WORKING TOGETHER TO REDUCE THE IMPACT OF CLIMATE CHANGE

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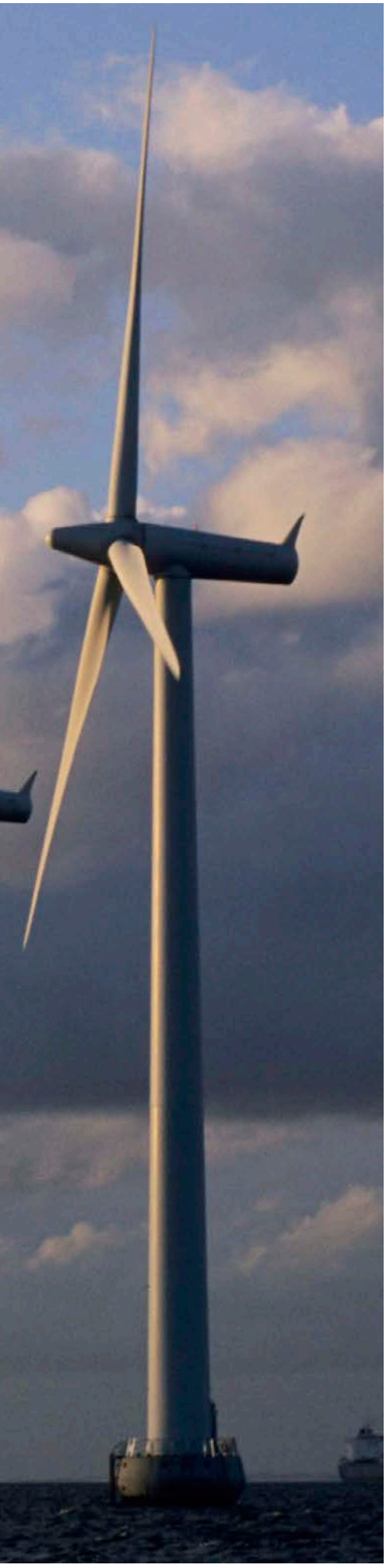
Power Forward

Why the World's Largest Companies Are Investing in Renewable Energy

Prepared by David Gardiner & Associates, LLC



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EXECUTIVE SUMMARY

Large corporations are increasingly turning to renewable energy to power their operations. Companies are investing in renewable energy because it makes good business sense: renewable energy helps reduce long-term operating costs, diversify energy supply and hedge against market volatility in traditional fuel markets. It also enables companies to achieve greenhouse gas (GHG) emissions reduction goals and demonstrate leadership on broader corporate sustainability and climate commitments.

"We are hoping to demonstrate environmental responsibility at Microsoft with our commitment to be carbon neutral starting in July 2012. As part of our accountability pillar of the overall strategy, we have established an internal price on carbon that will allow us to embed the cost of carbon in our financial model and account for the true cost of our electricity use and air travel, along with raising funds for efficiency and renewable energy projects. As part of our portfolio approach to renewable energy, we are exploring long-term PPAs, capital in new renewable energy projects, data centers with on-site innovative renewable energy sources, and RECs and carbon offsets."

Tamara "TJ" Dicaprio
Senior Director,
Carbon and Renewable Energy,
Microsoft Corporation

More than half of the Fortune 100 and more than two-thirds of the Global 100 have set GHG emissions reduction commitments, renewable energy commitments or both. As corporations turn to renewable energy to reduce GHG emissions and meet specific sourcing goals, companies are driving significant new investments in renewable energy. Though these pockets of activity are encouraging, with the proper policies, companies could set even stronger renewable energy commitments.

Among the combined Fortune 100 and Global 100 companies, nearly two dozen have set public, voluntary renewable energy commitments. These include globally recognized brands like AT&T, Dow Chemical, General Motors, Google, HSBC, Procter & Gamble, Volkswagen and Walmart.

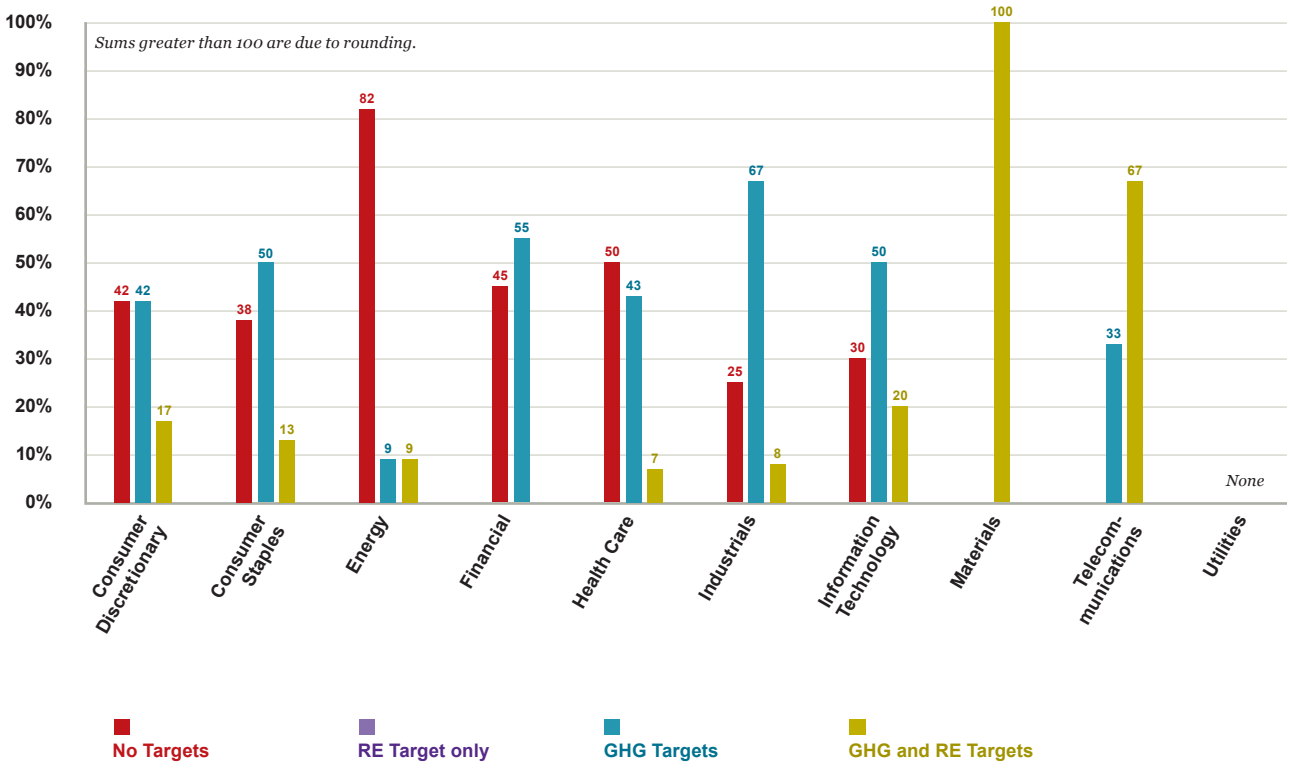
Global corporate renewable energy commitments are driving global purchasing. For many of the Fortune 100 and Global 100 firms, action on renewable energy is not limited to regional or national levels; it is planned across a global scale. In order to meet their renewable energy targets, companies are developing comprehensive purchasing strategies in every market where they have a significant presence—often in countries core to their supply chains.

Looking at corporate targets by sector, in the Fortune 100, the Materials and Telecommunications sectors have the highest share of companies who have set both GHG and renewable energy commitments. The Industrials and Financial sectors have the highest share of companies that have set GHG targets only. The Energy sector, followed by Health Care, lags in setting either a GHG or renewable energy target (see chart, opposite top).

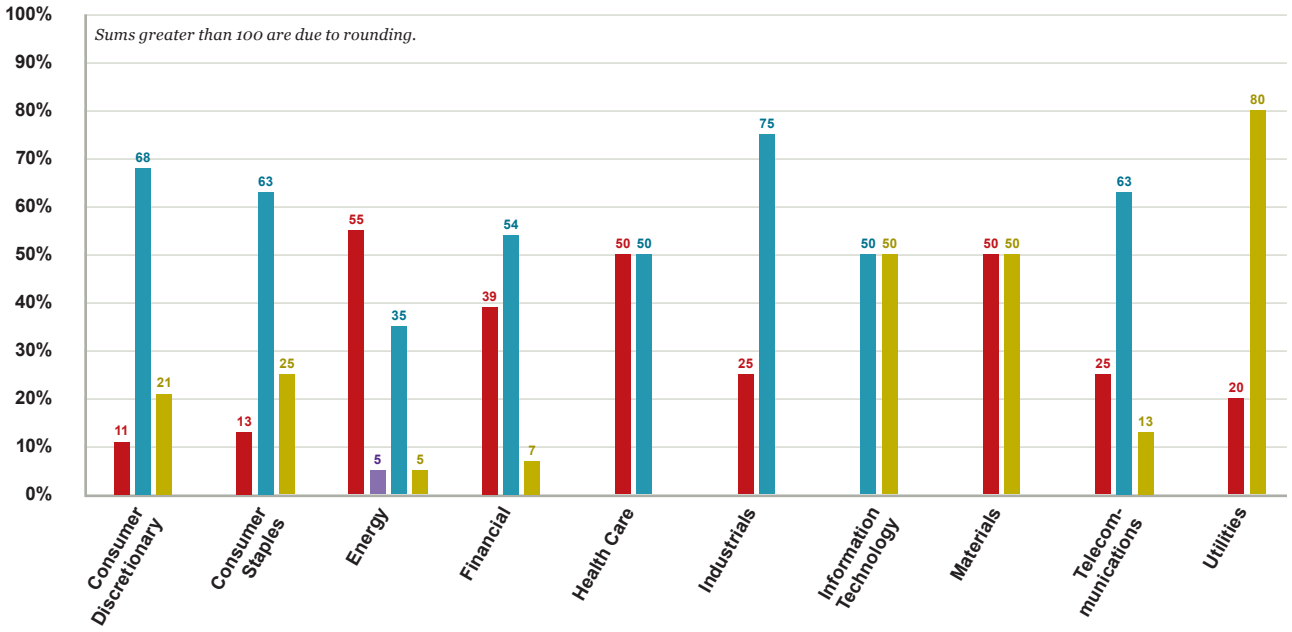
By sector in the Global 100, the vast majority of utilities have set both GHG and renewable energy targets and all IT companies have set targets. At least 60% of companies in the Industrials, Consumer Discretionary, Consumer Staples and Telecommunications sectors all have set GHG targets. The Energy, Health Care and Materials sectors lag in setting targets (see chart, opposite below).

The global transition to a lower carbon economy is accelerating due to rising public concern about climate change. This large-scale trend presents an opportunity for companies to meet corporate climate commitments and diversify their energy sources by purchasing and investing in renewable energy.

FORTUNE 100 Percentage of Companies with Climate and Energy Targets by Sector



GLOBAL 100 Percentage of Companies with Climate and Energy Targets by Sector



In 2011, renewable energy investments reached a record high of $260 billion worldwide.[1] At the same time, renewable energy costs continue to decline, with dramatic gains over the past 20 years in wind and solar in particular. Global renewable energy power generation is expected to continue to grow rapidly over the next five years, according to the International Energy Agency.[2]

"Sprint has committed to reduce its reliance on fossil fuels and increase its use of renewable energy sources for electricity. That's why we have been actively working to meet our goal to secure 10% of our total electricity through renewable energy sources by 2017. We support the extension of the Production Tax Credit for wind because it has enabled companies like Sprint to make the shift to abundant, clean and homegrown wind energy."

Amy Hargroves
Manager,
Corporate Social Responsibility,
Sprint

As companies become more sophisticated in their renewable energy procurement methods, more and more of them are pursuing diversified approaches to renewable energy that often include a combination of Renewable Energy Certificates (RECs), which are a market-based means of tracking who produces and who uses renewable energy; Power Purchase Agreements (PPAs), which are contracts to buy power over a negotiated period; and on-site direct investment.

Many companies with a history of predominantly purchasing RECs have transitioned instead to favoring PPAs and on-site direct investment, driven by longer-term commitments to emissions reductions and renewable energy. These companies are looking to capture the long-term value of renewable energy, like electricity price certainty, instead of year-on-year purchases of RECs. In some cases companies are able to get closer to cost parity (the price at which renewable energy is cost competitive with fossil fuel) with long-term PPAs or on-site direct investment. Companies also increasingly recognize that RECs do little to incentivize new investments in renewable energy. By investing directly or signing PPAs, companies are directly adding renewable capacity to the grid.

Principle barriers to accelerating corporate renewable energy purchasing include:

1. A desire by most companies to purchase renewable energy at cost parity or better, which differs across geographies;
2. Internal competition for capital funding that must otherwise drive top-line growth; and
3. Short-term, inconsistent policies that hinder companies from setting and meeting renewable energy commitments, particularly, unstable renewable energy support and an inability for companies to sign PPAs.

In order to meet their corporate sustainability commitments and invest in renewable energy, companies have developed innovative solutions to overcome many of these barriers. Walmart is prioritizing long-term PPAs above other financing models as a way of procuring long-term, low-cost renewable energy. Johnson & Johnson launched a CO2 project capital relief fund to overcome internal competition of capital and to drive implementation of energy efficiency and renewable energy projects at their sites around the world.

Additionally, companies are increasingly engaging in policy advocacy to expand their access to renewable energy and reduce costs. While many companies have aggressive public commitments to renewable energy, the lack of strong, consistent and long-term policies can create uncertainty regarding the price, supply and

Source: "Business Leaders Urge Congress to Extend Renewable Energy Tax Credit," Press Release, September 18, 2012 (http://www.ceres.org/press/press-releases/business-leaders-urge-congress-to-extend-renewable-energy-tax-credit)

[1] Bakewell, S. (January 12, 2012). Clean energy investment rises to $260 billion, boosted by solar. Bloomberg. Retrieved from http://www.bloomberg.com/news/2012-01-12/clean-energy-investment-rises-to-a-record-260-billion-on-solar.html

[2] Houssin, D. (July 5, 2012). IEA sees renewable energy growth accelerating over next five years. International Energy Agency. Retrieved from http://www.iea.org/newsroomandevents/pressreleases/2012/july/name,28200,en.html

Twenty-three companies from the Fortune 100 and Global Fortune 100 have set specific targets—either percentage of energy, capacity (MW) or level of investment—for buying and investing in renewable energy for their own operations. These commitments include:

Assicurazioni Generali: 28 MW of renewable energy by 2014 (which includes a €40 million investment in solar, wind and biomass)

AT&T: 5 MW of alternative energy from fuel cell and solar production by 2012 (relative to 2011 capacity baseline of 3,888 kW)

BP: Invest $8 billion in renewable energy between 2005 and 2015

Caterpillar: 20% renewable energy by 2020

Chevron: Invest $2.2 billion between 2011 and 2013 in renewable energy and efficiency

Deutsche Post: Increase percentage of electricity generated from renewable energy sources to 60% by 2012

Dow Chemical: 50% zero carbon energy by 2050

DuPont: Reduce nonrenewable energy use by 10% per adjusted dollar revenue by 2020 (relative to 2010 baseline)

E.ON: Invest €7 billion in renewable energy by 2017

Électricité de France: Long-term goal of 1,000 MW of renewable energy production

Enel: Increase net installed capacity of renewables by 6.6 GW by 2016 in Latin America, Russia and Eastern Europe

GDF Suez: Increase installed renewable energy capacity by 50% between 2009 and 2015

General Motors: Utilize 125 MW of renewable energy by 2020 (globally), including a commitment to double solar power from 30 to 60 MW by 2015

Google: 100% renewable energy (long-term goal)

Hewlett-Packard: 8% renewable energy by 2012

HSBC Holdings: 40% renewable energy by 2020

Johnson & Johnson: 50 MW of renewable energy by 2015

News Corporation: 20% renewable energy by 2015

Procter & Gamble: 30% renewable energy by 2020 (100% long-term goal)

Samsung Electronics: Install 2.4 MW of renewable energy by 2017

Sprint Nextel: 10% renewable energy by 2017

Volkswagen: Invest €1 billion in the expansion of renewable energy resources including solar and wind by 2020

Walmart: 100% renewable energy (long-term goal)

deployment of renewable energy. In many markets, government incentives for renewable energy help make projects feasible, such as solar RECs in New Jersey or the renewable energy feed-in tariffs in Germany and the United Kingdom. Not all markets allow companies to seek PPAs with renewable energy providers, for example. As a result of renewable energy policy uncertainty, many companies with corporate renewable energy commitments, including Hewlett-Packard, Johnson & Johnson and Sprint, are engaged in policy advocacy, both directly with legislators and in support of key policies such as the Production Tax Credit (PTC) for wind. Others are seeking to change the rules so they can sign PPAs and choose where and how they source their energy. As large electricity consumers with significant political clout, corporate purchasers of renewable energy are, in many cases, redefining the very politics of renewable energy.

Corporate commitments are driving renewable energy investments. The combination of a sluggish recovery from the global economic crisis and austerity measures to tackle budget deficits has had a significant impact on renewable energy deployment across nearly every market, drawing down financial support from government incentives, which typically have been a key driver for renewable energy investment. Corporate investment in renewable energy, therefore, is even more important as a driver of renewable energy markets in the near term. Investing in renewable energy has become an integral part of what it means to be a sustainable company in the 21st century, which has significant implications for electric utility companies as more large electricity consumers shift to renewable energy. The findings of this report also have implications for policy makers, who should be moving to expand availability of renewable energy to lower prices in order to meet the growing demand among the world's largest corporations.

Recommendations for Corporations

- Companies that do not have renewable energy or GHG commitments should set time-bound targets. There is a strong economic case and significant precedent for setting a corporate commitment to manage climate risks.
- Companies with GHG targets should also set renewable energy targets, or at a minimum ensure that renewable energy is a part of any GHG reduction strategy. Specific renewable energy targets are strongly encouraged because they clearly explain a company's commitment to renewable energy. While energy efficiency is encouraged as the first and least-cost investment, companies—especially growing companies—will not achieve their climate commitments through efficiency alone; it will require parallel investments in renewable energy.
- Companies should be fully transparent in reporting their GHG commitments and the role that renewable energy should play in meeting them, using emerging global standards for Scope 2 carbon accounting. Companies should publicly disclose the amount of renewable energy they purchase annually compared to their total energy consumption, in order to measure progress.
- Companies should identify opportunities to support local, state and national policies that remove barriers to scale up renewable energy and enable companies to achieve their climate commitments. Companies are already seeing the value of engaging in specific enabling policies that improve access to and reduce the cost of renewable energy. All companies should be engaged in policy

advocacy because it helps increase availability of renewable energy and lower prices, while bringing corporate commitments and public policy positions in line with one another.

Recommendations for Policy Makers

- U.S. policies that promote renewable energy, like the Production Tax Credit for wind or feed-in tariffs for solar, should be extended. The PTC in particular has enabled the wind industry to dramatically slash energy costs, which eliminates an important barrier to purchasing renewable energy. Allowing the PTC to expire will immediately raise prices for companies committed to buying renewable energy.
- State utility regulators should authorize the use of third-party PPAs and remove policies that limit the development of on-site renewable power generation. Currently, PPAs are not allowed or are otherwise restricted in Florida, Georgia, Iowa, Kentucky and North Carolina.[3] As companies increasingly look to PPAs to procure long-term, cost-effective renewable energy, policy makers and utility regulators must work together to enable increased corporate access to renewable energy.
- Renewable Portfolio Standards (RPSs) should be enacted in all U.S. states, either through state legislatures or through a federal RPS. An RPS requires utilities to procure a minimum amount of electricity from renewable sources. In the 30 states and Washington, D.C. where they currently exist, governors and state legislators should strengthen and expand RPSs. RPS mandates have driven one third of new renewable electricity in the United States.[4]
- Because the Fortune 100 and Global 100 operate internationally, policies such as feed-in tariffs and renewable energy mandates are needed to kick-start renewable energy industries, particularly in emerging markets. Many countries critical to global supply chains have fledgling renewable energy markets that require stable support and clear policies. In other markets, like China, voluntary green power markets do not yet exist, and incentives and market structures must be created.
- Ultimately, policies that enable deeper cost reductions to level the playing field with conventional energy sources are needed. Companies are already significant drivers of renewable energy purely through voluntary efforts, but to reach the scale and pace needed to address the challenge of climate change, policies are needed that enable more companies across more sectors to use renewable energy cost-competitively. These include market-based solutions that price negative externalities and allow businesses to find the most cost-effective measures to achieve their GHG and renewable energy commitments.

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[3] DSireSolar (August 2012). Third-party solar PV PPAs. Retrieved from http://www.dsireusa.org/documents/summarymaps/3rd_Party_PPA_map.pdf

[4] Fulton, M., & Capalino, R. Deutche Bank Group, Deutche Bank Climate Change Advisors (2012). Ramping up renewables: Leveraging state RPS programs amid uncertain federal support. Retrieved from the U.S. Partnership for Renewable Energy Finance website: http://www.dbcca.com/dbcca/EN/_media/Ramping_up_Renewables-Leveraging_State_RPS_Programs_amid_Uncertain_Federal_Support.pdf


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Introduction

The world's largest companies understand the benefits of renewable energy, motivating many to set voluntary corporate renewable energy commitments that scale up their use of renewable energy. Companies are driven to adopt these targets by a combination of factors, including an attractive economic return on investment, climate science and evidence of increasing climate impacts, concern from the public and their customers about environmental and social issues, as well as public policies that increasingly support renewable energy. Renewable energy has become an integral part of corporate sustainability and climate plans.

This report is designed to clarify the size and scope of corporate renewable energy commitments in order to shed greater light on their level of ambition and impact. In addition, this report seeks to better understand the business case behind why members of the Fortune 100 (America's largest corporations by revenue) and Global 100 (the world's largest corporations by revenue) are investing significantly in renewable energy when, for many, there is no legal obligation to do so.

WWF, Calvert and Ceres have commissioned this review of corporate renewable energy and climate commitments by David Gardiner & Associates. All three organizations work extensively with businesses to promote renewable energy and corporate sustainability through partnership programs and/or shareholder advocacy, and all three organizations recognize the urgency for corporate action to mitigate climate change.

In an era of rapidly changing expectations, opportunities and risks, this report is meant to offer recommendations and models of success to corporate sustainability officers and investors as they develop and implement corporate renewable energy commitments and GHG emissions reduction strategies. This review will provide both audiences with a clearer overall picture of existing corporate renewable energy commitments and will identify the major issues—both opportunities and barriers—related to strengthening those commitments within a larger corporate sustainability strategy. The review will also help the renewable energy industry, policy makers and the media better understand corporate renewable energy customers as well as the policies needed to level the playing field to enable large corporate purchasers of energy to continue purchasing renewable energy at scale.

Recent reports from Ceres and WWF offer companies clear guidelines for designing and achieving corporate renewable energy and GHG emissions reduction commitments. WWF's Energy Report: 100% Renewable Energy by 2050 lays out the vision and the technical feasibility of a world run almost entirely on renewable energy by 2050.[5] The Road to 2020: Corporate Progress on the Ceres Roadmap for Sustainability, a recent publication by Ceres and Sustainalytics, reviews how U.S. companies are making progress on their sustainability commitments, including renewable energy and GHG emissions reduction.[6] The report recommends that in order to achieve emissions reduction

"We aim to make production operations at our plants around the world 25% more eco-friendly by 2018. In concrete terms, that means 25% less energy and water consumption, emissions and waste. One major contributory factor here is the €600 million investment we are making in energy from renewables, including solar and hydroelectric power and wind energy [recently increased to €1 billion]. This will lead to a 40% drop in CO_2 emissions from energy supplies to our production plants."

Martin Winterkorn
Chairman of the Board of Management, Volkswagen Aktiengesellschaft

and Bernd Osterloh
Chairman of the General and Group Works Councils

Source: 2011 Volkswagen Sustainability Report (http://sustainability-report2011.volkswagenag.com/en.html)

[5] WWF (February 3, 2010). The energy report: 100% renewable energy by 2050. Retrieved from http://wwf.panda.org/what_we_do/footprint/climate_carbon_energy/energy_solutions/renewable_energy/sustainable_energy_report/

[6] (2012). The road to 2020: Corporate progress on the Ceres roadmap for sustainability. Boston, MA: Ceres, Sustainalytics.

targets advised by the Intergovernmental Panel on Climate Change, companies must source 30% of their energy from renewable sources by 2020 and reduce GHG emissions 25% by 2020 (from a 2005 baseline).

Report Methodology

This report evaluates how companies are committing to purchase renewable energy, with a focus on operations. Our analysis offers a prospective assessment of how and at what scale companies are committed to investing in and procuring renewable energy.

The findings in this report are based on publicly available information, including annual corporate sustainability reports, 2012 responses to the Carbon Disclosure Project, the EPA Green Power Partnership and the 2012 Global Corporate Renewable Energy Index, created by Bloomberg New Energy Finance and Vestas. In particular, this report examines the publicly available information on companies in the Fortune 100 and Global 100. The Global 100 includes 27 companies also in the Fortune 100, which should be taken into consideration when attempting to compare the scope and scale of commitments across both lists. In order to supplement this research, this report also includes trends and highlights from nearly 20 interviews with Fortune 100 senior executives. Important caveats to consider are that publicly available data can be imperfect and interviews were conducted with only a limited set of companies that do not represent a comprehensive view of the economy.

This study complements recent research on corporate renewable energy trends, most notably the 2012 Global Corporate Renewable Energy Index by Bloomberg New Energy Finance and Vestas, by also including GHG emissions reduction commitments, given that a portion of that climate commitment would be met by investments in renewable energy. While the report does not focus on energy efficiency, it is not meant to diminish its importance—corporate leaders often pursue a diversified approach to energy procurement, which should include a significant focus on energy efficiency in addition to renewable energy. “Renewable energy” in this report usually refers to renewable electricity (though companies also procure renewables for thermal needs) and will not include transport energy.

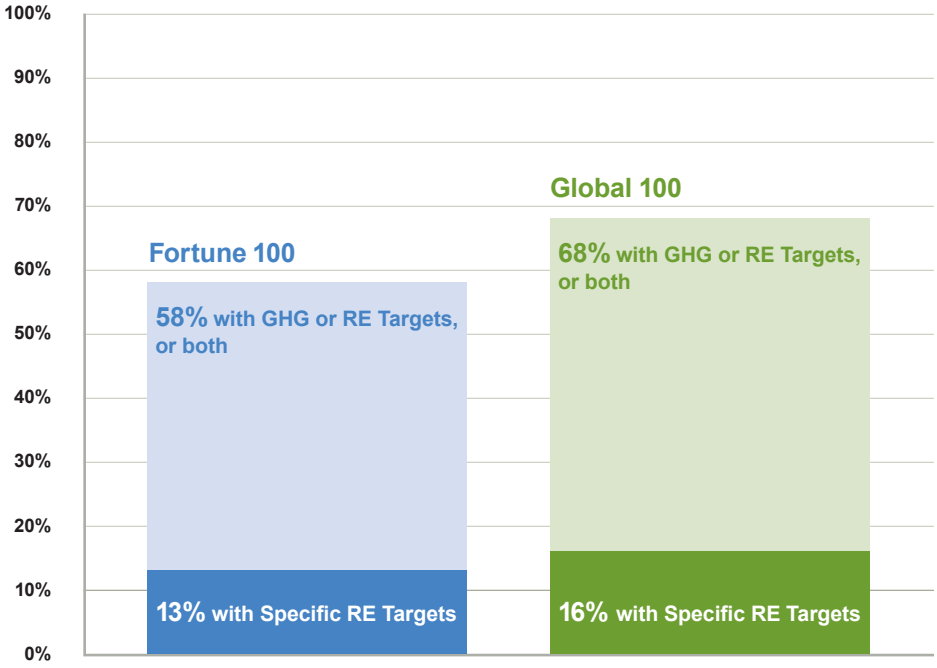
What Targets Are Companies Setting?

Fortune 100 and Global 100 companies are buying renewable energy today and plan to buy more tomorrow, driven largely by corporate renewable energy commitments and GHG emissions reduction commitments.

Corporate renewable energy commitments differ by scope, scale and level of ambition. Commitment types are typically one of three options: a percentage of total energy (e.g., HSBC Holdings will secure 40% renewable energy by 2020), an absolute procurement target (e.g., Johnson & Johnson will procure 50 MW of renewable energy by 2015) or a target investment level (e.g., Volkswagen will invest €1 billion in renewable energy resources including solar, wind and hydroelectric power by 2020).

More than half of the Fortune 100 (58%) has set a renewable energy commitment, a GHG emissions reduction commitment or both. Currently 13% of the Fortune

Percentage of Fortune 100 and Global 100 Companies with Energy-Related Targets



100 has set a specific renewable energy commitment. However, 41% of the Fortune 100 has yet to set either a renewable energy commitment or a GHG emissions reduction commitment.

Over two-thirds of the Global Fortune 100 (68%) has set a renewable energy commitment, a GHG emissions reduction commitment or both. Currently 16% of the Global 100 has set a specific renewable energy commitment. However, 31% has yet to establish a goal to invest in renewable energy or to reduce GHG emissions. Often the more global a firm, the more likely it is to set climate and renewable energy commitments. There is an overlap of 27 companies that are on both lists that have set specific targets to purchase renewable energy for their own operations.

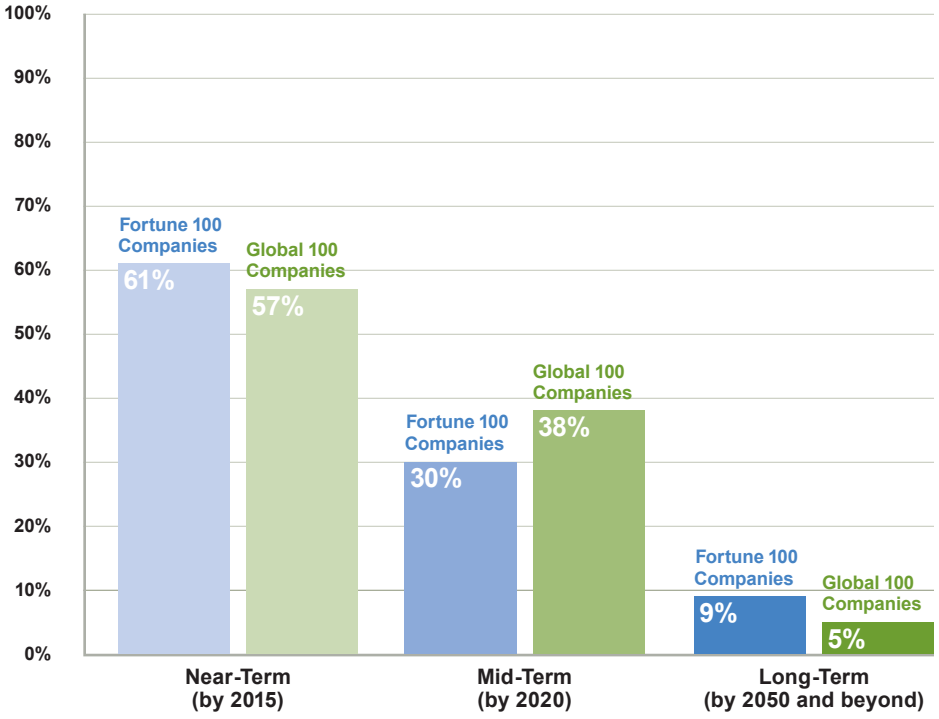
Corporate renewable energy commitments can be categorized as near-term (by 2015), mid-term (by 2020) or long-term (by 2050 and beyond) (see chart, page 12). Despite a difficult economic environment, corporations have not been deterred from investing in renewable energy. All Fortune 100 companies with targets announced their renewable energy commitments after the global economic crisis, with the exceptions of Google and Walmart, which set their targets in 2007.

Companies with GHG reduction targets are driven to look for a variety of ways to reduce their emissions, including through renewable energy, though they do not always have a specific renewable energy target. For example, FedEx Corporation has a corporate GHG target but no specific renewable energy commitment, and has installed five solar energy systems with a total installed capacity of 4,889

"Procter & Gamble is proud of its target to achieve 30% renewable energy by 2020. We know it is a challenging target, but it is also an incredibly meaningful target that represents our culture of innovation. Sustainability is embedded into the rhythm of the business at P&G, and we believe that it will support our long-term growth. In order to identify on-site renewable energy project opportunities, we look at which facilities have the highest energy costs. Then we map the biomass, geothermal, wind and solar availability, evaluate relevant incentives and then conduct a net present value evaluation of potential projects. Importantly, we have not established a lower rate of return for sustainability projects—we plan to deliver renewable energy profitably and at scale."

Steve Skarda
Corporate Energy/CO_2 Leader, Procter & Gamble

Timing of Commitments in Fortune 100 and Global 100 Companies with Energy-Related Targets



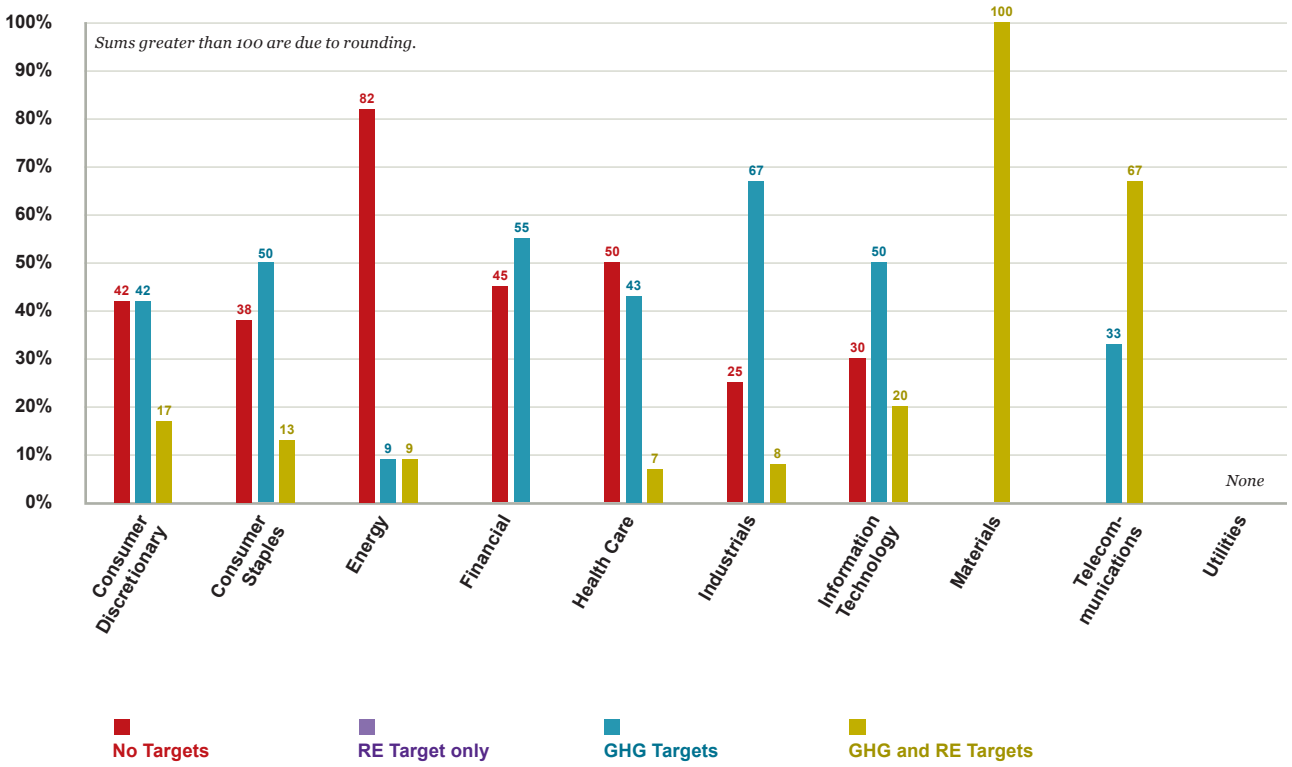
kW.[7] Though targets provide a tangible driver for scaling renewable energy and reducing a company's carbon footprint, many companies buy renewable energy to offset electricity use without any targets. Companies like Costco and Safeway are significant purchasers of renewable energy but neither company has set a GHG or renewable energy target. However, on the whole, companies with targets tend to invest more in renewable energy—creating innovative ways of meeting their targets along the way—and they also tend to invest in longer-term projects and procurement methods like PPAs and on-site generation.

To illustrate how corporate GHG and renewable energy targets compare across sectors, this report classifies companies across 10 sectors following the Global Industry Classification Standard (GICS), an industry taxonomy used by the global financial community. The GICS structure consists of 10 sectors, including Consumer Discretionary, Consumer Staples, Energy, Financial, Health Care, Industrials, Materials, Information Technology, Telecommunication Services and Utilities. The following charts (on pages 14–17) show which companies by sector in the Fortune 100 and Global Fortune 100 have targets (either for GHG emissions reduction, renewable energy or both) and those that do not. The analysis only reflects whether companies have set GHG emissions reduction and renewable energy targets; it is not a reflection of the quality or level of ambition of those targets.

[7] Hart Research Associates. Solar Energy Industries Association (2012). Solar means business: Top commercial solar customers in the U.S. Retrieved from http://www.seia.org/research-resources/solar-means-business-top-commercial-solar-customers-us.


E-40

FORTUNE 100 Percentage of Companies with Climate and Energy Targets by Sector



In the Fortune 100, the Materials and Telecommunications sectors lead in setting both GHG and renewable energy targets. Companies from the Industrials and Financials sectors lead in setting GHG targets only (without also setting renewable energy targets). There are no utilities currently in the Fortune 100.

The Energy industry is lagging most in setting targets—82% of companies in the Energy sector have not set either a GHG or renewable energy target, followed by 50% of companies without targets in the Health Care sector and 45% in the Financial sector. The Energy, Health Care and Industrial sectors all only have one company that has set a specific renewable energy commitment. For the full list of Fortune 100 companies and targets by sector see Appendix A, pp 32–36.

FORTUNE 100 Companies with Energy-Related Targets by Sector

Consumer Discretionary

NO TARGET (42%)
Amazon.com
CHS
Comcast
Lowe's
Sears Holdings

GHG TARGETS (42%)
Best Buy
Ford Motor*
Home Depot
Johnson Controls
Walt Disney

RE and GHG TARGETS (17%)
General Motors*
News Corporation

Consumer Staples

NO TARGET (38%)
Costco Wholesale*
PepsiCo
Safeway
Sysco
Tyson Foods
Walgreen

GHG TARGETS (50%)
Archer Daniels Midland
CVS Caremark*
Kraft Foods
Kroger*
Philip Morris International
Supervalu
Target
The Coca-Cola Company

RE and GHG TARGETS (13%)
Procter & Gamble*
Walmart Stores*

Energy

NO TARGET (82%)
Conoco Phillips*
Enterprise Products Partners
Hess
Marathon Petroleum
Murphy Oil
Plains All American Pipeline
Sunoco
Valero Energy
World Fuel Services

GHG TARGETS (9%)
Exxon Mobil*

RE and GHG TARGETS (9%)
Chevron*

Financial

NO TARGET (45%)
American International Group*
Berkshire Hathaway*
Fannie Mae*
Freddie Mac*
INTL FCStone
Liberty Mutual Insurance Group
MetLife
Nationwide
New York Life Insurance

GHG TARGETS (55%)
Allstate
American Express
Bank of America Corp.*
Citigroup*
Goldman Sachs Group
J.P. Morgan Chase & Co.*
Morgan Stanley
Prudential Financial
State Farm Insurance Cos.
TIAA-CREF
Wells Fargo*

RE and GHG TARGETS (0%)

Health Care

NO TARGET (50%)
Aetna
AmerisourceBergen*
Express Scripts Holding
(merged with Medco)
HCA Holdings
McKesson*
Medco Health Solutions
(merged with Express Scripts)
WellPoint

GHG TARGETS (43%)
Abbott Laboratories
Cardinal Health*
Humana
Merck
Pfizer
UnitedHealth Group*

RE and GHG TARGETS (7%)
Johnson & Johnson

Industrials

NO TARGET (25%)
Delta Air Lines
General Dynamics
Honeywell International

GHG TARGETS (67%)
Boeing
Deere
FedEx
General Electric*
Lockheed Martin
United Continental Holdings
United Parcel Service
United Technologies

RE and GHG TARGETS (8%)
Caterpillar

Information Technology

NO TARGET (30%)
Apple
Ingram Micro
Oracle

GHG TARGETS (50%)
Cisco Systems
Dell
Intel
International Business Machines*
Microsoft

RE and GHG TARGETS (20%)
Google
Hewlett-Packard*

Materials

NO TARGET (0%)

GHG TARGETS (0%)

RE and GHG TARGETS (100%)
Dow Chemical
DuPont

Telecommunications

NO TARGET (0%)

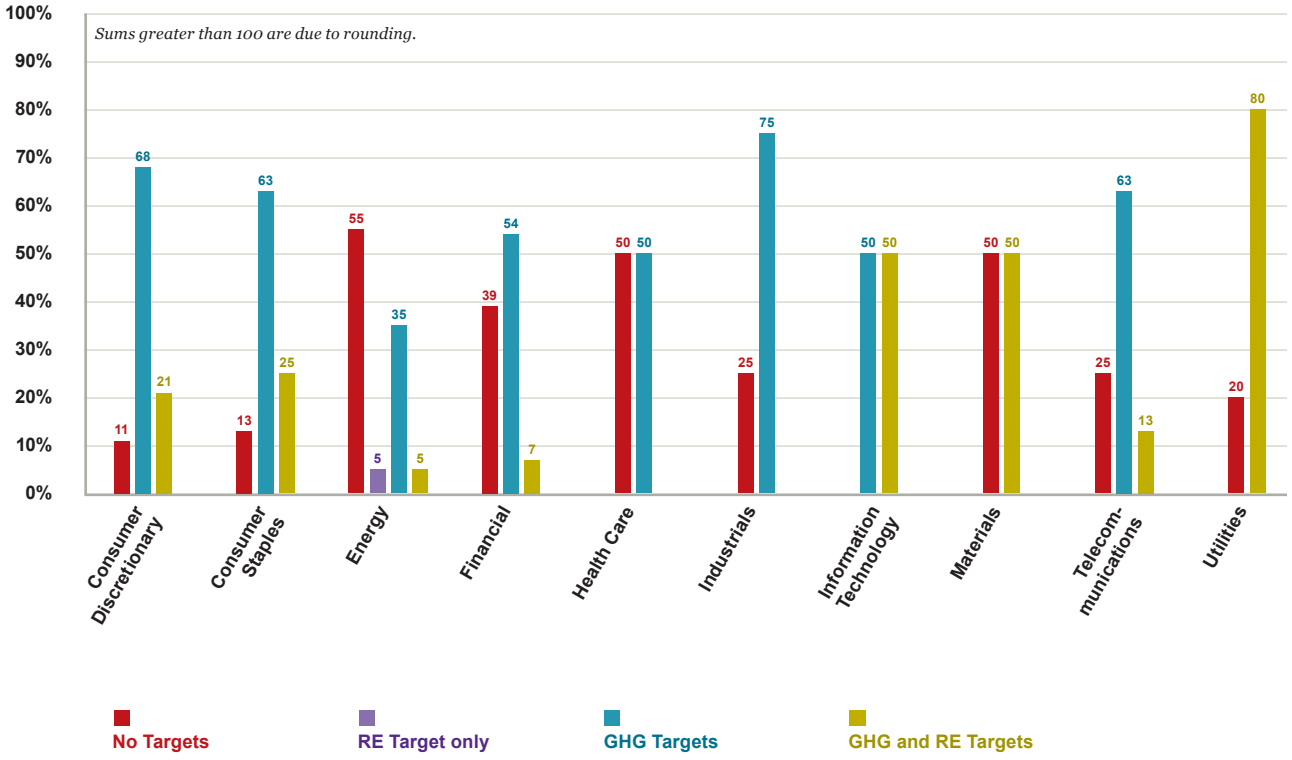
GHG TARGETS (33%)
Verizon*

RE and GHG TARGETS (67%)
AT&T
Sprint Nextel*

* These companies appear in both the Fortune 100 and Global 100.

Note: Companies listed here are from the annual 2012 ranking of the Fortune 100 and Global 100.

GLOBAL 100 Percentage of Companies with Climate and Energy Targets by Sector



In the Global 100, the Utilities sector leads with 80% of companies setting both GHG and renewable energy targets. All companies in the Information Technology sector have set some type of target, followed closely by 89% of Consumer Discretionary and 88% of Consumer Staples companies. Again, Energy sector companies lag in setting targets—more than half do not have either type of target. Fifty percent of companies in the Health Care and Materials sectors also do not have targets. For the full list of Global 100 companies and targets by sector see Appendix B, pp 37–42.

GLOBAL 100 Companies with Energy-Related Targets by Sector

Consumer Discretionary

NO TARGET (11%)
Hon Hai Precision Industry
Metro

GHG TARGETS (68%)
BMW
Carrefour
Daimler
Ford Motor*
Hitachi
Honda Motor
Hyundai Motor
Nissan Motor
Panasonic
Peugeot
Sony
Toshiba
Toyota Motor

RE and GHG TARGETS (21%)
Deutsche Post
General Motors*
Samsung Electronics
Volkswagen

Consumer Staples

NO TARGET (13%)
Costco Wholesale*

GHG TARGETS (63%)
CVS Caremark*
Kroger*
Nestlé
Tesco
Total

RE and GHG TARGETS (25%)
Procter & Gamble*
Walmart Stores*

Energy

NO TARGET (55%)
China National Petroleum
ConocoPhillips*
ENI
Gazprom
Lukoil
PDVSA
Pemex
Petronas
Royal Dutch Shell
Sinopec Group
Valero Energy

RE TARGET (5%)
BP

GHG TARGETS (35%)
Exxon Mobil*
Indian Oil
JX Holdings
Marathon Oil
Petrobras
Repsol YPF
Statoil

RE and GHG TARGETS (5%)
Chevron*

Financial

NO TARGET (39%)
American International Group*
Berkshire Hathaway*
BNP Paribas
Dexia Group
EXOR Group
Fannie Mae*
Freddie Mac*
Groupe BPCE
Ind. & Com. Bank of China
Lloyds Banking Group
Nippon Life Insurance

GHG TARGETS (54%)
Allianz
Aviva
AXA
Banco Santander
Bank of America Corp.*
Citigroup*
Crédit Agricole
ING Group
J.P. Morgan Chase & Co.*
Japan Post Holdings
Munich Re Group
Prudential
Royal Bank of Scotland
Société Générale
Wells Fargo*

RE and GHG TARGETS (7%)
Assicurazioni Generali
HSBC Holdings

Health Care

NO TARGET (50%)
AmerisourceBergen*
McKesson*

GHG TARGETS (50%)
Cardinal Health*
UnitedHealth Group*

RE and GHG TARGETS (0%)

Industrials

NO TARGET (25%)
China Railway Group

GHG TARGETS (75%)
BASF
General Electric*
Siemens

RE and GHG TARGETS (0%)

Information Technology

NO TARGET (0%)

GHG TARGETS (50%)
International Business Machines*

RE and GHG TARGETS (50%)
Hewlett-Packard*

Materials

NO TARGET (50%)
Glencore International

GHG TARGETS (0%)

RE and GHG TARGETS (50%)
Arcelor Mittal

Telecommunications

NO TARGET (25%)
China Mobile Communications
Nippon Telegraph & Telephone

GHG TARGETS (63%)
Deutsche Telekom
SK Holdings
Telefónica
Verizon Communications*
Vodafone

RE and GHG TARGETS (13%)
AT&T*

Utilities

NO TARGET (20%)
State Grid

GHG TARGETS (0%)

RE and GHG TARGETS (80%)
E.ON
Électricité de France
Enel
GDF Suez

* These companies appear in both the Fortune 100 and Global 100.

Note: Companies listed here are from the annual 2012 ranking of the Fortune 100 and Global 100.

Why Are Companies Buying Renewable Energy?

Companies are investing in renewable energy because it makes good business sense. Renewable energy offers companies important opportunities to reduce operating costs, diversify energy supply and hedge against market volatility in traditional fuel markets. These investments also enable companies to achieve GHG emissions reduction goals and demonstrate leadership in broader corporate climate commitments. The three most common drivers for purchasing renewable energy include:

"HSBC plans to dramatically increase its renewable energy use from 25% to 40% by 2020. We decided to make this commitment for three reasons: we want to improve our carbon footprint, we want to save money and we want to lock in lower rates over the long term. As one of the largest investors in renewable energy, we are looking for opportunities across the globe in wind, solar, geothermal, biomass and fuel cells."

Bill Thomas
Group Head, HTS Sustainability, HSBC Holdings

Investing in renewable energy is an effective way to reduce the environmental impact of a company's electricity use, effectively reducing the corporate carbon emissions profile. For instance, Sony promotes the use of renewable energy to achieve its corporate GHG commitment to reduce absolute emissions 30% by 2015. Renewable energy accounts for approximately 10% of the total amount of electricity that Sony purchases worldwide each year.[8]

Companies are driven by demand and interest from their customers. For example, according to the 2012 Global Consumer Wind Study, a survey of over 24,000 consumers in 20 countries, 74% of consumers said they would have a more positive perception of a brand if wind energy were the primary energy source used in its production, and 49% of consumers expressed willingness to pay more for products made with renewable energy.[9]

Companies are looking for opportunities to lock in fixed, long-term prices in order to limit exposure to commodity price swings. Renewable energy offers an opportunity for companies to decrease use of fossil fuels and reduce and stabilize utility costs. A reliance on fossil fuel generation can expose a company to price spikes and variations in fossil fuel costs. Renewable energy is a fuel-free option, which can provide long-term price certainty. For example, General Motors established a global renewable energy commitment to utilize 125 MW of renewable energy on-site by 2020, including a commitment to double solar power from 30 to 60 MW by 2015, across its manufacturing facilities in over 30 countries. This plan will allow the manufacturer to lock in a fixed price for electricity over the long term, guarding against expected rises in traditional fuel markets.

How Do Companies Plan to Achieve Their Renewable Energy Commitments?

For many of the largest companies, strategies to meet their renewable energy commitments are not limited to national or regional levels; they are implemented on a global scale.

Global corporate commitments are driving global purchasing. As the largest corporations in the world choose to procure renewable energy at scale, it will

[8] World Wildlife Foundation (2012). Sony leading through innovation. Retrieved from http://wwf.panda.org/what_we_do/how_we_work/businesses/climate/climate_savers/partner_companies/sony/

[9] Consumers more willing to buy from brands using renewable energy (September 14, 2012). Environmental Leader. Retrieved from http://www.environmentalleader.com/2012/09/14/consumers-more-willing-to-buy-from-brands-using-renewable-energy/

have ripple effects in nearly every major market. For example, Walmart is developing a comprehensive renewable energy purchasing strategy in every market where it has a significant presence in order to meet its 100% renewable energy commitment. Already the company has more than 180 renewable energy projects in operation or under development, providing more than 1.1 billion kW hours of renewable electricity annually.[10] At the same time, in order to achieve its 40% renewable energy target by 2020, HSBC plans to identify low-cost renewable energy opportunities in China, Europe, India, Latin America, the United Kingdom and the United States.

Companies are testing the waters in a few markets before expanding. In order to strategically deploy capital across various markets, companies with a global presence complete internal reviews to identify key market opportunities. Companies tend to analyze each market by product volume, corporate energy use, level of private and public sector investment in renewable energy, and favorable regulatory structure for renewable energy financing (such as incentives and allowance of PPAs). Intel serves as one such example—following the company's successful investment in solar energy in Israel, Vietnam and the United States, Intel now plans additional renewable energy opportunities across Asia, most notably in China, India, Japan and Malaysia.

Corporate commitments also differ in execution. As companies become more sophisticated in their renewable energy procurement methods, more and more companies are pursuing a diversified approach to renewable energy that often includes a combination of RECs, PPAs and on-site direct investment. Many companies with a history of predominantly purchasing RECs have transitioned to instead favoring PPAs and on-site direct investment exclusively. Though inexpensive, RECs come at a premium and in some cases companies are able to get closer to cost parity with long-term PPAs or on-site direct investment. For companies concerned that REC purchases may not deliver new or additional renewable energy to the grid, PPAs and on-site investment are favorable.

Renewable Energy Certificates

RECs are credits purchased from a utility through a third-party vendor in which a company can buy the environmental "attributes" associated with the renewable electricity generated (1 REC = 1 megawatt hour). Companies choose to buy RECs because they:

- Allow flexibility, especially when other green products are otherwise not locally available. REC purchases enable companies to purchase renewable energy across a diverse geographical area while still applying the renewable energy attributes to the electricity use at a given facility. Intel continues to be the nation's largest voluntary purchaser of renewable energy, a title awarded to the company each year since 2008 by the U.S. Environmental Protection Agency's (EPA's) Green Power Partnership. In 2012, Intel increased its purchase of RECs to account for nearly 90% of its U.S. electricity use.

[10] Raj, R. (October 5, 2012). How to sell renewable energy to Walmart. GreenBiz. Retrieved from http://www.greenbiz.com/blog/2012/10/05/how-sell-renewable-energy-walmart

- Enable companies to maintain existing relationships with their utilities. For companies that are otherwise unfamiliar with renewable energy project opportunities, RECs allow for companies to continue their existing procurement arrangements with electricity providers.
- Demonstrate commitment to renewable energy while transitioning to PPAs and on-site direct investment. RECs offer a bridge while companies learn about other renewable energy investment strategies. In addition, RECs offer the opportunity for a company to scale to its organization's total energy consumption, which can be difficult to do exclusively with PPAs and on-site direct investment.

Power Purchase Agreements

A PPA is a contract to buy power over time at a negotiated price from a particular facility in which the renewable energy is either located on-site or sited remotely. In this financial arrangement, a third-party developer owns, operates, maintains and monitors the renewable energy system, placing risk on the project developer, not the company. Companies are most likely to negotiate PPAs where electricity rates are high, incentives exist and financial partners are available. Firms prefer PPAs because they:

- Ensure that a company is directly responsible for new, additional renewable energy generation. In order to achieve its full corporate renewable energy commitment of 10% by 2017, Sprint Nextel plans to negotiate numerous PPAs in 2012 and 2013. Sprint has found that PPAs are a preferable financing strategy, following a successful five-year PPA with Kansas City Power & Light that ended in 2011.[11]
- Limit capital investment required, freeing up resources to invest in revenue-generating assets. In 2011, AT&T was the single largest private investor in the United States, with over $20 billion in capital expenditures, mostly in broadband infrastructure.[12] For the company to achieve its corporate renewable energy commitment to purchase 5 MW of renewable energy by 2012 (from fuel cells and solar photovoltaic (PV) systems), the PPA financing structure offers a preferred model. By limiting the capital outlay required for renewable energy, it allows the company to focus on investments in its wireless network.
- Can be more cost-effective for meeting long-term commitments than buying RECs off the spot market. Most corporate renewable energy commitments enable a company to plan for the long term. RECs only represent a fraction of the total value of a renewable energy project and are typically contracted for no more than two to three years, whereas negotiating a PPA for 15–20 years guarantees a long-term revenue stream—which represents significant financial value to project developers. Importantly for companies, a long-term, fixed-price contract for renewable energy protects them from expected price increases and volatility in traditional fuel markets.

[11] Sprint. (2012). Investing in clean energy. Retrieved from http://www.sprint.com/responsibility/ouroperations/climate_change/renewable-energy.html

[12] Carew, D., & Mandel, M. (2012). Investment heroes: who's betting on America's future? Progressive Policy Institute. Retrieved from http://progressivepolicy.org/wp-content/uploads/2012/07/07.2012-Mandel_Carew_Investment-Heroes_Whos-Betting-on-Americas-Future.pdf

- Deliver renewable energy from local sources. Google buys electricity directly from a renewable energy project developer through PPAs, selecting projects that are on the same power grid as its data center facilities. Google has completed two long-term (20-year) PPAs: the first is for 114 MW in Iowa and the second is for 100.8 MW in Oklahoma. The company sells the power back into the grid at the local, wholesale price and, in the process of selling, strips RECs and keeps them so that no one can claim credit for the green aspect of the purchase. Recently, Google announced an agreement with the Grand River Dam Authority to deliver 48 MW of wind energy from the Canadian Hills Wind Project to power its data center in Oklahoma.[13]
- Can buy from sites with the best resources. Latin America's largest wind farm is under development in Mexico as part of a 20-year PPA involving Mitsubishi, Heineken and FEMSA (the largest Coca-Cola bottler in Latin America). Once operational, the wind farm will have an installed capacity of 396 MW.[14] The project will be completed in the southern region of Oaxaca along the Isthmus of Tehuantepec, which has been identified to have the best wind resources.[15]
- Offer innovative opportunities for collaboration. Large manufacturers often encourage their suppliers to locate within a close proximity. Some have begun to investigate the possibility of negotiating a "Cooperative PPA," which could pass on economic savings through a combined purchase that aggregates demand for renewable energy within a limited geographic region. Collaboration can yield greater market interest, better pricing and lower project risks. The EPA's Green Power Partnership advises that an aggregated renewable energy effort can yield volume discounts and lower administrative and transaction costs, and deliver better-qualified vendors and projects.[16]

On-Site Direct Investment

Many companies prefer to construct and operate renewable energy, such as solar or wind, on-site in order to improve fuel diversity and visibly demonstrate their corporate commitment. Companies prefer on-site direct investment because it:

- Allows companies to most clearly account for investments against a corporate renewable energy commitment. Direct investment enables a company to receive federal, state and local incentives and rebates while also retaining RECs to claim against their renewable energy and GHG emissions reduction commitments (whereas a third party will often justify the costs by selling the RECs). On-site investments in renewable energy are most easily communicated to customers

[13] Demasi, G. (September 26, 2012). [Web log message]. Retrieved from http://googleblog.blogspot.com/2012/09/more-renewable-energy-for-our-data.html

[14] Andrew (March 12, 2012). Latin America's largest wind project to power Mexico Coca-Cola, Heinekin, OXXO.Clean Technica. Retrieved from http://cleantechnica.com/2012/03/12/latin-americas-largest-wind-project-to-power-mexico-coca-cola-heineken-oxxo/

[15] Elliott, D., Schwartz, M., Scott, G., Haymes, S., Heimiller, D., & George , R. Department of Energy (2003).Wind energy resource atlas of Oaxaca (NREL/TP-500-34519). Retrieved from National Renewable Energy Laboratory website: http://www.nrel.gov/wind/pdfs/34519.pdf

[16] Collison, B. Environmental Protection Agency (2011). EPA green power partnership clean energy collaborative procurement initiative. Retrieved from http://www.epa.gov/greenpower/cecp/documents/MWDC_CleanEnergyProcurement_HigherEd.pdf

and stakeholders. BMW built a 9.5-mile pipeline to deliver landfill gas directly to its automotive manufacturing plant in Spartanburg, South Carolina, which provides more than 50% of the company's on-site energy needs.[17]

- Frees companies from long-term financial arrangements with third parties and ensures a secure investment offering steady, reliable cash flows over long-term horizons. Multinational insurance companies continue to make significant direct investments in renewable energy projects.[18] Munich RE recently bought three UK wind farms with a combined capacity of 102 MW (bringing the company's total investment in renewable energy to more than €600 million) and Allianz has invested more than €1.3 billion in renewable energy since 2005, most notably in German and French wind power farms with investment returns around 7%.[19]
- Offers flexibility as solar equipment prices continue to drop at a dramatic pace (which may make companies hesitant to enter into 20-year contracts at fixed prices). UPS installed a 250 kW solar rooftop array on its Lakewood, New Jersey, facility, which will provide a significant portion of the building's peak energy needs.[20] UPS electrical engineers were able to design a custom solar system to meet the company's requirement to minimize roof penetration—a significant cost and a concern if managed by a third party. This enables the company to depreciate that asset over time, which reduces its taxable income.

"Electricity use at UPS operations represents 10% of our overall carbon footprint. In order to achieve our corporate commitment to reduce our greenhouse gas emissions, we have aggressively pursued opportunities in solar energy. To date we have installed numerous 1 MW rooftop solar systems that we designed and own ourselves, which work far better than a PPA."

Scott Wicker
Vice President of Corporate Plant Engineering and Chief Sustainability Officers, UPS

What Are the Barriers to Investing in Renewable Energy at Scale?

Cost of Renewable Energy

Most companies will not pay a premium for renewable energy. Projects must be price competitive to locally available forms of power, meaning that in most cases renewable energy acquisition must be delivered at cost parity or better. Companies with renewable energy commitments are seeking the least costly investments to achieve their objectives, which is difficult to realize in many markets. Historically low natural gas prices have begun to affect corporate renewable energy purchasing decisions. In the United States, for example, natural gas prices fell from $4.37/mmBtu in 2010 to $3.98/mmBtu in 2011, the lowest annual average price for natural gas since 2002.[21] Low natural gas prices are causing challenges for renewable energy projects, making it harder to justify any cost premium for renewable energy.

[17] http://www.southeastcleanenergy.org/profiles/se_profiles/BMW_Case_Study.pdf

[18] Burger, A. (August 17, 2012). Direct investments in renewable energy increasingly attractive. TriplePundit. Retrieved from http://www.triplepundit.com/2012/08/renewable-energy-pension-funds/

[19] Dauer, U., & Edinger, A. (August 16, 2012). [Web log message]. Retrieved from http://blogs.wsj.com/source/2012/08/16/could-insurers-plug-germanys-energy-funding-gap/

[20] Rasberry, E. (June 15, 2011). UPS to harness solar power at New Jersey facility. Retrieved from http://pressroom.ups.com/Press+Releases/Archive/2011/Q2/ci.UPS+to+Harness+Solar+Power+at+New+Jersey+Facility.print

[21] Energy Information Administration, "2011 Brief: Energy Commodity Price Trends Varied Widely During 2011," Today in Energy, January 9, 2012. Available at http://www.eia.gov/todayinenergy/detail.cfm?id=4490

Companies are launching innovative strategies to address the cost of renewable energy. For instance, Walmart is focusing on the most cost-effective markets and signing long-term contracts with providers in order to deliver business certainty while lowering costs. While this is a successful strategy, it requires that companies can sign third-party PPAs, something which is not possible in all markets.

"We established a long-term goal to be supplied by 100% renewable energy. It is important for companies to tip their hands to have the market rise to meet their needs. If solar manufacturers or policy makers know that there are companies of our size that have long-term commitments to renewable energy, they can form their business models and policy strategies around that."

Greg Pool
Senior Manager of Renewable Energy and Emissions, Walmart Stores, Inc.

Case Study: Walmart Using PPAs to Enhance Cost Competitiveness

- Established an ambitious goal to be supplied by 100% renewable energy
- Committed to reduce GHG emissions by 20% by the end of 2012 from its 2005 base of stores, clubs and distribution centers
- Operates more than 180 renewable energy projects providing more than 1.1 billion kW hours of renewable energy annually

Walmart is the largest retailer, the third-largest public corporation and the biggest private employer in the world. Headquartered in Bentonville, Arkansas, the company has over 10,400 stores in 27 countries, including Brazil, China, Japan, Mexico and the United Kingdom. Walmart has set ambitious renewable energy and GHG emissions reduction goals, most notably to be supplied by 100% renewable energy and to reduce GHG emissions by 20% by the end of 2012 from its 2005 base of stores, clubs and distribution centers. Walmart US is currently the largest on-site green power generator in the United States and has more installed solar capacity than any other company in the U.S.[22] By the end of 2010, the company achieved an absolute GHG reduction of 12.74% in its 2005 base of stores.[23]

In deciding to set a long-term, ambitious renewable energy goal (with no exact end date), Walmart has been able to strengthen the renewable energy market. Solar manufacturers and policy makers, to name a few, now have certainty that companies like Walmart will continue to demand renewable energy, which allows each to form a business model or policy strategy around increased renewable energy demand. Instead of offsetting their non-renewable power by buying RECs, the company's strategy is to work with developers to build new renewable energy projects from the ground-up, usually by guaranteeing the purchase of the renewable power in a long-term Power Purchase Agreement (PPA). By providing a guaranteed revenue stream for the project developer, Walmart's high credit-rating and low-risk profile give banks and financiers confidence to provide better costs of capital and strong financing terms, thereby making new renewable projects viable and affordable before the shovel even hits the ground.

It has been Walmart's experience that with every renewable energy project completed, the costs of renewable energy go down. With over 180 renewable energy projects around the world that currently provide the company with over 1.1 billion kW hours of renewable energy annually, each project has been cost competitive with traditional power. Nearly every project has been developed

[22] "Top 20 On-site Generation", Web. October 2, 2012, http://www.epa.gov/greenpower/toplists/top20onsite.htm; "Solar Means Business: Top Commercial Solar Customers in the U.S.," Web. November, 2012, http://www.seia.org/research-resources/solar-means-business-top-commercial-solar-customers-us.

[23] "Greenhouse Gas Emissions," Walmart, Web. October 31, 2012, http://corporate.walmart.com/global-responsibility/environment-sustainability/greenhouse-gas-emissions.

as part of a PPA, which requires no up-front capital costs on Walmart's behalf and establishes a fixed price per kW hour over a long-term period. Walmart has been able to achieve cost competitiveness by focusing on markets where conditions are favorable to renewable energy.[24] The corporate philosophy to "Save Money, Live Better" applies to renewable energy: the company does not believe that its customers should be burdened with the cost of its renewable energy ambitions.

Internal Competition for Capital

Companies invest capital in revenue-generating assets that drive top-line growth, which limits the capital available to invest in renewable energy projects. Internal competition for capital funding at the facility level poses an obstacle to on-site investment in renewable energy projects for many companies.[25] Corporate investments in renewable energy must often be approved by the chief financial officer and must meet internal rate of return (IRR) or return on investment (ROI) thresholds.

Case Study: Johnson & Johnson (J&J) Strategy to Overcome Internal Competition for Capital

- Committed to increase on-site renewable energy to 50 MW by 2015
- Launched $40 million annual capital relief fund to support renewable energy projects globally
- Shifted strategy away from RECs to instead favor on-site direct investment and PPAs
- Joined other Fortune 500 firms to advocate extension of PTC for wind

J&J is a multinational medical devices and pharmaceuticals company based in New Brunswick, New Jersey, with operations in 60 countries and over 128,000 employees. In 2011, the company announced an ambitious renewable energy commitment to increase on-site renewable energy to 50 MW by 2015 (currently 38.7 MW in 2012). According to its 2012 Carbon Disclosure Project filing, J&J's renewable energy commitment is one component of a broader strategy to "reduce the environmental impact of our operations and to increase the sustainable design of our products." Other commitments include a "20% absolute reduction in facility carbon dioxide emissions, without the use of voluntary carbon offsets, by 2020 using a 2010 baseline; decreasing our fleet CO_2 emissions per kilometer driven by 20%; reducing absolute water consumption by 10%; reducing total waste disposal by 10%; and evaluating all new products and packaging for sustainability improvements."[26]

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[24] For more information see: "Walmart 2012 Global Responsibility Report," Web. http://www.walmartstores.com/sites/responsibility-report/2012/renewableEnergyApproach.aspx

[25] Some companies are reevaluating their commitment to renewable energy, in part because of internal competition for capital. During the Q3 2012 earnings call, Andrew Liveris, chairman and CEO of Dow Chemical Company, noted, "In light of the current environment, we are taking a more near-term and pragmatic approach … dialing back spending in programs and industries where policy and industry fundamentals have altered the value proposition—such as in alternative energy, where positive returns are in the far-distant future." http://www.dow.com/investors/earnings/2012/12q3sum.htm

[26] Johnson & Johnson response to 2012 Carbon Disclosure Project questionnaire, 2.2a.

One of the largest hurdles for corporations to invest in renewable energy at scale is limited capital funding. In order to sustain its investment in renewable energy, J&J created a $40 million annual capital relief fund to support energy efficiency and renewable energy projects globally.[27] This fund is designed to allow the corporate office to relieve a local site of the capital required to invest in renewable energy projects that helps to overcome the competition at the facility level around capital funding. In addition, J&J lowered the threshold IRR (compared to other cost-improvement projects) to 15% for projects that have a "carbon reduction impact," where most of J&J's competitors require a 20% rate of return or better. In 2011, J&J spent $48.2 million on projects that reduced GHG emissions, increased renewable energy capacity and generated energy cost savings. This included the installation of three solar PV systems in New Jersey and Pennsylvania for a total of 12 solar PV systems with an installed capacity of 11.6 MW.[28]

As a founding member of the EPA Green Power Partnership, J&J was honored as a Green Power Partner of the Year in 2003, 2005, 2006 and 2007, largely through purchasing RECs from wind power and biomass facilities. J&J chose to set its renewable energy commitment, in part, to encourage a shift away from purchasing voluntary RECs and instead to prioritize on-site direct investment in addition to negotiating PPAs. Priority projects for J&J include solar, biomass, cogeneration and landfill gas to energy.

Given the important role of government in developing renewable energy policies, J&J was an active member of the United States Climate Action Partnership, an alliance of major businesses and leading environmental organizations in support of legislation requiring significant reductions of GHG emissions. More recently, J&J joined several other Fortune 500 firms to request congressional leadership to extend the PTC for wind, a key provision supporting renewable energy in the United States.[29]

Policy

Short-term and inconsistent renewable energy policies hinder companies from setting ambitious commitments and pose an obstacle to companies in meeting existing commitments because of uncertainty around the price, supply and deployment of renewable energy. The business case for renewable energy technologies is influenced by a combination of local, state and federal policies. Long-term government policies are normally difficult to sustain, a dilemma that is further amplified by the current sluggish recovery from the global economic crisis, causing governments to draw down financial support for renewable energy policies.

[27] Johnson & Johnson Responsibility (2012). Energy use and alternative energy. Retrieved from http://www.jnj.com/responsibility/ESG/environment/climate_change/Energy_Use_and_Alternative_Energy.

[28] Hart Research Associates. Solar Energy Industries Association (2012). Solar means business: Top commercial solar customers in the U.S. Retrieved from http://www.seia.org/research-resources/solar-means-business-top-commercial-solar-customers-us

[29] Johnson & Johnson, Starbucks, 17 other companies tell Congress to extend wind tax credit (September 24, 2012). Environmental Leader. Retrieved from http://www.environmentalleader.com/2012/09/24/johnson-johnson-starbucks-17-other-companies-tell-congress-to-extend-wind-tax-credit/

Government policies in nearly every major market across the globe now prioritize renewable energy investments in one fashion or another. In many markets, government incentives for renewable energy help make projects feasible, such as solar RECs in New Jersey or the renewable energy feed-in tariffs in Germany and the United Kingdom. National targets for renewable energy are helping to drive renewables as well. However, incentives have wavered in recent years due to global economic instability. Other important policy barriers exist; for example, not all markets allow companies to seek PPAs with renewable energy providers, something which is crucial in order for companies to exercise their choice of energy supply and drive renewable energy demand.

Most analysts also conclude government support and ambition remain below the level required to mitigate the worst impacts of climate change. The 2011 Global Investor Statement on Climate Change, supported by 285 investors that represent assets of more than $20 trillion, notes that,

> *"Private sector investment will only flow at the scale and pace necessary if it is supported by clear, credible and long-term domestic and international policy frameworks—investment-grade climate change and energy policies—that shift the balance in favor of low-carbon investment opportunities."*[30]

Deutsche Bank argues that countries with more "TLC"—transparency, longevity and certainty—in their policy frameworks will attract more investment and build renewable energy industries faster than their policy-lagging counterparts.[31] In the United States, this tension is best illustrated by a recent campaign by 19 companies, including major consumer brands and several Fortune 500 firms, to support extension of the PTC for wind, the policy most responsible for the growth of America's thriving wind industry. According to a letter sent to congressional leadership,

> *"The PTC has enabled the industry to slash wind energy costs—90% since 1980—a big reason why companies like ours are buying increasing amounts of renewable energy. Extending the PTC lowers prices for all consumers, keeps America competitive in a global marketplace and creates homegrown American jobs."*[32]

Much of the advocacy to date around the PTC has focused on the supply side: more wind energy will ensure more job creation. Increasingly, companies on the demand side are calling for a long-term renewable energy policy because it will lower prices and make it easier to meet corporate commitments.

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[30] IIGCC (2011). 2011 global investor statement on climate change. Retrieved from http://www.ceres.org/files/press-files/2011-global-investor-statement-on-climate-change/official-2011-global-investor-statement-on-climate-change

[31] Fulton, M. Deutche Bank Group, Deutche Bank Climate Change Advisors (2012). Global climate change policy tracker. Retrieved from http://www.dbcca.com/dbcca/EN/_media/Global_Policy_Tracker_20120424.pdf

[32] BICEP (September 18, 2012). Production tax credit for wind energy. Retrieved from http://www.ceres.org/files/press-files/bicep-ptc-extension-letter-9172012/at_download/file

Case Study: Sprint Policy Advocacy on Renewable Energy

- Committed to secure 10% of its total electricity through renewable sources by 2017
- Invested in renewables through PPAs and RECs
- Advocated for the extension of the wind PTC

Over the past decade, Sprint's involvement with renewable energy has included installation of on-site clean-energy facilities, partnering with energy research institutions to research clean-energy alternatives for backup power at sites, advocating in support of clean-energy opportunities and purchasing renewable energy through utility partnerships. Sprint believes that its best option for investing directly in renewable energy is through long-term PPAs, and the company established a Renewable Energy Working Committee in the second half of 2011 to develop its strategy for achieving its 10% renewable energy goal by 2017.[33]

Sprint's five-year PPA for wind energy with Kansas City Power & Light ended on December 31, 2011; as such, the company looked for a suitable replacement for that energy (equal to 2.5% of Sprint's total electrical use) to meet the full 10% reduction goal by 2017. With the expiration of the PTC, Sprint's renewable energy investment strategy of securing PPAs became at risk.

To manage this risk, Sprint has become involved in policy advocacy. Sprint's actions have included lobbying with Kansas City Power & Light to get approval to build the Spearville Wind Farm in Kansas, having Sprint CEO Dan Hesse meet with leadership of the U.S. Department of Energy regarding renewable energy opportunities, speaking publicly about the importance of renewable energy and, in June 2012, sending a letter to congressional leaders urging them to support the extension of the PTC for wind energy. For consumers of wind electricity, the economic benefits of the PTC are tremendous. In a recent interview, Amy Hargroves, Sprint's manager of corporate responsibility, said, "We need our voices to be heard. We think it's important to have more green energy choices in the United States."[34]

Recommendations for Corporations and Policy Makers

Renewable energy offers companies the opportunity to reduce operating costs, diversify energy supply, hedge against market volatility in traditional fuel markets, achieve GHG emissions reduction goals and realize broader corporate sustainability commitments.

Companies will buy more renewable energy as project developers and policy makers tackle the barriers companies cannot address alone, including the price of renewable energy and unpredictable and inconsistent policies.

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[33] Sprint (2012). Investing in clean energy. Retrieved from http://www.sprint.com/responsibility/ouroperations/climate_change/renewable-energy.html

[34] Green Biz. (November 15, 2012). Starbucks, J&J, Yahoo! fight to extend wind energy tax credit. Retrieved from http://m.greenbiz.com/17574/show/631d885f5e31b6a736daa2c2ffa86346&t=qh3441j7g0tpeq6mr1qqi0rqd5

In order to achieve emissions reductions at a scale that is ambitious enough to address the risks posed by global climate change, the world's largest companies will need to set corporate commitments in line with the science. The majority of leading climate scientists recommends that the global economy must achieve GHG emissions reductions of 80% below 1990 levels by 2050. Getting started now will be easier and cheaper—companies that wait will face risks to their competitiveness.

Recommendations for Corporations

- Companies that do not have renewable energy or GHG commitments should set them. There is a strong economic case and significant precedent for setting a corporate commitment to manage climate risks. More than half of the Fortune 100 and over two-thirds of the Global 100 have set GHG emissions reduction commitments, renewable energy commitments or both.
- Companies with GHG targets should also set renewable energy targets, or at a minimum ensure that renewable energy is a part of any GHG emissions reduction strategy. Specific renewable energy targets are strongly encouraged because they clearly explain a company's commitment to renewable energy. While energy efficiency is encouraged as the first and least-cost investment, companies will not achieve their climate commitments through efficiency alone; it will require parallel investments in renewable energy.
- Companies should be fully transparent in reporting their GHG commitments and the role that renewable energy should play in meeting those commitments using emerging global standards for Scope 2 carbon accounting.[35] Companies should publicly disclose the amount of renewable energy they purchase annually compared to their total energy consumption, in order to measure progress (at least in terms of the percentage of total energy, if not total MW).
- Companies should identify opportunities to support local, state and national policies that remove barriers to scaling up renewable energy and enable companies to achieve their climate commitments. Companies are already seeing the value of engaging in specific enabling policies that improve access to and reduce the cost of renewable energy. All companies should be engaged in policy advocacy, because it helps increase availability of renewable energy and lower prices.

Ultimately, for companies in the Fortune 100, Global 100 and beyond to continue scaling up purchases and investments in renewable energy, effective public policy is needed to create greater market stability, increase corporate access to renewable energy and reduce the cost of renewable energy.

[35] Scope 1 (all direct GHG emissions), Scope 2 (indirect GHG emissions from consumption of purchased electricity, heat or steam), Scope 3 (other indirect emissions).

Recommendations for Policy Makers

- Policies that promote renewable energy, like the PTC for wind or feed-in tariffs for solar, should be extended. The PTC in particular has enabled the wind industry to slash energy costs, which eliminates an important barrier to purchasing renewable energy. Allowing the PTC to expire will immediately raise prices for companies committed to buying renewable energy.
- State utility regulators should authorize the use of third-party PPAs and remove policies that limit the development of on-site renewable power generation. Currently, PPAs are not allowed or are otherwise restricted in Florida, Georgia, Iowa, Kentucky and North Carolina.[36] As companies increasingly look to PPAs to procure long-term, cost-effective renewable energy, policy makers and utility regulators must work together to enable increased corporate access to renewable energy.
- Renewable Portfolio Standards (RPSs) should be enacted in all U.S. states, either through state legislatures or through a federal RPS. An RPS requires utilities to procure a minimum amount of electricity from renewable sources. In the 30 states and Washington, D.C. where they currently exist, governors and state legislators should strengthen and expand RPSs. RPS mandates have driven one third of new renewable electricity in the United States. [37]
- Because the Fortune 100 and Global 100 operate internationally, policies such as feed-in tariffs and renewable energy mandates are needed to kick-start renewable energy industries, particularly in emerging markets. Many countries critical to global supply chains have fledgling renewable energy markets that require stable support and clear policies. In other markets, like China, voluntary green power markets do not yet exist, and incentives and market structures must be created. Mexico offers a successful model that combines limited government investment in renewable energy with clear policy conditions for private sector investment by enabling PPAs and charging a standard interconnection fee from project to facility.
- Ultimately, policies that enable deeper cost reductions to level the playing field with conventional energy sources are needed. Companies are already significant drivers of renewable energy purely through voluntary efforts, but to reach the scale and pace needed to address the challenge of climate change, policies are needed that enable more companies across more sectors to use renewable energy cost-competitively. These include market-based solutions that price negative externalities and allow businesses to find the most cost-effective measures to achieve their GHG and renewable energy commitments.

[36] DSireSolar (August 2012). Third-party solar PV PPAs. Retrieved from http://www.dsireusa.org/documents/summarymaps/3rd_Party_PPA_map.pdf

[37] Fulton, M., & Capalino, R. Deutche Bank Group, Deutche Bank Climate Change Advisors (2012). Ramping up renewables: Leveraging state RPS programs amid uncertain federal support. Retrieved from U.S. Partnership for Renewable Energy Finance website: http://www.dbcca.com/dbcca/EN/_media/Ramping_up_Renewables-Leveraging_State_RPS_Programs_amid_Uncertain_Federal_Support.pdf


AAPT

FORTUNE 100 Climate and Renewable Energy Commitments by Sector

GHG and RE Targets
GHG Targets
No Targets

COMPANY	RE TARGET	GHG TARGET
Consumer Discretionary:		
General Motors*	Utilize 125 MW of renewable energy by 2020 (globally), which includes a commitment to double solar from 30 MW to 60 MW by 2015[1]	Reduce carbon intensity from facilities by 20% by 2020 (2000 baseline)[2]
News Corp.	By 2015, Invest in clean energy equal to 20% of electricity use[3]	By 2015, reduce absolute GHG emissions and intensity (per revenue) by 15% (relative to 2006 baseline)[4]
Best Buy	None	Reduce absolute carbon emissions in North America by 20% by 2020 (relative to 2009 baseline)[5]
Ford Motor*	None	Reduce our facility CO_2 emissions by 30% per vehicle by 2025 compared to a 2010 baseline, building on our reduction of 31% from 2000 to 2010[6]
Home Depot	None	Remove 20% of absolute GHG emissions from domestic supply chain by 2015 (relative to 2009 baseline)[7]
Johnson Controls	None	Reduce carbon dioxide equivalent emissions per million U.S. dollars revenue from 50 in 2011 to 35.5 by 2018[8]
Walt Disney	None	By 2012, achieve 50% of long-term goal of zero net direct GHG emissions through a combination of reductions, efficiencies and offsets[9]
Amazon.com	None	None
CHS	None	None
Comcast	None	None
Lowe's	None	None
Sears Holdings	None	None
Consumer Staples:		
Procter & Gamble*	30% by 2020, 100% long-term goal[10]	Emit zero fossil-based CO_2 emissions (long-term goal)[11]
Walmart Stores*	Supplied by 100% renewable energy (long-term goal)[12]	20% absolute reduction by 2012 (relative to 2005 baseline)[13]
Archer Daniels Midland	None	15% reduction from 2010 levels on a per-unit-of-production basis by 2020[14]
CVS Caremark*	None	Reduce carbon intensity by 15% by 2018 (relative to 2010 baseline)[15]
Kraft Foods	None	By 2015, reduce energy-related carbon dioxide emissions in manufacturing plants by 15% (relative to 2010 baseline)[16]
Kroger*	None	Reduce absolute energy consumption by 35% in stores by 2013 (relative to 2000 baseline)[17]
Philip Morris International	None	Reduce CO_2 emissions from manufacturing by 20%/million cigarettes equivalent by 2015; reduce emissions from value chain by 30%/million cigarettes equivalent by 2020 (relative to 2010 baseline).[18]

* These companies appear in both the Fortune 100 and Global 100.

FORTUNE 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Consumer Staples (continued):		
Supervalu	None	Reduce absolute carbon emissions by 10% by the end of 2012 (relative to 2007 baseline)[19]
Target	None	Reduce Scope 1 and Scope 2 GHG emissions intensity by 10% per square foot and 20% per million dollars of retail sales by 2015 (relative to 2007 baseline)[20]
The Coca-Cola Company	None	Stabilize overall emissions; 5% absolute reduction in Annex 1 countries by 2015 (2004 baseline)[21]
Costco Wholesale*	None	None
PepsiCo	None	None
Safeway	None	None
Sysco	None	None
Tyson Foods	None	None
Walgreen	None	None
Energy:		
Chevron*	Invest $2.2 billion between 2011 and 2013 on renewable energy and efficiency[22]	Reduce absolute GHG emissions by 0.7% by 2012 (relative to 2011 baseline)[23]
Exxon Mobil*	None	Reduce GHG intensity by 10% by 2012 (relative to 2002 baseline)[24]
Conoco Phillips*	None	None
Enterprise Products Partners	None	None
Hess	None	None
Marathon Petroleum	None	None
Murphy Oil	None	None
Plains All American Pipeline	None	None
Sunoco	None	None
Valero Energy	None	None
World Fuel Services	None	None
Financials:		
Allstate	None	Reduce absolute Scope 1 emissions by 20% by 2020 and Scope 2 emissions by 20% by 2020 (relative to 2007 baseline)[25]
American Express	None	Absolute target of 10% reduction by 2012 (relative to 2006 baseline)[26]
Bank of America Corp.*	None	30% by 2015 (relative to 2004 baseline)[27]
Citigroup*	None	25% absolute reduction by 2015 (relative to 2005 baseline)[28]

FORTUNE 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Financials (continued):		
Goldman Sachs Group	None	Near-term commitment is to reduce absolute GHG emissions by 7% by 2012 (relative to 2005 baseline). Have pledged beyond 2012 goal to reduce GHG emissions from all facilities to zero by 2020.[29]
J.P. Morgan Chase & Co.*	None	Reduce absolute emissions 20% by 2012 (relative to 2005 baseline)[30]
Morgan Stanley	None	Reduce emissions intensity by 15% in all office buildings by 2013 (relative to 2006 baseline)[31]
Prudential	None	Reduce absolute GHG emissions by 10% from U.S. office properties by 2013 (relative to 2007 baseline)[32]
State Farm Insurance Cos.	None	18% reduction by 2012 (relative to 2002 baseline)[33]
TIAA-CREF	None	Reduce Scope 1 and Scope 2 intensity by 17.5% by 2012 (relative to 2007 baseline)[34]
Wells Fargo*	None	20% absolute reduction by 2018 (relative to 2008 baseline)[35]
American International Group*	None	None
Berkshire Hathaway*	None	None
Fannie Mae*	None	None
Freddie Mac*	None	None
INTL FCStone	None	None
Liberty Mutual Insurance Group	None	None
MetLife	None	None
Nationwide	None	None
New York Life Insurance	None	None
Health Care:		
Johnson & Johnson	50 MW by 2015[36]	20% absolute reduction by 2020 (relative to 2010 baseline)[37]
Abbott Laboratories	None	15% absolute reduction reduction by 2015 (relative to 2005 baseline)[38]
Cardinal Health*	None	10% absolute reduction emission reductions by 2015 (relative to 2010 baseline)[39]
Humana	None	Reduce emissions intensity by 10% by 2012 (relative to 2009 baseline)[40]
Merck	None	10% absolute reduction by 2015 (relative to 2009 baseline)[41]
Pfizer	None	Reduce absolute emissions by 20% by 2012 (relative to 2007 baseline)[42]
UnitedHealth Group*	None	Reduce CO_2 emissions intensity by 15% by 2015 (relative to 2011 baseline)[43]

FORTUNE 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Health Care (continued):		
Aetna	None	None
AmerisourceBergen*	None	None
Express Scripts Holding *(now merged with Medco)*	None	None
HCA Holdings	None	None
McKesson*	None	None
Medco Health Solutions *(now merged with Express Scripts)*	None	None
WellPoint	None	None
Industrials:		
Caterpillar	20% by 2020[44]	25% absolute reduction by 2020[45]
Boeing	None	1% absolute reduction in GHG emissions by 2012; 25% improvement per adjusted revenue at major manufacturing facilities (relative to 2007 baseline).[46]
Deere	None	Reduce carbon intensity by 25% per dollar of revenue by 2014 (relative to 2005 baseline)[47]
FedEx	None	By 2020, reduce aircraft emissions intensity 30% per available-ton-mile and increase vehicle efficiency by 20%; 30% of jet fuel from alternative fuels by 2030 (all relative to 2005 baseline).[48]
General Electric*	None	25% absolute reduction by 2015 (relative to 2004 baseline)[49]
Lockheed Martin	None	Reduce absolute carbon emissions by 25% by 2012 (relative to 2007 baseline)[50]
United Continental Holdings	None	50% reduction in CO_2 intensity by 2050 (relative to 2005 baseline); carbon-neutral growth beginning in 2020.[51]
United Parcel Service	None	Reduce Scope 1 and 2 emissions intensity by 10% by 2016 (relative to 2007 baseline)[52]
United Technologies	None	By 2015, reduce absolute GHG emissions 27% (relative to 2006 baseline)[53]
Delta Air Lines	None	None
General Dynamics	None	None
Honeywell International	None	None
Information Technology:		
Google	Striving to power company with 100% renewable energy[54]	Zero carbon footprint[55]
Hewlett-Packard*	8% by 2012[56]	Reduce GHG emissions from owned and leased facilities by 20% by 2013 on an absolute basis (relative to 2005 baseline)[57]

FORTUNE 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Information Technology (continued):		
Cisco Systems	None	25% absolute reduction by 2012[58]
Dell	None	Reduce global GHG emissions per dollar of revenue by 15% by 2012 and reduce worldwide facilities GHG emissions by 40% by 2015 (both relative to 2007 baseline)[59]
Intel	None	20% reduction of absolute emissions by 2012 (relative to 2007 baseline)[60]
International Business Machines*	None	12% absolute reduction by 2012 (relative to 2005 baseline)[61]
Microsoft	None	Carbon neutral by 2013[62]
Apple	None	None
Ingram Micro	None	None
Oracle	None	None
Materials:		
Dow Chemical	By 2050, at least 50% of the energy consumed globally will be non-carbon emitting[63]	Reduce GHG emissions 2.5% per year per pound of product by 2015 (relative to 2005 baseline)[64]
DuPont	Reduce non-renewable energy use by 10% per adjusted dollar revenue by 2020 (relative to 2010 baseline)[65]	Reduce at least 15% absolute reduction by 2015 (relative to 2004 baseline)[66]
Telecommunication Services:		
AT&T*	5MW of alternative energy from fuel cell and solar production by 2012 (relative to 2011 capacity baseline of 3,888 kW)[67]	20% absolute reduction by 2020 (relative to 2008 baseline)[68]
Sprint Nextel	10% by 2017[69]	20% absolute reduction by 2017 (relative to 2007 baseline)[70]
Verizon Communications*	None	50% reduction in carbon intensity by 2020 (relative to 2009 baseline)[71]
Utilities:		
No utilities in the Fortune 100		

GLOBAL 100 Climate and Renewable Energy Commitments by Sector

COMPANY	RE TARGET	GHG TARGET
Consumer Discretionary:		
Deutsche Post	Increase the percentage of electricity generated from renewable energy sources to more than 60% by 2012[72]	Reduce carbon intensity 30% by 2020 (relative to 2007 baseline)[73]
General Motors*	Utilize 125 MW of renewable energy by 2020 (globally), which includes a commitment to double solar from 30 MW to 60 MW by 2015[74]	Reduce carbon intensity from facilities by 20% by 2020 (2000 baseline)[75]
Samsung Electronics	Set up and operate renewable systems with total 2.4MW capacities by adopting small-hydro power generation system and roof-top solar generation system gradually by 2017[76]	Reduce GHG emissions intensity normalized by sales (metric tonnes of CO_2 per KRW 100 million) by 50% by 2013 (relative to 2008 baseline)[77]
Volkswagen	Volkswagen will invest around €1 billion in the expansion of renewable energy resources including solar, wind and hydroelectric power by 2020[78]	Reduce GHG emissions in German operations 40% by 2020 (relative to 2010 baseline)[79]
BMW	None	Reduction of product CO_2 emissions by 50% by 2020 (relative to 1995 baseline)[80]
Carrefour	None	Reduce CO_2 intensity 40% by 2020 (relative to 2009 baseline)[81]
Daimler	None	Reduce CO_2 emissions intensity from production operations by 20% by 2015 (relative to 2007 baseline)[82]
Ford Motor*	None	Reduce facility CO_2 emissions by 30% per vehicle by 2025 compared to a 2010 baseline, building on reduction of 31% from 2000 to 2010[83]
Hitachi	None	20% absolute reduction by 2015 (relative to 1990 baseline)[84]
Honda Motor	None	Reduce emissions intensity due to corporate activities 5% by 2013 (relative to 2008 baseline)[85]
Hyundai Motor	None	Reduce Korean plant absolute GHG emissions (74% of company total) by 10% by 2020 (relative to 2005 baseline)[86]
Nissan Motor	None	Reduce metric tons of CO_2 equivalent per vehicle produced by 27% by 2016 (relative to 2005 baseline)[87]
Panasonic	None	By 2018, reduce CO_2 emissions per basic unit in logistics by 46% or more compared to FY2006.[88] Panasonic will endeavor to ensure that CO_2 emissions from its entire business operations peak out by 2018.[89]
Peugeot	None	Reduce absolute emissions by 15% 2010–2020. Reduce Scope 3 emissions by 32% by 2020 (relative to 2008 baseline)[90]
Sony	None	30% reduction in the absolute amount of GHG emissions by 2015 (relative to 2000 baseline)[91]

GHG and RE Targets
GHG Targets
RE Target only
No Targets

* These companies appear in both the Fortune 100 and Global 100.

GLOBAL 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Consumer Discretionary (continued):		
Toshiba	None	Reduce absolute CO_2 emissions 35% by 2015 (relative to 1990 baseline)[92]
Toyota Motor	None	Reduce absolute Scope 1 and 2 CO_2 emissions 25% by 2012 (relative to 1990 baseline)[93]
Hon Hai Precision Industry	None	None
Metro	None	None
Consumer Staples:		
Procter & Gamble*	30% by 2020, 100% long-term goal[94]	Emit zero fossil-based CO_2 emissions (long-term goal)[95]
Walmart Stores*	Supplied by 100% renewable energy (long-term goal)[96]	20% absolute reduction by 2012 (relative to 2005 baseline)[97]
CVS Caremark*	None	Reduce carbon intensity by 15% by 2018 (relative to 2010 baseline)[98]
Kroger*	None	Reduce absolute energy consumption by 35% in stores by 2013 (relative to 2000 baseline)[99]
Nestlé	None	Reduce absolute GHG emissions 1% by 2011; reduce metric tons CO_2e/metric ton of product 5% by 2015 (both relative to 2010 baseline).[100]
Tesco	None	New stores built between 2007 and 2020 to emit half the CO_2 of a 2006 new store[101]
Total	None	Reduce emissions related to flaring (29% of overall emissions) by 50% by 2014 (relative to 2005 baseline). Other targets reported.[102]
Costco Wholesale*	None	None
Energy:		
Chevron*	Invest $2.2 billion between 2011 and 2013 on renewable energy and efficiency[103]	Reduce GHG emissions by 0.7% by 2012 (relative to 2011 baseline)[104]
Exxon Mobil*	None	Reduce GHG intensity by 10% by 2012 (relative to 2002 baseline)[105]
Indian Oil	None	Achieve growth path in an environmentally responsible manner in line with national target to cut the emissions intensity of GDP by 20–25% by 2020 compared to the 2005 level[106]
JX Holdings	None	Reduce emissions intensity from refining and production (3% of overall emissions) by 3%, 2009–2012, and other departments by 3% per unit of production, 2009–2012[107]
Marathon Oil	None	Reduce Scope 1 and 2 emissions 4% per thousand barrels of oil equivalent by 2013 (2008 baseline)[108]

GLOBAL 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Energy (continued):		
Petrobras	None	By 2015, reduce 10% of the energy intensity in the refining process; reduce 15% of the GHG emission intensity in the exploration and production activities; reduce 5% of the GHG emission intensity in the thermoelectric power plant activities (all relative to 2009 baseline). Other targets reported.[109]
Repsol YPF	None	Absolute reduction of Scope 1 and Scope 2 of 9.26%, 2005–2013. Reduce emissions by 2.5 million metric tonnes from 2005–2013 related to "business as usual" scenario[110]
Statoil	None	Reduce CO_2 emissions on the Norwegian continental shelf about 800,000 tonnes by 2020 (relative to 2007 baseline)[111]
BP	Invest $8 billion over ten years in alternative energy in operations (beginning in 2005)[112]	None
China National Petroleum	None	None
ConocoPhillips*	None	None
ENI	None	None
Gazprom	None	None
Lukoil	None	None
PDVSA	None	None
Pemex	None	None
Petronas	None	None
Royal Dutch Shell	None	None
Sinopec Group	None	None
Valero Energy	None	None
Financials:		
Assicurazioni Generali	28MW of renewable energy by 2014, which includes a 40 million Euro investment in solar, wind and biomass[113]	10% reduction of emissions from Scope 1 and Scope 2 by 2012 (relative to 2009 baseline)[114]
HSBC Holdings	Increase energy consumption from renewables from 24% to 40% by 2020[115]	Reduce annual carbon emissions per employee by 1 tonne, from 3.5 to 2.5 tonnes, between 2012–2020[116]
Allianz	None	Reduce Scope 1, 2 and 3 CO_2 emissions per full time employee 35% by 2015 (relative to 2006 baseline)[117]
Aviva	None	Reduce absolute carbon emissions by 20% by 2020 (relative to 2010 baseline)[118]
AXA	None	Reduce carbon emissions 20% by 2012 per full-time employee (relative to 2008 baseline)[119]

GLOBAL 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Financials (continued):		
Banco Santander	None	Reduce Scope 2 GHG emissions by 3% by 2012 and 2.5% for 2013; reduce total emissions by 9% by 2013 per resident (relative to 2010 baseline); commitment covers Brazil, Chile, Spain, Mexico and UK.[120]
Bank of America Corp.*	None	30% absolute reduction by 2015 (relative to 2004 baseline)[121]
Citigroup*	None	25% absolute reduction by 2015 (relative to 2005 baseline)[122]
Crédit Agricole	None	Reduce metric tons CO_2 per kWh by 15% by 2014 (relative to 2012 baseline)[123]
ING Group	None	Reduce CO_2 emissions by 30% in 2012 (relative to 2007 baseline)[124]
J.P. Morgan Chase & Co.*	None	Reduce absolute emissions 20% by 2012 (relative to 2005 baseline)[125]
Japan Post Holdings	None	Reduce absolute emissions by 9% by 2013 (relative to 2007 baseline)[126]
Munich Re Group	None	Carbon neutral by 2015; at least 10% of emissions reduced globally, up to 90% by offsets (relative to 2009 baseline).[127]
Prudential	None	Reduce absolute GHG emissions 10% by 2013 (relative to 2007 baseline)[128]
Royal Bank of Scotland	None	Cut absolute energy and associated CO_2 emissions by 15% by 2014 (relative to 2011 baseline)[129]
Société Générale	None	Reduce CO_2 emissions per occupant by 11% between 2008–2012[130]
Wells Fargo*	None	20% absolute reduction by 2018 (relative to 2008 baseline)[131]
American International Group*	None	None
Berkshire Hathaway*	None	None
BNP Paribas	None	None
Dexia Group	None	None
EXOR Group	None	None
Fannie Mae*	None	None
Freddie Mac*	None	None
Groupe BPCE	None	None
Industrial & Commercial Bank of China	None	None
Lloyds Banking Group	None	None
Nippon Life Insurance	None	None

GLOBAL 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Health Care:		
Cardinal Health*	None	5-year 10% absolute emission reductions from 2010 baseline[132]
UnitedHealth Group*	None	Reduce CO_2 intensity equivalent by 15% by 2015 (relative to 2011 baseline)[133]
AmerisourceBergen*	None	None
McKesson*	None	None
Industrials:		
BASF	None	Reduce GHG emissions by 40% per metric ton of sales product by 2020 (relative to 2002 baseline)[134]
General Electric*	None	25% absolute reduction by 2015 (relative to 2004 baseline)[135]
Siemens	None	Improve CO_2 efficiency by 20% by 2011 (relative to 2006 baseline)[136]
China Railway Group	None	None
Information Technology:		
Hewlett-Packard*	8% by 2012[137]	Reduce GHG emissions from owned and leased facilities by 20% by 2013 on an absolute basis (relative to 2005 baseline)[138]
International Business Machines*	None	12% absolute reduction by 2012 (relative to 2005 baseline)[139]
Materials:		
ArcelorMittal	None	Reduce CO_2 emissions by 8% per tonne of steel produced by 2020 (relative to 2007 baseline)[140]
Glencore International	None	None
Telecommunications:		
AT&T*	5MW of alternative energy from fuel cell and solar production against our 2011 capacity baseline of 3,888 kW by 2012 [141]	20% absolute reduction by 2020 (relative to 2008 baseline)[142]
Deutsche Telekom	None	By 2020, reduce CO_2 emissions in Germany by 40% (relative to 1995 baseline)[143]
SK Holdings	None	Reduce emissions by 30% by 2020 per sales in KRW (relative to 2009 baseline)[144]
Telefónica	None	30% reduction in energy consumption in networks by 2015 measured in kWh/equivalent access (relative to 2007 baseline)[145]
Verizon Communications*	None	50% reduction in carbon intensity by 2020 (relative to 2009 baseline)[146]

GLOBAL 100 Climate and Renewable Energy Commitments by Sector, (continued)

COMPANY	RE TARGET	GHG TARGET
Telecommunications (continued):		
Vodafone	None	Reduce CO_2 absolute emissions by 50% against the 2006/07 baseline by March 2020 for mature markets; reduce CO_2 per network node by 20% against a 2010/11 baseline by March 2015 for emerging markets.[147]
China Mobile Communications	None	None
Nippon Telegraph & Telephone	None	None
Utilities:		
E.ON	Invest EUR7 billion in renewables over the next five years as a substitute for other power generation[148]	Reduce CO_2 emissions by 50% by 2025 per unit of production (relative to 1990 baseline)[149]
Électricité de France	1000 MW of renewable energy production (long-term goal)[150]	In France, reduce Scope 1 absolute emissions by 30% by 2020 (relative to 1990 baseline). Other targets reported[151]
Enel	Increase the net installed capacity of renewables by 6.6 GW by 2016 in Latin America, Russia, and Eastern Europe[152]	Reduce Scope 1 intensity by 15% by 2020 (relative to 2007 baseline)[153]
GDF Suez	Increase installed renewable capacity by 50% by 2015 (relative to 2009 baseline)[154]	Reduce absolute emissions in Belgium (10% of overall emissions) by 2% by 2015 (relative to 2007 baseline)[155]
State Grid	None	None

[1] http://www.gm.com/article.content_pages_news_us_en_2012_sep_0912_green_corp_cit.~content~gmcom~home~vision~environment1.html

[2] http://gmsustainability.com/ENVIRONMENTAL_2020Commitments.html

[3] http://gei.newscorp.com/strategy.html

[4] Newscorp response to 2012 Carbon Disclosure Project questionnaire, 3.1.

[5] Best Buy response to Carbon Disclosure Project questionnaire, 1.2a.

[6] http://corporate.ford.com/microsites/sustainability-report-2011-12/environment-climate

[7] https://corporate.homedepot.com/CorporateResponsibility/Environment/Documents/Sustainability__Brochure_pages.pdf

[8] http://www.johnsoncontrols.com/content/dam/WWW/jci/corporate/sustainability/2011_bsr/21093_JC_2011BSR_HealthSafety_kzh1.pdf

[9] http://thewaltdisneycompany.com/sites/default/files/commitment-categories/file/DisneyCitizenshipTargets2012_Final32612_9.pdf

[10] http://www.pg.com/en_US/sustainability/environmental_sustainability/environmental_vision.shtml

[11] Ibid.

[12] http://corporate.walmart.com/global-responsibility/environment-sustainability/energy

[13] http://corporate.walmart.com/global-responsibility/environment-sustainability/greenhouse-gas-emissions

[14] http://www.adm.com/en-US/responsibility/2011CR/Pages/Environment.aspx

[15] http://info.cvscaremark.com/our-company/corporate-responsibility/environment/measuring-emissions

[16] Kraft Foods response to 2012 Carbon Disclosure Project questionnaire, 3.1b.

[17] http://sustainability.kroger.com/2012KrogerSustainabilityReport.pdf

[18] Philip Morris International response to 2012 Carbon Disclosure Project questionnaire, 3.1b.

[19] http://www.supervalu.com/sv-webapp/about/envstewardship.jsp

[20] http://corporate.target.com/corporate-responsibility/goals-reporting/goals-progress

[21] http://wwf.panda.org/what_we_do/how_we_work/businesses/climate/climate_savers/partner_companies/the_coca_cola_company/

[22] http://www.chevronenergy.com/news_room/default.asp?pr=pr_20110825.asp

[23] Chevron response to 2012 Carbon Disclosure Project questionnaire, 3.1a, 3.3b.

[24] Exxon Mobil response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[25] Allstate response to 2012 Carbon Disclosure Project questionnaire, 3.

[26] American Express response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[27] http://about.bankofamerica.com/assets/pdf/CSR_Advancing_Environmental_Sustainability.pdf

[28] Citigroup response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[29] Goldman Sachs response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[30] JPMorgan Chase response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[31] Morgan Stanley response to 2012 Carbon Disclosure Project questionnaire, 3.1a-d.

[32] http://www.prudential.com/view/page/public/15961#Commitments

[33] http://www.statefarm.com/aboutus/community/green/facilities/fleet.asp

[34] https://www.tiaa-cref.org/public/about/press/about_us/releases/pressrelease392.html

[35] Wells Fargo response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[36] http://www.jnj.com/wps/wcm/connect/e265d6804bc83ae392f6ffbf30c50c56/2011-responsibilty-report.pdf?MOD=AJPERES

[37] http://www.jnj.com/responsibility/ESG/environment/climate_change/greenhouse_gas_emissions

[38] Abbott Laboratories response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[39] Cardinal Health response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[40] Merck response to 2012 Carbon Disclosure Project questionnaire, 3.1b

[41] http://www.merckresponsibility.com/focus-areas/environmental-sustainability/environmental-goals/home.html

[42] Pfizer response to 2012 Carbon Disclosure Project questionnaire, 3.1.

[43] Humana response to 2012 Carbon Disclosure Project questionnaire, 3.1a.

[44] http://www.caterpillar.com/sustainability/vision-mission-strategy

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About the Organizations

WWF is an organization dedicated to stopping the degradation of the planet's natural environment and building a future in which humans live in harmony with nature. WWF achieves this mission through innovative partnerships that combine on-the-ground conservation, high-level policy and advocacy and work to make business and industry more sustainable. This work includes engagements with hundreds of companies across a range of sustainability issues, including through the Climate Savers program, whose member companies have cut their CO_2 emissions by over 100 million tons since the beginning of the program, while creating competitive advantage and increasing shareholder value. WWF also supports green power tools and certification systems like WindMade™ www.windmade.org. For more information, visit http://worldwildlife.org/initiatives/transforming-business (U.S. website) and www.panda.org (global website).

Ceres is an advocate for sustainability leadership. It mobilizes a powerful coalition of investors, companies, and public interest groups to accelerate and expand the adoption of sustainable business practices and solutions to build a healthy global economy. Ceres also directs the Investor Network on Climate Risk (INCR), a network of 100 institutional investors with collective assets totaling more than $10 trillion. For more information, visit www.ceres.org and www.incr.com.

Calvert Investments is an investment management company serving institutional investors, retirement plans, financial intermediaries, and their clients. Many of Calvert's investment strategies feature integrated corporate sustainability and responsibility research. Founded in 1976 and based in Bethesda, Maryland, Calvert Investments managed assets of more than $11.9 billion as of November 13, 2012. For more information, visit www.calvert.com.

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