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#### **About This Report**

The Chubb Corporate Environmental Program is now in its eleventh year. Chubb remains committed to communicating important information about the company's environmental initiatives to our clients, shareholders, employees, business partners, the communities where we operate and others who have an interest in our company, our industry and the environment.

### **About Chubb**

Chubb is the world's largest publicly traded property and casualty insurance company. With operations in 54 countries and territories, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients. As an underwriting company, we assess, assume and manage risk with insight and discipline. We service and pay our claims fairly and promptly. The company is also defined by its extensive product and service offerings, broad distribution capabilities, exceptional financial strength and local operations globally. Parent company Chubb Limited is listed on the New York Stock Exchange (NYSE: CB) and is a component of the S&P 500 index. Chubb maintains executive offices in Zurich, New York, London and other locations, and employs approximately 31,000 people worldwide. Additional information can be found at: www.chubb.com

Chubb Environmental Report 2017

As the world's largest publicly traded property and casualty insurer, Chubb has a responsibility not only to provide solutions that help clients manage environmental and climate change risks, but also to control our own ecological impact and contribute to environmental causes. We also believe that the well-being of society depends on a healthy environment and that a proper ethic strives for balance between sustainable development and preservation.

## Chubb and the Environment – At a Glance

Climate change is an important and serious issue for the global insurance industry because it is our business to provide security against many of the property-related risks posed by such change.

With operations in 54 countries and territories, Chubb's business and operating models are exposed to the full impact of global climate change. At Chubb, we recognize that a changing climate affects everyone – our customers, employees, shareholders, business partners and the people who live and work in the communities we serve.

Chubb's Corporate Environmental Program is now in its eleventh year. We continue to be on the forefront in addressing environmental issues and the implications of climate change for all areas of our business. We are proud of the progress we have made and are committed to taking further steps to make meaningful improvements in the environment.

#### **Products & Services**

As a global insurance company, assessing risk is a core competency and strength for Chubb. The company is a leader in developing insurance products and risk management services that facilitate market-based solutions to environmental and climate-related issues. Today, Chubb is among the world's largest global underwriters of environmental liabilities and pollution risks. In the U.S., Chubb is also a leader in meeting the insurance and risk engineering needs of clean technology companies, including renewable and alternative energy providers, manufacturers and software and hardware companies.

Chubb's solutions also include coverages for premise-based exposures, contractors' and project pollution liability, and environmental cleanup projects, as well as "green building" consulting services and a property policy that enables greener rebuilding after a loss. In addition, Chubb provides incentives and discounts to certain property customers for environmentally friendly behaviors.

#### **Operations**

The company has had a formal program to measure, record and reduce greenhouse gas (GHG) emissions in its own operations since 2006. Between 2006 and 2012, a period that preceded ACE Limited's January 2016 acquisition of The Chubb Corporation, GHG emissions at ACE were reduced 27% per employee, far exceeding the original goal of an 8% reduction per employee. From 2015 to 2017, Chubb reduced absolute global GHG emissions by 11%. The company will continue to deploy successful approaches for GHG emissions reduction, including installing energyefficient lighting and equipment and more efficient use of office space.

#### **Philanthropy**

The environment is a priority in Chubb's corporate philanthropy.

Chubb supports communities around the world in which our employees live and work through our established philanthropic entities and via company-sponsored volunteer initiatives. For example, grants from the Chubb charitable foundations have helped preserve sensitive lands and habitats across the U.S. and around the world, finance green business entrepreneurs, and support educational programs that promote a healthy and sustainable environment.

# Recent Milestones

11%

The reduction from 2015 to 2017 in absolute global GHG emissions.



150

Total number of metric tons of carbon dioxide equivalents saved from new building-efficiency projects at company-owned facilities in 2017

144,000

Number of trees the company has planted through its Environmental Risk Business's sponsorship of American Forests' ReLeaf Program since 2007

> Number of years of Chubb's Corporate Environmental Program

A-

The company's 2017 score the CDP's climate change program ranking

Chubb released its first progress report since joining the UN Global Compact and formally committing to its environmental principles

Number of countries around the world where Chubb has issued

environmental risk policies

<u>≋≋ 342,000</u>

Number of acres of threatened lands and waters in the U.S. Chubb has helped save through its support of The Conservation Fund



1/2

The proportion of the Global Cleantech 100, the top private innovation companies in clean tech, insured by Chubb



## Perspective on Climate Change Risk



At Chubb, our business involves providing clients with insurance and reinsurance protection from the impact of natural catastrophes, including weather events that are more frequent or severe. Over time, we've seen an increasing trend in extreme weather events – floods, drought, heat waves and hurricane intensity – and recognize that climate change is a contributor.

Chubb recognizes that a changing climate affects everyone – customers, employees, shareholders, business partners and the communities we serve. In his 2017 letter to shareholders, Evan Greenberg, Chubb Chairman and CEO, wrote, "The evidence of climate change is immediately apparent, profound and disturbing. It can be found in its extremes – from drought to flooding – with rising sea levels and warmer oceans likely contributing to large wind events that contain more moisture or creating weather patterns favorable to massive wildfire conditions."

According to a 2018 Swiss Re Sigma study, total global economic losses from natural and man-made disasters were \$337 billion, almost double the losses in 2016 and the second highest on record<sup>1</sup>.

Global insured losses from catastrophe events were the highest-ever recorded in a single year. It was the second costliest North Atlantic hurricane season since 2005. Last year was also a record year for wildfires. Major wildfires across the globe resulted in combined insurance losses of \$14 billion, the highest ever.

Many of these natural catastrophes are affecting human environments that are now more densely populated and, therefore, more vulnerable.

Global sea levels are also rising at an accelerated rate and, as the National Aeronautics and Space Administration has reported, global sea levels rose about 17 centimeters (6.7 inches) in the last century. However, the rate of this increase has doubled that of the last century<sup>2</sup>.

In addition, since 1950 in the U.S., the number of record high temperatures has been increasing, while the number of low temperature events has been decreasing. According to the World Meteorological Organization's 2017 Statement on Global Climate, 2017 was one of the world's three warmest years on record<sup>3</sup>.

 $<sup>1\</sup> Swiss\ Re\ Sigma\ Study\ No\ 1/2018,\ Natural\ catastrophes\ and\ man-made\ disasters\ in\ 2017;\ a\ year\ of\ record-breaking\ losses$ 

 $<sup>2\</sup> Environmental\ Protection\ Agency,\ Climate\ Change\ Indicators\ in\ the\ United\ States:\ Sea\ Level\ -\ Updated\ August\ 2016$ 

<sup>3</sup> World Meteorological Organization, Statement on the State of Global Climate in 2017; WMO-No. 1212

<sup>4</sup> World Health Organization, Fact Sheet on Climate Change and Health; Feb., 2018

Recent research from the National Oceanic and Atmospheric Administration has stated that because of increasing temperatures, ideal wildfire conditions have resulted in large fires impacting the Western part of the U.S. As stated in Chubb's Annual Report, in 2017 we experienced the largest wildfire in California history by both the amount of acreage destroyed (288,000 acres) and the amount of insured loss (approximately \$9 billion), with estimated industry insured losses for all California wildfires likely exceeding \$12 billion.

The impact of global climate change extends beyond natural disasters and weather events in ways that are a direct threat to human health. For example, the World Health Organization's July 2017 Fact Sheet on Climate Change and Health notes that between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year from malnutrition, malaria, diarrhea and heat stress<sup>4</sup>.

It is clear that a societal response is required – from legal and regulatory issues to corporate responsibility – to address the liabilities and the opportunities presented by climate change. Climate change will also require a more holistic or comprehensive risk management approach.

As a leading insurer, Chubb continues to implement innovative ways to engage with its policyholders and other constituencies in managing climate change risk. These include:

- Advising policyholders in catastropheprone areas of the potential risk management benefits of mitigation, including the transition away from such areas
- Providing innovative risk-mitigating insurance solutions to companies that must operate with climate change risks
- Providing risk engineering services to help clients mitigate supply chain and global operations risks from exposures related to a changing climate
- Working with governmental agencies on mutually beneficial insurance capacity solutions in catastrophe-prone areas
- Consulting with policyholders on a targeted basis regarding their own carbon footprint management



## Managing Risk at Chubb

Managing risk is core to Chubb. Standard & Poor's rating of Chubb's enterprise risk management process as "Strong" in its April 2017 ERM rating report places the company among the top 19% of North American and Bermuda insurers.

Our approach to risk management is to identify all known and emerging risks that could have an impact on overall capital levels and financial results. Regarding the potential effects of catastrophe losses, we closely monitor our catastrophe risk accumulations around the world.

Because the potential physical effects of climate change present a significant risk to the company, they have been integrated into Chubb's overall risk management process. In addition, Chubb continually assesses the potential business impact of the changing climate and, if appropriate, develops new procedures, products and/or services. New offerings could be in the form of products, entry into industry segments, risk engineering services or claims services.

#### **Modeling**

Chubb is a leading proponent and user of catastrophe models to quantify natural catastrophe risk for product pricing, risk management, capital allocation and to simulate and estimate hurricane losses. Chubb uses models to aggregate and closely monitor natural catastrophe exposures across its global portfolio and to ensure that its capital base is sufficiently strong to meet the expectations of regulators, rating agencies and policyholders and to provide shareholders with an appropriate risk-adjusted return.

Modeling is a valuable tool in identifying possible market opportunities. At Chubb, risk management modeling and underwriting practices have been adapted

to the developing risk exposures attributed to climate change. Since the earth's climate appears to be changing in ways inconsistent with the historical record upon which catastrophe models draw data, Chubb has adopted a shorter-term view of event frequency that is higher than the long-term historical frequency.

Chubb invests continually to upgrade and refine its risk management tools for catastrophes such as floods and hurricanes. Through the use of catastrophe models, Chubb manages severe weather risk to indirect client exposures throughout the world. Special emphasis is given to areas where Chubb has significant exposures and the inherent risk from extreme weather events – such as tropical cyclone and other windstorms – is deemed to be high, such as the coastal United States, Southeast Asia and U.K./Europe.

To aid in prioritizing management focus on extreme weather events, each peril region is classified as either Tier 1, 2 or 3 according to the exposures and risk combination present. Tier 1 regions are the highest priority areas for the company as they present the greatest risk profile and are the most carefully managed. Tier 2 and 3 regions are also closely managed at the regional and business unit level.

In addition to modeled peril regions, we focus on non-modeled perils, such as flood and wildfire, which present a risk in many of the developing areas of the Chubb insurance portfolio. Several major natural catastrophes in recent years, such as Hurricane Harvey in Texas, the Kumamoto earthquake in Japan, flooding in Europe and wildfires in California, were non-modeled events or involved difficult-to-model coverages (e.g., business interruption). These types of losses have not typically been considered in the risk and pricing model framework used by the insurance industry to project

Chubb recognizes that a changing climate affects everyone – customers, employees, shareholders, business partners and the communities we serve.



natural catastrophe losses and this has led to an overall rise in the industry's perception of risk.

The natural catastrophes of 2017 included both modeled and non-modeled losses. For example, the insurance industry's flood models for Houston did not correctly anticipate the extent of flood risk: the city suffered three one-in-100 year floods in an 18-month period, including Hurricane Harvey. As Mr. Greenberg has noted, "Models provide an organized framework for thinking; they don't represent truth."

The lessons learned from such events – new assessments of building performance and improved understanding of how a convergence of conditions can increase losses in a severe catastrophe – enable us to incorporate the latest knowledge in our modeled loss estimates.

Chubb accounts for the potential impact of catastrophe and climate risks on the company's own facilities and operations. Direct risk to Chubb's business operations exists if such weather events occur where Chubb has offices. Severe weather events have tested Chubb's business continuity program and operations have functioned effectively. Chubb's risk

analysis ranges from the known (based on definitive historical loss experience) to the hypothetical (based on a probable maximum loss (PML) calculation).

#### **Pricing**

Chubb incorporates risk mitigation services through its risk management and site surveys, specification of terms and conditions in policies and the development of sound underwriting guidelines into the underwriting of catastrophe-exposed products (e.g., property, energy, marine or crop coverage). Chubb's modeling and underwriting approach allows for risk – and hence price – differentiation across our client base.

Clients that mitigate risk – through retrofitting buildings to comply with updated building codes, installation of hurricane shutters and relocating exposures away from coastlines and flood plains – will have lower insurance costs than those that do not. Chubb also makes use of terms and conditions, such as sub-limits, coverage restrictions and deductibles, to ensure appropriate risk selection and potentially reward certain policyholder behavior.

Chubb invests continually to upgrade and refine its risk management tools for catastrophes such as floods and hurricanes.



The company is also actively engaged with regulators to ensure that pricing is actuarially sound and can be adapted to meet new and emerging climate change risks and the capital implications of these risks. For Chubb to continue to offer coverage under climate change conditions, pricing must always be set at sound actuarial rates that cover loss costs, expenses and risk margins on exposed capital. Thus, pricing must be flexible over time and by geography.

Unfortunately, many regulatory regimes impose the functional equivalent of price controls, which are not built to respond to developments in risk assessment and signal the wrong incentives to consumers and businesses that are encouraged to increase exposures.

#### Reinsurance

We mitigate our exposure to climate change risk by actively hedging catastrophe risk in both the reinsurance and capital markets. In addition, our investment portfolio, which backs the loss reserves and claims-paying ability of our insurance businesses, is highly diversified by risk, industry, location, and type and duration of security.

Successful risk transfer from policyholders to insurance and capital markets also requires industry standards around exposure data. We are committed to helping the industry improve standards that will ultimately help increase risk transfer capacity and provide additional incentive for risk mitigation behavior by policyholders.

## Our Products & Services

Chubb is committed to developing insurance products and risk management services that facilitate market-based solutions to current and pending environmental and climate-related issues. Chubb is one of the largest and most advanced global underwriters of environmental liabilities and pollution risk, with environmental risk units in North America, Europe, Asia and Latin America. In the U.S., we are a leader in meeting the insurance and risk engineering needs of clean technology companies, including renewable and alternative energy providers, manufacturers and software and hardware companies.

Chubb's products and services, which fall primarily into the areas of environmental risk, renewable energy coverage, Clean Tech and "green" initiatives, touch on virtually all lines of coverage worldwide. The full range of environmental and sustainability property and casualty products and services include:

- Environmental professional indemnity
- Environmental risk products
- Global weather insurance

- Green property insurance
- Political risk and trade credit
- Renewable energy construction, technical lines
- Power production property insurance
- · Clean tech

Chubb's Environmental Risk business has issued policies in more than 53 countries, and continues to launch products that are in demand globally. One example is a suite of coverages offered through the company's specialized clean tech industry insurance program. The Clean Tech Sustainability Suite offers tech firms involved in research and development (R&D) protection for property and business income.

In addition, the success of the company's green consulting services offered to insureds within certain policies has led to an expansion of these environmental services to other coverages and products within Chubb's portfolio. In order to effectively manage growing multinational demand for these products, Chubb continues to establish a flexible, complex and unified set of standards for global market opportunities.



#### **Environmental Liability Insurance**

Chubb is fully aware that specialized environmental risks present a unique combination of scientific, political and financial factors that require specific technical expertise and local knowledge. As environmental regulation and awareness has increased, coverages for environmental liabilities are growing in demand, not only from traditional "polluting" industries, such as energy and chemical companies, but also from other organizations that own land or have potential liability. These include governments, real estate owners and developers, manufacturers, agricultural entities and global consumer brands. Chubb monitors more than 3,400 environmental regulations awaiting attention from legislators and regulators around the globe, all with the potential to alter how commercial clients conduct their business. These include both new initiatives as well as increased enforcement of existing laws and regulations.

To meet strong and growing demand, Chubb has bolstered its environmental underwriting staff and offers many innovative products, including Global Premises Pollution Liability (PPL) and Contractors' Pollution Liability (CPL) policies for U.S. multinational corporations doing business at home and abroad. The CPL and PPL programs combine insurance with technical support to help contractors reduce their environmental exposure. Also, Chubb's Hazardous Material/Waste Transportation product line offers safety and claims services for hazardous materials and hazardous waste transporters.

Another innovative product is Chubb's Environmental Incident Alert program, which facilitates more rapid dispatching of incident-response contractors as well as real-time monitoring of clean-up costs. The program offers 24/7 incident

reporting via phone, web or mobile device and has demonstrated it can both reduce environmental damage and lower claim costs by as much as 20% to 25%.

Chubb's product line also includes catastrophe management coverage, which handles the cost of services to maintain and restore public confidence following an environmental catastrophe. Outside the U.S., the company's core environmental products are sold through Chubb Global Markets at Lloyd's of London. Among the broad range of bundled/unbundled environmental engineering and risk minimization services available for Chubb Environmental Risk insureds are:

- Evaluation of existing waste management protocol/disposal site selection
- Evaluation of existing mold, asbestos and lead management plans
- Evaluation of existing underground storage tank management programs
- Evaluation of spill prevention, control and countermeasure (SPCC) plans
- Mock regulatory audits for point source pollutants into surface waters, air pollutants and solid waste pollution (for compliance with the National Pollutant Discharge Elimination System (NPDES) and the Resource Conservation and Recovery Act (RCRA))
- Training (mold awareness, underground storage tank program management, 24 HAZWOPER for hazardous waste operations, etc.)
- Storage tank operator training

Chubb has demonstrated its leadership in insuring environmental risks in other ways. The company has provided information to the National Association of Insurance Commissioners and individual state insurance regulators in the U.S. related to climate change risks and related company policies. Chubb also periodically produces and sponsors

whitepapers that provide perspectives to businesses on emerging risks and insights into how to manage these risks to avoid future environmental exposures. Titles include: Electronic Waste: Managing the Environmental and Regulatory Challenges; Agricultural Businesses Face Unrecognized Environmental Risks and New Business Models, Technology Raise Professional Liability Risks for Contractors.

#### **Renewable Energy Initiative**

The renewable energy sector is another major product area for Chubb, particularly in light of the increased global attention on climate change. The desire to develop clean, efficient alternative sources of energy is leading to the planning and construction of renewable energy projects around the world.

These projects take many different forms: biomass/biofuel, biogas, fuel cell, methane extraction facilities, solar, wind, geothermal, hydro energy and manufacturers of solar panels, wind turbines and wind turbine components. Chubb addresses risks that occur in the two main phases of a typical renewable energy project – construction and operation. Construction risks range from delay in startup to public or employer liability, whereas operation risks range from business interruption to premises pollution.

Chubb partners with a variety of companies to provide risk engineering expertise in the following capabilities: business continuity assessment, equipment breakdown inspections, maintenance program reviews, pollution risk assessments, and many others.



#### Clean Tech

Chubb's Clean Tech business provides bespoke insurance solutions to companies that are creating new technology and driving innovation. This global business has dedicated underwriters, risk engineers and claims examiners who specialize in handling clean technology clients.

Clean Tech clients face differing exposures through the development, or lifecycle, of their business. Chubb's bespoke insurance solutions cover companies as they move from start-up, including research and development, to pilot projects to commercialization. The exposures faced by these clients stem from complex supply chains, the globalization of their product, intellectual property rights and environmental liability. Our risk engineers are able to provide clients with risk management advice in all of these areas.

Any company involved in the following activities would fall within our Clean Tech business:

Renewable and alternative energy producers

- Software and hardware companies, including energy efficiency and smart grid technologies
- Emerging companies, including those in R&D stage with a focus on biorenewables
- Manufacturers and service providers, especially component parts manufacturers or distributors supporting clean technologies, renewable energy producers and clean transportation

Recent clients include an energy-efficient lighting company that reduces electricity usage, as well as a company engaged in the research and development of next-generation fibers.

Chubb has joined clean tech associations and sponsored events to enable direct access to the local clean tech ecosystem. Such engagement enhances product development because we can translate our understanding of client exposures into new, bespoke coverage. This approach ensures that our insurance solutions tailored for this fast-paced, innovative segment remain relevant.

We have entered into the following associations and sponsorships:

- Global Cleantech 100 List
- Cleantech Forum San Francisco
- Colorado Cleantech Industries Association
- Northeast Clean Energy Council
- Cleantech San Diego
- · Sustain OC
- Sponsor of Greentown Labs, Boston
- The Clean Tech Group Sponsorship of the European Forum 2016
- Clean Tech Scandinavia Sponsorship of the Nordic Cleantech Open
- U.K. Renewable Energy Association 2016 & 2017 Membership

There are premium credits available to customers that buy "preventative measures" coverage.



#### **Green Building Restoration**

Chubb works with public and private stakeholders worldwide to develop risk transfer and risk management services that allow for innovative responses to the additional risks associated with implementing green initiatives. Chubb's Green Property Insurance policy provides coverage for commercial businesses that desire to rebuild to a "greener" standard in the event of a loss to an existing building. This includes: energyefficient appliances, electronics, heating and cooling systems, interior plumbing systems and lighting fixtures; low volatile organic compound (VOC) paints, primers, solvents, finishes and adhesives; low emissions carpet and floor coverings; or Forest Stewardship Council (FSC) certified wood. There are also premium credits available to customers that buy "preventative measures" coverage, which provides the policyholder up to a certain amount of money if the insured has certain mitigation features in place. These policies encourage actions from Chubb's customers that help to reduce GHG emissions.

#### **Consulting Services**

Chubb clients also receive a full complement of traditional environmental consulting in the following categories: wastewater management, waste management, air quality management, emergency preparedness and response, reporting, environmental management systems including ISO 14001, as well as sustainability and environmental impact analysis and reduction. Chubb provides services such as industrial hygiene assessments; regulated and hazardous materials management and remediation oversight; environmental due diligence; and Leadership in Energy and Environmental Design (LEED) and regulatory compliance consultation. **Customized Environmental Protection** Agency (EPA) and Occupational Safety and Health Administration (OSHA) compliance training programs and services are also provided. Programs in asbestos, lead-based paint and microbial management, and water intrusion prevention are also offered. Accredited compliance staff are also available to augment clients' environmental, health,

and safety personnel at their locations as necessary to meet their health, safety and the environment (HSE) objectives. Other services offered by our personal lines unit includes wildfire defense services and infrared camera scans of clients' homes to identify areas for improved energy efficiency.

#### **Other Coverages**

Coverages such as property catastrophe, crop and business interruption insurance are significant businesses for Chubb, and the company continues to invest in these businesses and in developing solutions to help clients manage the physical risks posed by climate change. Today, Chubb is one of the leading crop insurers in the U.S. through the company's Rain and Hail subsidiary. Chubb Agribusiness insures companies that manufacture, process and distribute agricultural products. In addition, our Global Weather coverages help clients insure against unpredictable weather conditions and climate change, protecting their assets around the world against damage or loss due to adverse weather conditions.

## **Our Operations**

Chubb is committed to developing insurance products and risk management services that facilitate market-based solutions to current and pending environmental and climate-related issues.

One of the primary objectives of Chubb's Corporate Environmental Program is to measure, record and reduce GHG emissions. As an insurance company, Chubb has a modest environmental footprint. However, we aim to reduce our mark on the environment even further. This includes efforts to reduce the direct and indirect GHG emissions generated from heating, cooling and lighting our offices and from company owned or leased vehicles, as well as the reduction, reuse or recycling of resources.

ACE Limited launched its corporate environmental program in 2006, about a decade before it acquired The Chubb Corporation and adopted the Chubb name globally. By 2012, the company had reduced its GHG emissions 27% per employee, far exceeding its original goal. From 2015 to 2017, Chubb reduced its absolute global GHG emissions by 11%.

The company first developed its Corporate Greenhouse Gas Inventory Management and Reduction Plan in 2007, when ACE joined the voluntary Climate Leaders initiative sponsored by the U.S. Environmental Protection Agency (EPA). The plan included global emissions reporting, the establishment of a reduction goal and a strategy for achieving the goal.

While the EPA's Climate Leaders program was discontinued in late 2011, our Corporate GHG Inventory Program is still actively using its methodology, which is based on the World Resources Institute and the World Business Council for Sustainable Development (WRI/WBCSD) GHG Protocol for data collection and analysis. We gained valuable knowledge and skill related to climate change issues through the Climate Leaders initiative, and are proud to have been one of only a few insurance company partners in the program.

The company's emissions are third-party verified to ISO 14064-3 standards. Chubb also reports its GHG emissions data and related activities to CDP, an international, not-for-profit organization providing the only global system for companies and cities to measure, disclose, manage and share vital environmental information. For 2017, the company earned a score of A- on the CDP's climate change program ranking.

In 2016, both ACE and legacy Chubb were ranked "High Quality" companies for the comprehensiveness of their climate risk disclosures by Ceres, the nonprofit sustainability organization. ACE and Chubb were two of only 22 insurers out of 148 analyzed to earn this distinction. The report, Insurer Climate Risk Disclosure Survey Report & Scorecard: 2016 Findings & Recommendations, ranked insurance companies based on five core areas: governance structures to address climate risk; climate risk management programs; use of catastrophe and other computer modeling tools to manage climate risk; engagement with stakeholders; and greenhouse gas emissions measurement and reduction.

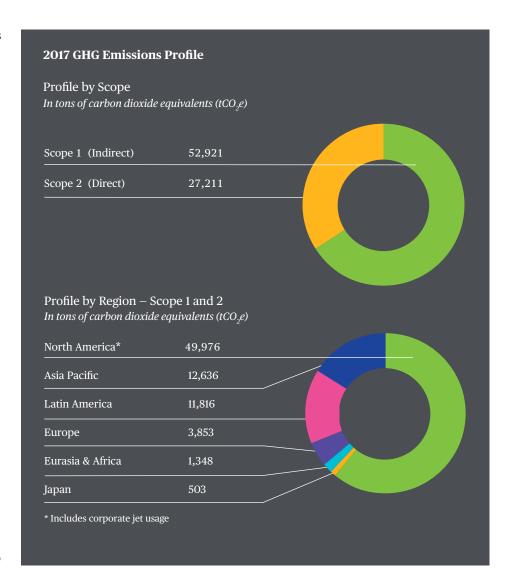
To achieve our GHG reduction goals, we have aggressively worked to make reductions within our operations. Our plan focuses on reducing our energy consumption at the facility level – primarily in our owned buildings and larger, long-term leased spaces. Chubb created a targeted energy policy for its operations in Europe, a region that includes 19 countries. The policy aims to reduce GHG emissions by establishing building energy benchmarks and pursuing short-term objectives that reduce energy consumption within the region. As part of this policy, Chubb has conducted an energy audit at its

London, U.K. office, for example, and has identified GHG reduction opportunities that have been implemented successfully to date. Projects in London include: increased chiller temperature set points, AHU heat recovery and changing plant running times. A number of other projects are still in planning stage, but the energy efficiency projects that have been implemented have reduced energy consumption at the building.

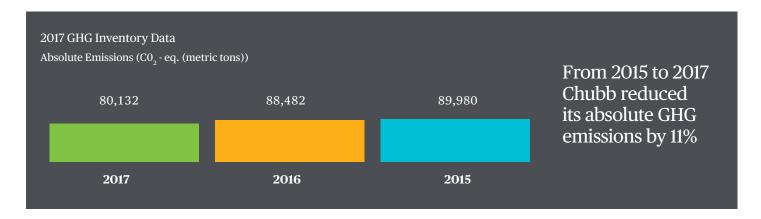
In addition, Chubb deployed natural renewable energy as its main source of energy for its real estate portfolio in the U.K. In 2017, the natural renewable energy mix consisted of 50% wind, 40% solar and 10% hydro (water). Through the deployment of natural renewable energy, Chubb's GHG emissions have been reduced through the avoidance of fossil-fuel based energy consumption. This reduction in emissions is equivalent to 3,140 tons of CO2e.

Another approach to reducing our GHG emissions is to reduce our overall real estate square footage by condensing office locations and making work space more efficient. Applying new company standards for the number and size of office and cubicle spaces not only reduces total real estate per-person square footage, but allows more light into the space, which decreases electricity consumption.

In Mexico, for example, Chubb implemented GHG reduction initiatives at three of our offices in Monterrey, Mexico, which have contributed to an 8% reduction in energy consumption in the region. Also, during the integration of ABA Seguros and Chubb Fianzas Monterrey, 550 employees from seven offices were relocated to the company's new building in Mexico City. In addition to establishing a recycling program and eliminating plastic water bottles and Styrofoam, approximately four tons of paper were recycled during the move.



Additional Environmental Metrics			
	2017	2016	2015
Energy (MWH)	245,138	250,178	245,846
Direct	107,261	104,570	100,317
Indirect	137,877	145,608	145,529
Renewable	10,126	4,984	0
Waste (Tonnage)	4,600	5,100	5,000
Water (Million m³)	0.344473	0.340687	0.340687
US/Bermuda Business Travel (KM)	139,466,178	141,111,852	110,274,492



In 2017, Chubb completed an energy audit for one of the company's largest facilities located in Whitehouse Station, N.J. The results of this energy audit are currently being evaluated, and energy saving initiatives will be implemented where feasible in order to further reduce GHG emissions.

Emissions from mobile combustion – which account for 27% of the company's GHG inventory – include our global fleet of vehicles and aircraft. Chubb manages its flight-related emissions by operating new, ultramodern jet aircraft equipped with the latest engines, wings and avionic design technologies, making them leaders in their respective aircraft categories for efficient flying. These advanced capabilities allow Chubb's aircraft to operate at very high altitudes and consume less fuel. These advanced aircraft also fly optimal routes, which have shorter distances between world destinations, saving fuel and, ultimately, the release of GHGs.

Chubb has implemented green building practices and, in a number of locations, has pursued the U.S. Green Building Council's LEED certification. Green building practices help improve indoor air quality, address resource management and reduce building water use.

One of our largest buildings in North America, in Philadelphia, earned LEED Silver certification in 2009, becoming the city's first LEED-certified existing building. Over the next five years, the company increased the amount of energy efficient lighting (raising the Energy Star score from 73 to an 84), supported alternative commuting methods (public transportation, walking, biking, etc.) and implemented other green building initiatives at the location. In November 2014, the Philadelphia building earned LEED Gold recertification.

In 2011, our Bermuda executive office building was awarded LEED Gold Certification under the LEED for Existing **Buildings: Operations and Maintenance** rating system, making it the first building on the island to earn LEED certification. In 2014, Chubb was one of the first companies to engage with the USGBC to adopt the LEED Dynamic Plaque system for the building. Dynamic Plaque is a building performance and monitoring tool. It is continually scoring the building based on five different categories: energy, water, waste, transportation and human experience. Because the building is continuously being scored on a one-to-100 scale, the LEED Dynamic Plaque encourages stakeholders to make meaningful improvements to the building based on observations gained from their score.

#### **Employee Engagement**

Our employees globally play a role in supporting the company's environmental commitment.

In recent years, employees helped the company achieve substantial progress on the following five initiatives:

- Establishing recycling programs in all eligible offices
- Discontinuing the use of disposable plastic water bottles
- Removing all disposable Styrofoam products in offices
- Purchasing only sustainable copy paper in all offices
- Reducing paper consumption by 5%

Volunteers in offices undertake environmental projects on a local scale. For example, in Philadelphia, the local Chubb Green committee implemented a composting program in the building's cafeteria. Due in part to this initiative, Chubb diverts 60% of all waste in the building from a landfill. In Bermuda, local teams created a Chubb vegetable garden, and the produce is served in the building's cafeteria.

In late 2017, employees at the company's Whitehouse Station, N.J. office participated in a series of sustainability trainings aimed at educating employees on sustainability, green building and the company's own environmental goals.

## Our Philanthropy

The environment is a priority in Chubb's corporate philanthropy. The Chubb charitable foundations and the company's employees support a wide range of environmental philanthropies and volunteer activities in local communities around the world. Through these initiatives, Chubb promotes a healthy and sustainable planet.

Chubb's charitable foundation grants have helped preserve sensitive lands and habitats, finance green business entrepreneurs, and support educational programs that promote a healthy and sustainable environment in the U.S. and around the world.

Since 2005, the company has supported The Conservation Fund, which has protected nearly 8 million acres across the U.S. In recent years, the company's charitable foundation has provided more than \$1 million to The Conservation Fund initiatives that have protected more than 345,000 acres of threatened lands and waters as well as the Conservation Fund's ShadeFund™ program, which provides small loans to promising green entrepreneurs by pooling contributions from individuals, companies and foundations. As entrepreneurs repay their loans, capital is redeployed to help other entrepreneurs grow their businesses, thus creating jobs, preserving working forests and supporting rural communities across the country.

The Chubb Charitable Foundation's support of the Nature Conservancy provided the continuation and expansion of coral reef restoration in the Mexican portion of the Mesoamerican Reef. This effort resulted in transplanting 10,000 new coral colonies and establishing new restoration sites and coral nurseries. The Nature Conservancy works to protect the lands and waters on which all life depends in 72 countries around the world.

The Bermuda National Trust plays a leading role in environmental stewardship in Bermuda. For over 20 years, Chubb has supported the Trust with nearly \$450,000 grants to help preserve precious natural reserves and woodlands by removing invasive species, planting native flora, grass sowing, landscaping and picking up litter.

The Chubb Charitable Foundation also supports the sustainability of cultural institutions. Through a Foundation grant, the Philadelphia Museum of the American Revolution, which opened in 2017, was recently awarded a LEED Gold certification for its commitment to energy conservation and environmental awareness. Among the museums' environmentally friendly features are a green roof and cutting-edge stormwater management and heat-recovery systems.

Chubb's Environmental Risk business unit continued to contribute to the ReLeaf Program of American Forests, the oldest national nonprofit conservation organization in the U.S. In 2017, Chubb pledged its support to sponsor the planting of 32,000 trees to support the American Forests Global ReLeaf® program. Chubb's sponsorship is the largest by the company since it began supporting the cause in 2008. Chubb's pledge represents one tree for each new environmental insurance policy written globally in 2017.

Chubb's contribution will support planting projects in six U.S. states - California, Kentucky, Mississippi, Texas, West Virginia and Wyoming - as well as Indonesia and Panama. With a goal of planting more than 2 million trees in 2017 alone, American Forests has planted more than 50 million trees since 1990 – in all 50 states and in nearly 50 countries worldwide.

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#### **Volunteer Efforts**

Chubb organizes employee volunteer projects regionally with an environmental focus. For example, in addition to providing financial assistance to the Fairmount Park Conservancy and its Growing the Neighborhood Program, Chubb employees in the Philadelphia area have volunteered on park cleanup days throughout the year. Chubb employees in Thailand have also volunteered in mangrove reforestation in the Rayong Province.

These are just a few of Chubb's many environmentally focused funding and volunteer projects. Other ongoing and pending projects around the world demonstrate Chubb's community and philanthropic dedication to critical environmental issue

## Our Engagement

In 2017, Chubb joined the United Nations Global Compact, the largest corporate sustainability project in the world. Chubb formally committed to making the Compact's environmental principles part of the culture and day-to-day operations of the company.



Membership in the Geneva Association (genevaassociation.org), an international insurance think tank representing 90 global insurance organizations, whose Climate Risk and Insurance project has been outspoken on climate change issues. Chubb's Chairman and CEO is among the 68 chief executives of major international insurers who have publicly confirmed their commitment to the Geneva Association's Climate Risk Statement – a set of guiding principles on the substantial role insurance can play in global efforts to tackle climate-related risks.



Completion of CDP's annual survey to further support our commitment to reducing our carbon emissions. In 2017, the company earned an A- on CDP's climate change program ranking.



Participation in ClimateWise (climatewise.org.uk), a U.K.-based organization of insurance companies committed to taking action on climate change and to reporting publicly on their performance.



Membership in the Business Roundtable (BRT), which supports collective actions that will lead to the reduction of greenhouse gas emissions on a global basis. Each year, Chubb Chairman and CEO Evan Greenberg outlines the company's environmental commitment and achievements in BRT's Sustainability Report.



Membership on the Reinsurance Association of America's (RAA) Extreme Events Committee, which focuses on catastrophe modeling improvements to reflect climate change. Chubb supported the RAA's call for reform of the National Flood Insurance Program (NFIP) in the U.S. Congress that would ensure that program rates are actuarially sound and encourage risk mitigation.



Chubb is a member of SmarterSafer.org, a coalition that includes environmental advocacy groups such as Ceres, Environmental Defense Fund, National Wildlife Federation and the Sierra Club, founded to promote and support disaster safety and preparedness measures that are consistent with sound environmental stewardship of our fragile coastal ecosystems.



Membership to the Insurance Information Institute (I.I.I), an association that improves public understanding of insurance. The organization, supported by industry members, is a primary source of information, analysis and referral concerning insurance, including the potential threats climate change poses to the global economy, ecology, and human health and well-being.





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