents and 1,300 foreign patents, and many patents pending, Broadcom embraces the IEEE standard as an integral part of its broad framework to deliver high-performance, low-power technologies at an optimal cost throughout its Ethernet portfolio. Further, suppliers must comply with environmentally friendly policies and practices to help ensure that products have a reduced effect on human health and the environment across the product lifecycle. Industry groups in which Broadcom has taken a leadership role in defining and setting government environmental compliance regulations and energy-saving technical standards include: Climate Savers Computing Initiative, ENERGY STAR, European Union Code of Conduct, The Green Grid, GreenTouch, and the Institute of Electrical and Electronic Engineers. -Facilities: Broadcom is committed to energy efficiency in its global real estate investments. This reduces operating costs (energy, water and other commodities) and GHG emissions associated with building operations. While all office space is leased, Operations Managers are tasked with ensuring that energy efficiency measures are implemented and maintained. The following is a sample of tenant improvements that have been incorporated recently. Some measures are incorporated into the tenant improvement process and lease agreements. California: Dewpoint Control System installed and runs dryers based on demand load; SIGMA Air Management System installed provides advanced data logging, real-time load analysis, and efficient operation of multiple air compressors; upgraded MR16 halogens mini-flood lamps with MR16 LED mini-flood lamps; all landscape irrigation on recycled water and landscape redesign; Metal Halide to LED, a 77% reduction, translates into .6 Tons of carbon emissions per year, (a 70% reduction); Lighting retrofit resulted in 80% kW reduction; HVAC replacement; window tinting to reduce solar load and New "Cool Roof" replacement. Hyderabad India: Broadcom leased a LEED Gold office building. iv. Reporting Frequency: Broadcom assesses company-wide risk on a quarterly basis and publishes press releases on their website. v. Priorities and reporting results: Broadcom's management staff convenes quarterly to identify risks and opportunities in each corporate division. These risks and opportunities are prioritized according to potential positive and negative impacts to the company, employees, and to the business community. Decisions are made on the most effective strategies to mitigate risks and nurture opportunities. Risk assessments are published in regular press releases and posted to the company website.

2.2

Is climate change integrated into your business strategy?

Yes

2.2a

Please describe the process and outcomes (see guidance)

i. Internal reporting processes: Climate change is integrated in Broadcom's core business strategy, specifically in the development of low energy products, which is centered around the 'top line growth' that will result in a reduced environmental impact. Broadcom embraces opportunities to develop energy-saving technologies, require sustainable manufacturing processes from suppliers, provide sustainability focused incentives to its employees, and implement building operations improvements which are in their direct control. Executive staff is committed to sustainable business practices and to provide its customers with highly integrated solutions that offer lower power consumption, smaller size, and greater quality. CTG, a sustainability consulting firm, is conducting a comprehensive GHG emissions inventory as well as identifying initiatives which reduce carbon emissions. Broadcom is using the 2010 inventory as a baseline for future climate action planning. The inventory findings and emission reduction opportunities will be reported to and managed by Broadcom's Sustainability Steering Group. The overarching assessment process which encompasses climate change related matters is monitored regularly and reported to executive staff quarterly.

ii. Climate aspects have influenced the strategy: Broadcom realizes that global energy supply, prices, and availability are volatile because of both regulation and the impacts of climate change. In addition, future climate change legislation as well as catastrophic events may impact the way in which companies in the U.S., and globally, conduct business. Broadcom has voluntarily chosen to incorporate a strategy for annual GHG reporting and emission reduction programs to reduce overall exposure to unknown future risks.

iii. Components of short term strategy from climate change: There are a number of sustainable business strategies that meet Broadcom's short-term goals and objects. Broadcom will continue to participate in sustainable industry initiatives and further internal strategies, such as the formation of the Sustainability Steering Group, to guide sustainable business practices and decisions. With the breadth of Broadcom's advanced portfolio, the company is able to drive innovative products to market while reducing negative impacts on human health and the environment. For example, the proprietary AutoGrEEEn™ technology, allows system designers to quickly implement the Institute of Electrical and Electronics Engineers standard, reducing power consumption in the physical layer of the network by at least 70%. This could reduce CO2 emissions in the U.S. alone by up to 2.85 million metric tons. Over time, more than \$7.8M has been invested in R&D in energy efficient Ethernet technology by Broadcom and will continue to be a priority in the future. Significant efforts are being made to optimize the energy efficiency of global real estate investments and company operations. Energy usage is monitored and systems are enhanced as much as possible. When selecting new office space, it is a priority to minimize the need for new construction and instead leverage existing materials for tenant improvements. Effective means to reduce emissions associated with its operations are being explored, including building operation efficiency, purchasing policies, and waste management programs. New energy management systems are currently being reviewed for potential rollout to the global building portfolio to monitor energy performance. Extending environmentally preferable purchasing policies, such as the use of sugarcane based paper products and the ban on Styrofoam cups to all global office locations, are also under consideration. New opportunities for waste recycling are being evaluated for global facilities to match the high rate of recycling (over 75%) at the company headquarters in Irvine, CA. By engaging in a comprehensive GHG Inventory of companywide operations, a base year will be established and help to better inform a path forward to manage emissions starting immediately. This is a critical part of the short term strategy to gauge sources of carbon emissions and develop a long-term strategy to address such factors.

iv. Long term strategy: Broadcom acknowledges that long term business strategies related to climate change are critical to the success of the programs and initiatives that have been established in the short term. Broadcom will continue to design products that help embrace carbon emission reduction for the population at large. The company will also continue involvement with industry leaders such as Climate Savers Computing Initiative (CSCI), a consortium dedicated to reducing carbon emissions and energy consumption of networking and computing equipment. Broadcom's other partnerships, dedicated to improving the energy efficiency of Information and Communications Technology (ICT) networks, underscores Broadcom's vision to drive radical changes in eco computing and devices that reduce CO2 emissions. Broadcom keeps a pulse on similar industry initiatives and develops internal strategies that will help further sustainable business goals. A GHG reduction goal for the year 2020, using a 2010 baseline, is under review by the Sustainability Steering Group. The metrics that are currently being evaluated include carbon intensity reduction targets.

v. Gaining strategic advantage: Broadcom is in a position to reduce exposure to climate change risks, while improving business practices and profitability. Broadcom is a leader in the innovation of green technology with long-standing eco computing initiatives that enable customers to leverage high-performance products that significantly reduce power consumption. By engaging in forums to collaborate on energy saving technologies that will provide more energy efficient networks, Broadcom is advancing as a global leader in semiconductors for wired and wireless communications. What distinguishes Broadcom in the marketplace is the fact that their devices are capable of providing a host of features on one chip. This requires less material resources thereby reducing the environmental impact associated with product manufacturing. Broadcom provides the industry's broadest portfolio of Energy Efficient Ethernet devices that allow for additional power savings of up to 70%.

vi. Substantial decisions influenced by climate change: Broadcom will continue to invest heavily in the research and design of products that enable carbon emission reduction for the population at large. Business decisions around product development help end-users to reduce their carbon footprint by utilizing energy efficient technology. Broadcom's AutoGrEEEn™ technology for example, is expected to save billions in energy consumption. By engaging in a

comprehensive GHG Inventory of company-wide operations to establish a baseline and inform a path forward to manage emissions, Broadcom made a conscious business decision to best implement a successful carbon management plan. Strategies to reduce emissions associated with its office purchasing policies and waste management programs continue to be explored. Expanding remote video conferencing to N. America, Taiwan, Israel, Shanghai and the U.K. limits carbon emissions associated with travel and saves \$400,000 per year in travel costs.

2.3

Do you engage with policy makers to encourage further action on mitigation and/or adaptation?

No

Page: 3. Targets and Initiatives

3.1

Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

No

3.1e

Please explain (i) why not; and (ii) forecast how your emissions will change over the next five years

Broadcom is conducting a more comprehensive carbon emissions inventory at this time and will establish a better understanding of the sources contributing to its carbon footprint through this process. It is anticipated that the 2010 GHG Inventory will serve as Broadcom's baseline year for future comparison. This, coupled with projected changes over the next several years, will help provide an informed path toward climate action planning. This information will be used to set future reduction targets that are aggressive, but also realistic and achievable. Broadcom anticipates setting a carbon intensity target for the next reporting year based on metric tonnes of carbon emissions per full-time employee OR metric tonnes of carbon emissions per square foot relative to the baseline year.

3.2

Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

No

3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

3.3a

Please provide details in the table below

Activity type	Description of activity	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
Behavioral change	Broadcom actively encourages its employees to recycle by providing recycling containers throughout common areas in most offices for materials such as paper, batteries, aluminum cans and plastic bottles. Broadcom is also modifying some of their office product procurement practices such as doing away with disposable drinking cups and switching from conventional office paper to paper sourced from sugarcane. These are voluntary practices intended to mitigate Scope 3 emissions.			<1 year
Energy efficiency:	Energy efficiency retrofits are employed in all feasible TI spaces such as: • Building controls • HVAC • Interior and exterior lighting (For example,			>3 years

Activity type	Description of activity	Annual monetary savings (unit currency)	Investment required (unit currency)	Payback period
building services	the headquarters in Irvine is equipped with an efficient lighting design that includes motion sensors in all offices and retrofitting the parking lot fixtures). • Motors and drives These activities are voluntary and will help mitigate Scope 1 & 2 emissions. Energy efficient building services has been a priority to Broadcom's Global Real Estate Team and will continue to be explored long term.			
Energy efficiency: processes	Building energy efficiency: Broadcom's headquarters, located in Irvine, CA, utilizes occupancy sensors in all offices and has reclaimed water for landscaping and waste water. These activities are voluntary and will help mitigate Scope 1 & 2 emissions. This initiative has been a priority to Broadcom's Global Real Estate Team, and energy efficient processes will continue to be explored long term.			1-3 years
Product design	Product efficiency: Broadcom is continuing to further its award-winning proprietary AutoGrEEEn™ technology that allows system designers to quickly implement the recently ratified Institute of Electrical and Electronics Engineers (IEEE) standard, reducing power consumption in the physical layer of the network by 70 percent or more. This is expected to reduce CO2 emissions in the U.S. alone by up to 2.85 million metric tons. Broadcom is embracing the IEEE standard as an integral part of its broad framework to achieve high-performance, low-power technologies at an optimal cost point throughout its wired Ethernet portfolio. This activity is voluntary and impacts Scope 3 emissions. This initiative has been embraced for several years and is expected to be a cornerstone of Broadcom's future product development strategy. Broadcom's products are designed to limit the demand on hazardous materials such as lead (Pb) and halogens like bromide and chlorine. Further, Broadcom works with suppliers to ensure compliance with environmentally friendly policies and practices, such as the Electronic Industry's Citizen's Coalition (IECC) supplier code of conduct, ISO 14001, OHSAS 18000, or equivalent standards. It is best practice to purchase and acquire goods and services that have a lesser or reduced effect on human health and the environment. Green products require consideration of all aspects of a product's life cycle: raw material acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, disposal, energy efficiency, product performance, durability, safety and cost. These activities are voluntary and impact Scope 3 emissions. This initiative has been embraced for the past few years and is expected to strengthen in the future with suppliers.			1-3 years

3.3b

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Broadcom is committed to reducing its environmental impact while conserving natural resources, and it is the company's policy to meet all applicable regulatory standards, including those in support of EPA and OSHA requirements: <ul style="list-style-type: none"> • Create clean, healthy, safe work environments for employees, customers and the community Comply with all applicable environmental, health and safety regulations, including EPA and OSHA standards for emissions, solid waste disposal, safe storage and handling of hazardous materials. • Require supplier certification of environmentally friendly policies and practices through compliance with ISO 14001, OHSAS 18000 or equivalent standards. • Ensure that Broadcom products are available without banned substances and meet the compliance of China RoHS labeling and RoHS European Union Directive.
Financial optimization calculations	It is also the company's goal to minimize waste, maximize recycling efforts, reduce consumption, and ensure that products and materials are reused, repaired or recycled. Broadcom minimizes energy consumption by purchasing ENERGY STAR compliant or more efficient equipment. When purchasing equipment, Broadcom evaluates energy and materials efficiency, and strives to reduce toxins that include end-of-life management and direct emissions. Broadcom also focuses on energy and resource efficient improvements in their global offices. The Corporate Manager of Facilities tracks energy consumption worldwide to find opportunities for improvement. Such opportunities are explored based on cost and return on investment.

Further Information**Page: 4. Communication****4.1**

Have you published information about your company's response to climate change and GHG emissions performance for this reporting year in other places than in your CDP response? If so, please attach the publication(s)

Publication	Page/Section Reference	Identify the attachment
In voluntary communications (underway) – previous year attached	1-2	Environmental Policy
In voluntary communications (complete)	1-4	CSCI Membership Final
In voluntary communications (complete)	1-3	01.10.11.BRCM Energy Efficient Ethernet Solutions Wine 2010 Best Electronic Design Award
In voluntary communications (complete)	1-4	GreenTouch_Membership_NR_VF1

Further Information**Attachments**

[https://www.cdproject.net/Sites/2011/20/2320/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/4.Communication/01.10.11.BRCM Energy Efficient Ethernet Solutions Wine 2010 Best Electronic Design Award.pdf](https://www.cdproject.net/Sites/2011/20/2320/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/4.Communication/01.10.11.BRCM%20Energy%20Efficient%20Ethernet%20Solutions%20Wine%202010%20Best%20Electronic%20Design%20Award.pdf)

[https://www.cdproject.net/Sites/2011/20/2320/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/4.Communication/GreenTouch_Membership_NR_VF1.pdf](https://www.cdproject.net/Sites/2011/20/2320/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/4.Communication/GreenTouch_Membership_NR_VF1.pdf)

[https://www.cdproject.net/Sites/2011/20/2320/Investor CDP 2011/Shared Documents/Attachments/InvestorCDP2011/4.Communication/Environmental Policy.pdf](https://www.cdproject.net/Sites/2011/20/2320/Investor%20CDP%202011/Shared%20Documents/Attachments/InvestorCDP2011/4.Communication/Environmental%20Policy.pdf)

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Module: Risks and Opportunities [Investor]

Page: 5. Climate Change Risks

5.1

Have you identified any climate change risks (current or future) that have potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in other climate-related developments

5.1e

Please describe your risks that are driven by changes in other climate-related developments

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
1	Reputation	Broadcom recognizes the importance of brand recognition as it relates to environmental performance. Customers, investors and suppliers will monitor Broadcom's GHG performance, and relate this to the company's overall reputation.	Inability to do business	Current	Indirect (Client)	Very unlikely	Medium-high
2	Uncertainty in market signals	Broadcom's market position is at risk as markets respond to current and future environmental signals, and volatility increases. As the momentum for wireless, "green solution" market penetration grows, market risk also increases because customer requirements and competitive landscapes are changing rapidly.	Inability to do business	Unknown	Indirect (Client)	Unlikely	Medium-high
3	Fluctuating socio-economic conditions	The global economic downturn causes uncertainty in consumer behavior;	Reduced demand for goods/services	Unknown	Indirect (Client)	Unlikely	Medium

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
		therefore, it is uncertain how customers and end-users will invest in products that contain Broadcom's technology. Disruptions in energy supply or significant changes in the cost of energy, due to either economic forces or natural disasters, could limit or stall operations or could limit the cost competitiveness of products.					

5.1f

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; (iii) the costs associated with these actions

Broadcom has differentiated itself as a leader in providing energy and resource-efficient products. Market, brand and socio-economic risks are taken seriously and managed closely. Potential financial implications associated with these risks include, but are not limited to, decreased sales, increased manufacturing/distribution costs, and resulting decreased valuation of the company (stock price). For example, as the cost of fuel and raw materials escalates, so does the cost of manufacturing and distributing Broadcom's products. This has a direct effect on product pricing, which impacts consumer purchasing decisions. To manage this risk, Broadcom's product designers consider better alternatives for raw materials and distribution channels to reduce the unknown risks that may be associated with manufacturing or distributing these products. The cost associated with this process is minimal since decisions are made early in the design process. Because Broadcom is not heavily invested in manufacturing infrastructure, it has flexibility in locating its operations. Fluctuating cost in operations (energy, water and other commodities) is more likely to impact Broadcom and is currently being monitored for continuous improvement.

5.1g

Please explain why you do not consider your company to be exposed to risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

At the present time, Broadcom is not subject to formal climate change regulatory compliance. However, Broadcom is actively monitoring regulatory risk as it relates to product labelling and standards (ie. EPA, OSHA, RoHS Labeling and other forms of compliance). Further, Broadcom engages with regulatory or standards bodies which bring clarity to the global marketplace such as: • ATIS (North America) • ETSI (Europe) • ITU (worldwide) Broadcom voluntarily exceeds standards set forth by IEEE P802.3az Energy Efficiency Ethernet Standard as part of its broad framework to achieve high-performance, low-power technologies. Broadcom is constantly monitoring industry standards that relate to climate change in the manufacturing of products such as labelling Restriction of Hazardous Substances (RoHS) and following the Electronic Industry's Code of Conduct (EICC) by which suppliers are required to abide. By conducting annual carbon accounting of company-wide operations and discussing the best path toward carbon reduction targets, Broadcom is well positioned to meet potential future regulations around carbon emission reporting. Because Broadcom is not heavily invested in manufacturing infrastructure, it has flexibility in locating its operations. Fluctuating cost in operations (energy, water and other commodities) is more likely to impact Broadcom and is currently being monitored for continuous improvement.

5.1h

Please explain why you do not consider your company to be exposed to risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

Broadcom considers physical climate parameters to have soft impacts on business operations or sales. Because the company does not manufacture products or own its office space, physical risk is considered nominal. Fluctuating cost in operations (energy, water and other commodities) is more likely to impact Broadcom and is currently being monitored for continuous improvement. This risk associated with physical climate parameters is more likely to impact Broadcom's suppliers and this is being examined. While Broadcom maintains business recovery plans that are intended to allow it to recover from natural disasters or other events that can be disruptive to business, the extent of this impact would not be substantive. Given the geographic locations of leased office space, existing backup precautions, and other preventative risk measures that are within control, Broadcom's exposure to physical climate parameters is considered marginal.

Further Information

Page: 6. Climate Change Opportunities

6.1

Have you identified any climate change opportunities (current or future) that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in other climate-related developments

6.1e

Please describe the opportunities that are driven by changes in other climate-related developments

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact
1	Reputation	Positive perceptions about Broadcom's carbon performance by clients, investors and the general public will enhance its brand equity in the marketplace.	Increased stock price (market valuation)	Current	Indirect (Client)	Very likely	Medium
2	Changing consumer behaviour	Broadcom's customers are continuing to request energy conserving technologies which are the cornerstone of the company's product lines and R&D efforts.	Increased demand for existing products/services	Current	Direct	Very likely	Medium-high
3	Fluctuating socio-	Broadcom is confident that	Premium price opportunities	Current	Direct	Very likely	Medium-high

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	economic conditions	downturns in the economy will cause consumers to want more energy efficient products. This works in Broadcom's favor and will result in increased sales					

6.1f

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

(i) Potential financial implications of these opportunities are related to an increase of sales and potentially market valuation (stock price) and are significant in magnitude. Current economic volatility is driving demand for more energy-conserving product alternatives in the marketplace, which is the cornerstone of Broadcom's product line. A move toward wireless technologies not only saves energy directly, but also saves energy associated with manufacturing, installing and maintaining infrastructure for a non-wireless grid system. Broadcom's products not only allow end-users to consume less energy but also increase productivity, both of which increase sales. Broadcom advocates environmental and social responsibility, which includes understanding the company-wide carbon emissions. Actions that are taken to reduce carbon emissions are not only good practice but also lend to a positive perception of the company by its customers, investors and public at large. Broadcom's highly energy efficient component products are not reflected in the company-wide emissions inventory. The real benefit is transferred to downstream consumers, who receive the efficiency benefits throughout the product's useful lifetime. Therefore, the greatest opportunities for Broadcom related to climate change result from market demand for efficient products, rather than from physical or regulatory changes. Therefore, it is imperative that Broadcom be able to effectively communicate the environmental and economic benefits of its products, as well as ensure that it continues to innovate and to improve performance in order to deliver on customer's needs and expectations. (ii) The methods you are using to manage this opportunity: Broadcom's business strategy is based upon managing these opportunities and capitalizing on them. As energy efficiency continues to become increasingly important to Broadcom's customers, technological developments are expected to advance that improve efficiency and product markets. Broadcom will continue to manage this opportunity by embracing R&D in these areas and also widely promoting new product lines. Communication is managed via company press releases, the website, trade publications, quarterly performance reports, and other avenues. Others have also expressed a belief that technology can be an important tool in addressing climate change. For example, the 2008 report "SMART 2020 – Enabling the low carbon economy in the information age" by The Climate Group and GeSI, concluded that the broad implementation of technology throughout the economy could drive efficiency that would result in emission savings of 15% – 7.8 GtCO_{2e} – of global Business As Usual (BAU) emissions in 2020. Broadcom is driving innovation in communication technology and embracing the IEEE P802.3az Energy Efficiency Ethernet Standard as part of its broad framework to achieve high-performance / low-power technologies at an optimal cost point throughout its wired Ethernet portfolio. Broadcom goes beyond this standard with their Energy Efficient Networking (EEN) initiatives that enable heightened energy savings and reduced CO₂ emissions. The EEN is expected to save billions in energy costs for IT organizations, which translates to fewer carbon emissions. This underscores Broadcom's strength as the industry's leader with the broadest portfolio of Energy Efficient Ethernet silicon solutions. By integrating more functionality onto a single chip than any of its competitors, Broadcom provides products that are efficient to manufacture as well as to use. (iii) The costs associated with these actions: The costs associated with these actions are imbedded in the corporate financial structure. As the momentum for wireless, "green solution" market penetration grows, market risk also increases because customer requirements and competitive landscapes are changing rapidly. Costs associated with measuring and communicating the environmental benefits of Broadcom's products are an integral part of the public relations and marketing budgets.

6.1g

Please explain why you do not consider your company to be exposed to opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

At the present time, Broadcom is not subject to formal climate change regulatory compliance. Broadcom does not own its own buildings or manufacturing facilities, and therefore Broadcom is able to remain nimble on a global stage. Broadcom is actively monitoring regulatory risk as it relates to product labelling and manufacturing standards (ie. EPA, OSHA, RoHS Labeling and other forms of compliance) which its suppliers follow. Further, Broadcom engages with regulatory or standards bodies which bring clarity to the global marketplace such as: • ATIS (North America) • ETSI (Europe) • ITU (worldwide) • Electronic Industry's Code of Conduct (EICC) Broadcom voluntarily exceeds standards set forth by IEEE P802.3az Energy Efficiency Ethernet Standard as part of its broad framework to achieve high-performance / low-power technologies. Further, by conducting annual carbon accounting of company-wide operations and discussing the best path toward carbon reduction targets, Broadcom is well positioned to meet potential future regulations around carbon emission reporting.

6.1h

Please explain why you do not consider your company to be exposed to opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

Broadcom considers physical climate parameters to have soft impacts on business operations or sales. Because the company does not manufacture products or own its office space, physical opportunity is considered nominal. Fluctuating cost in operations (energy, water and other commodities) is a more likely outcome that would have an effect on Broadcom and is currently being monitored for continuous improvement. Climate change poses physical risks that could harm our results of operations or affect the way we conduct our business. While we maintain business recovery plans that are intended to allow us to recover from natural disasters or other events that can be disruptive to our business, we cannot be sure that our plans will fully protect us from all such disasters or events. Many of our operations are located in semi-arid regions, such as Israel and the south western United States. Some scenarios predict that these regions may become even more vulnerable to prolonged droughts due to climate change.

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading [Investor]

Page: 7. Emissions Methodology

7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Fri 01 Jan 2010 - Fri 31 Dec 2010	2746	35946

7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

7.2a

If you have selected "Other", please provide details below

7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 100 year)

Gas	Reference
HFCs	IPCC Second Assessment Report (SAR - 100 year)

7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data

Fuel/Material/Energy	Emission Factor	Unit	Reference
Natural gas	56236	Other: kg CO2e / TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories
Diesel/Gas oil	74496	Other: kg CO2e / TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories
Motor gasoline	69696	Other: kg CO2e / TJ	IPCC 2006 Guidelines for National Greenhouse Gas Inventories
Other: Electricity (US - Arizona)	.52	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - California)	.26	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Colorado)	.82	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Georgia)	.64	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Massachusetts)	.55	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Maryland)	.61	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Minnesota)	.69	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - North Carolina)	.56	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - New Jersey)	.32	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Pennsylvania)	.55	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Texas)	.60	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (US - Washington)	.12	Other: kg CO2e / kWh	eGRID2010 Version 1.0 State File (Year 2007 Data)
Other: Electricity (Australia)	.92	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (China)	.79	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (India)	.94	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION:

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other: Electricity (Japan)	.42	Other: kg CO2 / kWh	BEYOND 2020 DOCUMENTATION (2010 Edition)" International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (South Korea)	.46	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Other Asia)	.31	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Israel)	.77	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Belgium)	.26	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Denmark)	.34	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Finland)	.24	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (France)	.08	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (United Kingdom)	.50	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Greece)	.72	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Italy)	.40	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Netherlands)	.39	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"
Other: Electricity (Spain)	.35	Other: kg CO2 / kWh	International Energy Agency's "CO2 EMISSIONS FROM FUEL COMBUSTION: BEYOND 2020 DOCUMENTATION (2010 Edition)"

Page: 8. Emissions Data - (1 Jan 2010 - 31 Dec 2010)

8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

8.2a

Please provide your gross global Scope 1 emissions figure in metric tonnes CO₂e

2746

8.3a

Please provide your gross global Scope 2 emissions figure in metric tonnes CO₂e

35946

8.4

Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions which are not included in your disclosure?

No

8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and Scope 2 figures that you have supplied and specify the sources of uncertainty in your data gathering, handling, and calculations

Scope	Uncertainty Range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 5% but less than or equal to 10%	Assumptions Metering/ Measurement Constraints	Some measured data regarding 2010 facility consumption of natural gas, fuel oil, and refrigerants was not available. In future years, this data will be tracked and measured. In the case that measured data was not available, consumption was approximated using regional energy use intensities.
Scope 2	Less than or equal to 2%	Assumptions Metering/ Measurement Constraints	Some measured data regarding 2010 facility electricity consumption was not available. In future years, this data will be tracked and measured. In the case that measured data was not available, consumption was approximated using regional electricity use intensities.

8.6

Please indicate the verification/assurance status that applies to your Scope 1 emissions

Not verified or assured

8.7

Please indicate the verification/assurance status that applies to your Scope 2 emissions

Not verified or assured

8.8

Are carbon dioxide emissions from the combustion of biologically sequestered carbon (i.e. carbon dioxide emissions from burning biomass/biofuels) relevant to your company?

No

Further Information

Although the Scope 1 and 2 emissions were not 3rd party verified, CTG Energetics, Inc., the consultant performing Broadcom's inventory, conducted an internal review of the inventory.

[Page: 9. Scope 1 Emissions Breakdown - \(1 Jan 2010 - 31 Dec 2010\)](#)

9.1

Do you have Scope 1 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

Yes

9.1a

Please complete the table below

Country	Scope 1 metric tonnes CO2e
United States of America	1663
Canada	124
Australia	2
China	32
India	62
Japan	2
South Korea	11
Singapore	46
Taiwan	25
Israel	198
Belgium	18
Denmark	36
Finland	1
France	39
United Kingdom	375
Greece	11
Italy	2
Netherlands	24
Spain	75

9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By GHG type

9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 metric tonnes CO2e
CO2	2321
CH4	4.5
N2O	2
HFCs	418.5

[Page: 10. Scope 2 Emissions Breakdown - \(1 Jan 2010 - 31 Dec 2010\)](#)

10.1

Do you have Scope 2 emissions sources in more than one country or region (if covered by emissions regulation at a regional level)?

Yes

10.1a

Please complete the table below

Country	Scope 2 metric tonnes CO2e
United States of America	21660
Canada	309

Country	Scope 2 metric tonnes CO2e
Australia	170
China	2082
India	6624
Japan	73
South Korea	263
Singapore	1509
Taiwan	646
Israel	1198
Belgium	1
Denmark	1
Finland	.5
France	7
United Kingdom	1192
Greece	172
Italy	.5
Netherlands	1
Spain	37

10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

[Page: 11. Emissions Scope 2 Contractual](#)

11.1

Do you consider that the grid average factors used to report Scope 2 emissions in Question 8.3 reflect the contractual arrangements you have with electricity suppliers?

Yes

11.2

Has your organization retired any certificates, e.g. Renewable Energy Certificates, associated with zero or low carbon electricity within the reporting year or has this been done on your behalf?

No

[Page: 12. Energy](#)

12.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

12.2

Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has consumed during the reporting year

Energy type	MWh
Fuel	10953
Electricity	94444
Heat	0
Steam	0
Cooling	0

12.3

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Natural gas	9130
Diesel/Gas oil	1746
Motor gasoline	77

Page: 13. Emissions Performance

13.1

How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Decreased

13.1a

Please complete the table

Reason	Emissions value (percentage)	Direction of change	Comment
Change in methodology	1	Decrease	Broadcom was able to report more measured Scope 1 and 2 activity data for this year's inventory and thus fewer assumptions were used this year. This improvement in data quality is most likely one of the causes of the change from the previous year's emissions.
Emissions reduction activities	.6	Decrease	Despite an increase in facility square footage, Broadcom's Scope 1 and 2 emissions have decreased from the previous year's inventory. This could be due to various tenant improvements implemented in the facilities. Examples of recently implemented measures are listed below by location: Irvine 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers. System only runs dryers based on demand load. Bldg 6,7,3,9. 2.) SIGMA Air Management System (SAM) installed on the highest volume compressed air system. Provides advanced data logging, real-time load analysis, and efficient operation of multiple air compressors. 3.) Upgraded all Common Area/Break Station MR16 halogens mini-flood lamps to MR16 LED mini-flood lamps. 4.) Metal Halide to LED, a 77% reduction, translates into .6 Tons of carbon emissions per year, a 70% reduction in carbon emissions per year. San Diego 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers. System only runs dryers based on demand load. Bldg A & B 2.) Zanker1- Lighting – 80% KW reduction, Project Cost \$103,433.45, PG&E NRR Incentives \$25,696.00, Net Project Cost \$77,737.45, Straight Payback (Mo) 11.4, Return on Investment 105% 3.) Z1- during the landscape remodel replace with low water landscaping 4.) Z2- replace old HVAC equipment with energy efficient new equipment 5.) M1: interior window tinting to reduce solar load 6.) M2: interior window tinting to reduce solar load 7.) Mathilda 190: interior window tinting to reduce solar load San Jose 1.) Roof replacement with new "cool Roof" – alliance roofing will send data for new roof Hyderabad India Broadcom leased its 50k SF GOLD LEED building with MindSpace and is expanding into another 20k SF. Broadcom's IT organization has undertaken projects to meet growing computing demands in operations while reducing the consumption of IT-related as a means to mitigate energy consumption.

13.2

Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO₂e per unit currency total revenue

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
.00000569	metric tonnes CO ₂ e	unit total revenue	35	Decrease	<p>Intensity is metric tonnes CO₂e per US \$ revenue. Broadcom's total Scope 1 and 2 emissions have decreased from the previous year, while the revenue has increased. The previous year's intensity figure was .00000876 MTCO₂e/US\$ revenue. This change in emissions is likely due to several factors:</p> <ol style="list-style-type: none"> 1. Broadcom was able to report more measured Scope 1 and 2 activity data for this year's inventory and thus fewer assumptions were used this year. This improvement in data quality is most likely one of the causes of the change from the previous year's emissions. 2. Broadcom has implemented various tenant improvements in its facilities. Examples of recently implemented measures are listed below by location: Irvine 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers. System only runs dryers based on demand load. Bldg 6,7,3,9. 2.) SIGMA Air Management System (SAM) installed on the highest volume compressed air system. Provides advanced data logging, real-time load analysis, and efficient operation of multiple air compressors. 3.) Upgraded all Common Area/Break Station MR16 halogens mini-flood lamps to MR16 LED mini-flood lamps. 4.) Metal Halide to LED, a 77% reduction, translates into .6 Tons of carbon emissions per year, a 70% reduction in carbon emissions per year. San Diego 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers. System only runs dryers based on demand load. Bldg A & B 2.) Zanker1- Lighting – 80% KW reduction, Project Cost \$103,433.45, PG&E NRR Incentives \$25,696.00, Net Project Cost \$77,737.45, Straight Payback (Mo) 11.4, Return on Investment 105% 3.) Z1- during the landscape remodel replace with low water landscaping 4.) Z2- replace old HVAC equipment with energy efficient new equipment 5.) M1: interior window tinting to reduce solar load 6.) M2: interior window tinting to reduce solar load 7.) Mathilda 190: interior window tinting to reduce solar load

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
					San Jose 1.) Roof replacement with new "cool Roof" – alliance roofing will send data for new roof Hyderabad India Broadcom leased its 50k SF GOLD LEED building with MindSpace and is expanding into another 20k SF. Broadcom's IT organization has undertaken projects to meet growing computing demands in operations while reducing the consumption of IT-related as a means to mitigate energy consumption.

13.3

Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO₂e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
3.86	metric tonnes CO ₂ e	FTE Employee	21	Decrease	Broadcom's total Scope 1 and 2 emissions have decreased from the previous year, while the number of employees have increased. This change in emissions is likely due to several factors: 1. Broadcom was able to report more measured Scope 1 and 2 activity data for this year's inventory and thus fewer assumptions were used this year. This improvement in data quality is most likely one of the causes of the change from the previous year's emissions. 2. Broadcom has implemented various tenant improvements in its facilities. Examples of recently implemented measures are listed below by location: Irvine 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers. System only runs dryers based on demand load. Bldg 6,7,3,9. 2.) SIGMA Air Management System (SAM) installed on the highest volume compressed air system. Provides advanced data logging, real-time load analysis, and efficient operation of multiple air compressors. 3.) Upgraded all Common Area/Break Station MR16 halogens mini-flood lamps to MR16 LED mini-flood lamps. 4.) Metal Halide to LED, a 77% reduction, translates into .6 Tons of carbon emissions per year, a 70% reduction in carbon emissions per year. San Diego 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers.

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
					System only runs dryers based on demand load. Bldg A & B 2.) Zanker1-Lighting – 80% KW reduction, Project Cost \$103,433.45, PG&E NRR Incentives \$25,696.00, Net Project Cost \$77,737.45, Straight Payback (Mo) 11.4, Return on Investment 105% 3.) Z1- during the landscape remodel replace with low water landscaping 4.) Z2- replace old HVAC equipment with energy efficient new equipment 5.) M1: interior window tinting to reduce solar load 6.) M2: interior window tinting to reduce solar load 7.) Mathilda 190: interior window tinting to reduce solar load San Jose 1.) Roof replacement with new “cool Roof” – alliance roofing will send data for new roof Hyderabad India Broadcom leased its 50k SF GOLD LEED building with MindSpace and is expanding into another 20k SF. Broadcom’s IT organization has undertaken projects to meet growing computing demands in operations while reducing the consumption of IT-related as a means to mitigate energy consumption.

13.4

Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
.013	metric tonnes CO2e	square foot	10	Decrease	Broadcom's total Scope 1 and 2 emissions have decreased from the previous year, while the facility square footage has increased. This change in emissions is likely due to several factors: 1. Broadcom was able to report more measured Scope 1 and 2 activity data for this year's inventory and thus fewer assumptions were used this year. This improvement in data quality is most likely one of the causes of the change from the previous year's emissions. 2. Broadcom has implemented various tenant improvements in its facilities. Examples of recently implemented measures are listed below by location: Irvine 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers. System only runs dryers based on demand load. Bldg 6,7,3,9. 2.) SIGMA Air Management System (SAM) installed on the highest

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Explanation
					<p>volume compressed air system. Provides advanced data logging, real-time load analysis, and efficient operation of multiple air compressors.</p> <p>3.) Upgraded all Common Area/Break Station MR16 halogens mini-flood lamps to MR16 LED mini-flood lamps.</p> <p>4.) Metal Halide to LED, a 77% reduction, translates into .6 Tons of carbon emissions per year, a 70% reduction in carbon emissions per year. San Diego 1.) Dewpoint Control System installed on compressed air molecular sieve type Desiccant dryers. System only runs dryers based on demand load. Bldg A & B 2.) Zanker1-Lighting – 80% KW reduction, Project Cost \$103,433.45, PG&E NRR Incentives \$25,696.00, Net Project Cost \$77,737.45, Straight Payback (Mo) 11.4, Return on Investment 105%</p> <p>3.) Z1- during the landscape remodel replace with low water landscaping 4.) Z2- replace old HVAC equipment with energy efficient new equipment 5.) M1: interior window tinting to reduce solar load 6.) M2: interior window tinting to reduce solar load 7.) Mathilda 190: interior window tinting to reduce solar load San Jose 1.) Roof replacement with new “cool Roof” – alliance roofing will send data for new roof Hyderabad India Broadcom leased its 50k SF GOLD LEED building with MindSpace and is expanding into another 20k SF. Broadcom’s IT organization has undertaken projects to meet growing computing demands in operations while reducing the consumption of IT-related as a means to mitigate energy consumption.</p>

Page: 14. Emissions Trading

14.1

Do you participate in any emission trading schemes?

No, and we do not currently anticipate doing so in the next two years

14.2

Has your company originated any project-based carbon credits or purchased any within the reporting period?

No

Page: 15. Scope 3 Emissions

15.1

Please provide data on sources of Scope 3 emissions that are relevant to your organization

Sources of Scope 3 emissions	metric tonnes CO2e	Methodology	If you cannot provide a figure for emissions, please describe them
Waste generated in operations	558.5	Broadcom reported 2010 solid waste generation for about 4% of Broadcom's facilities. All facilities reporting waste emissions this year are located in California. These emissions reported account for direct methane emissions from the landfill as well as an approximation of the emissions due to the transportation of solid waste to the landfill. For 2010, annual landfilled solid waste generation for these facilities was 486 short tons. The solid waste emissions factor for landfilled solid waste uses the Environmental Protection Agency's Waste Reduction Model (WARM). The inventory assumes the value for national average net GHG emissions from landfilling for mixed MSW. For the 2010 inventory solid waste generation data was only available for a select number of Broadcom's facilities. In the future, Broadcom will continue to develop its data collection process for solid waste generation for all global facilities.	
Other: Water consumption in operations	123.6	Broadcom reported 2010 water consumption for about 5% of Broadcom's facilities. All facilities reporting water emissions this year are located in California. These emissions include the direct methane and nitrous oxide emissions associated with wastewater treatment as well as the indirect electricity consumption associated with water supply and conveyance, treatment, and distribution. In 2010, these facilities consumed 17,853,478 gallons of potable water and 6,440,280 gallons of reclaimed water. The direct methane and nitrous oxide emissions associated with wastewater treatment are derived from the wastewater emissions reported in the 2011 "Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks". In addition, the indirect emissions associated with water conveyance, treatment, and distribution are derived from Navigant Consulting's "Refining Estimates of Water Related Energy Use in California" report multiplied by region specific electricity emissions factors. For the 2010 inventory water consumption data was only available for a select number of Broadcom's facilities. In the future, Broadcom will continue to develop its data collection process for water consumption for all global facilities.	

15.2**Please indicate the verification/assurance status that applies to your Scope 3 emissions**

Not verified or assured

15.3**How do your absolute Scope 3 emissions for the reporting year compare to the previous year?**

This is our first year of estimation

Further Information

Although the Scope 3 emissions were not 3rd party verified, CTG Energetics, Inc., the consultant performing Broadcom's inventory, conducted an internal review of the inventory.

Module: Sign Off

Page: Sign Off

Please enter the name of the individual that has signed off (approved) the response and their job title

Bryce Mason, VP Corp. Real Estate

Carbon Disclosure Project