

 **Teneo®**

Vision

Edition 5 | 2018



**Where Is The World Going?
How Do We Get There First?**

Editor | James Hoge

Warring Against Climate Change

Private Sector Now Setting the Pace

Lon Augustenborg, Senior Advisor

Corporations find themselves at the forefront of addressing climate change and protecting the environment voluntarily and at their own initiatives. Corporate Social Responsibility (CSR) in many firms now exceeds government policy and U.S. EPA standards as environmental regulations are eliminated in Washington D.C. The facts of climate change are difficult to ignore.

More than half of the Fortune 500 are already taking actions to address this important issue, including initiating decarbonization of energy and transport, creating circular enterprises to 'recycle and repair' products, expanding solar energy markets and setting clean air targets in more than half the Fortune 500 companies.

2016 was the hottest year in recorded history and preliminary analysis indicates 2017 will be the second hottest. The earth has already warmed more than 1°C since the early 1800s and estimates suggest it could rise 3-5°C or more by the end of this century.

This has caused ocean levels to rise and weather patterns to be disrupted. In the last 100 years, glaciers around the world covering an area larger than India have melted away. Warmer temperatures cause more evaporation and thus more intense rainfall so flooding is on the rise. Storms that once happened every 100 years are now happening twice as often in New York and New England.

The impact of climate change also extends to geopolitics. Energy-rich regions of the Arctic are now traversable during the summer months, prompting Russia to stake new claims for oil and gas exploration, which, in turn, is undermining Western energy companies' competitive position. In addition, China has quickly taken advantage of the leadership vacuum left by the U.S.'s recent exit from the Paris accord.

Ironically, the country with the worst pollution record, that places economic growth over the health and safety of its people, is now touting its alternative energy reforms. Beijing is reporting that it is 'ahead of schedule' in its plans to peak carbon emissions and generate one fifth of its energy from non-fossil sources by 2030 — an ambitious and possibly unrealistic goal given the overwhelming reliance of its economy on carbon-polluting fossil fuels.

The U.S. Secretary of Defence, James Mattis, has asserted that climate change is a national security threat impacting stability in areas of the world where U.S. troops are deployed and in combat. The Joint Operating Environment lists climate change as one of the security threats the military expects to confront over the next 25 years. The National Academy of Sciences has reported that extreme drought in Syria between 2006 and 2009 was most-likely due to climate change, and that this was a factor which sparked the violent Syrian uprising in 2011. Incidents of civil unrest and war are expected to increase as the planet continues to warm.

Where Is The World Going? How Do We Get There First?

Ripe for Revolution

Despite this outlook, corporations have a significant opportunity to lead a transformation comparable in scope to that of the Industrial Revolution. The potential for such a dramatic shift has been made possible through emerging technological breakthroughs in artificial intelligence, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, and energy storage — all which enhance quality of life and lower harmful carbon emissions. The current state of affairs underscores the importance of such a transformation.

Europe's largest insurer, Allianz, reports that climate change stands to increase insured losses on an average of 37 percent per year, over the next decade and single year losses could top US\$1 trillion.

World Bank President Jim Yong Kim has stated: *"Every company, investor and bank that screens new and existing investments for climate risk is simply being pragmatic."* Insurers acknowledge climate change is the main threat to their industry and the economy.

Thus, global corporations now find themselves in a position where they must lead the way to develop solutions that can simultaneously stall —and, ultimately, reverse— global warming while maximizing profits and growing the global economy. That is why even companies like Shell Oil continue to support the Paris Climate Agreement.

This technological transition, with a view towards sustainability and green-friendly practices, is not just limited to the insurance sector. The 2017 report: "Power Forward 3.0: How the Largest U.S. Companies are Capturing Business Value While Addressing Climate Change" found 63 percent of Fortune 100 companies and nearly half of all Fortune 500s have set one or more clean energy targets, with significant numbers of companies setting 100 percent renewable energy goals and science-based greenhouse gas reduction targets to align with the Paris Climate Agreement. Of 190 Fortune 500 companies undertaking emission-reducing projects, \$3.7 billion was saved in 2016 alone, equivalent to taking 45 coal-fired power plants offline. Nearly seven gigawatts in new energy contracts have been signed by 33 companies (mostly in the Fortune 500) in the last three years. These were motivated by the steady decline of renewable energy prices and core business benefits, such as reduced operating costs, long-term price stability, and a diversified energy supply.

Bloomberg's New Energy Finance outlook for fuel and electricity markets through 2040 reports solar power is becoming cheap enough that it will push coal and even natural-gas plants out of business faster than previously forecasted. The current political landscape in Washington D.C. may slow this boom, but global companies are making it clear that a great transition from the Industrial Revolution is accessible for those who choose to grab it.

The Paris Agreement had significant implications to global corporations and, in the year ahead, global corporations will have to evaluate their operations with respect to the ambition set forth in the agreement and provide evidence-based answers to shareholders and customers on how they plan to contribute to the goals. Companies are adapting to this new reality. Indeed, a majority of Exxon Mobile's shareholders voted in 2017 for further analysis of risks posed to its business practices from climate policies, including the Paris Agreement.

In 2018, all signatories to the U.N. Paris Agreement will participate in a dialogue to take stock of their efforts in achieving the long-term goal of the Agreement. 2018 will mark an important point when countries will begin to increase their emission reduction pledges to support the Agreement's ambitious goals. However, with the UK (one of the primary leaders of the European Union's climate action) now embedded in Brexit negotiations, this may compromise some emission reduction efforts, particularly those under the European Union's Emissions Trading Scheme, which are largely funded by the UK.

Corporations that operate on both sides of the Atlantic and the Pacific will likely find it more cost-effective to standardize practices in line with the more carbon progressive countries they operate in. This was the impetus for 25 U.S. companies, including Apple, Google, Microsoft, Intel, and Mars Corporation, to take out full-page advertisements in *The New York Times*, *Wall Street Journal* and *New York Post* in May 2017, urging the U.S. President to keep the United States in the Paris Agreement. The copy stated *"U.S. business is best served by a stable and practical framework facilitating an effective and balanced global response. The Paris Agreement provides such a framework. As other countries invest in advanced technologies and move forward with the Paris Agreement, we believe the United States can best exercise global leadership and advance U.S. interests by remaining a full partner in this vital global effort."*

Beyond the scope of the Paris Agreement, countries and corporations have already begun to transition toward a low-carbon future. By 2016, more than \$3.5 trillion worth of fossil fuel investments were withdrawn by universities, religious institutions, pension funds, local authorities and charitable foundations, making this NGO-led, UN-supported campaign the fastest divestment movement in history. In 2017, Ireland's parliament became the first to vote to divest its Strategic Investment Fund from fossil fuels. The Bank of England is now investigating the possibility that, if international climate agreements are met, fossil fuel investments will become 'stranded assets' that could create a trillion dollar "carbon bubble" and plunge the world into another economic crisis.

The low-carbon transition committed to by 195 countries under the Paris Agreement will touch every sector of society from energy, transport, agriculture, manufacturing and services. Almost every human activity has a carbon footprint and that carbon footprint needs to decline from a U.S. average of 20 metric tons of carbon per person, per year, to two metric tons to keep the Earth below two degrees Celsius. Thus, no sector can escape examination on how it could contribute to this dramatic transition.

In the coming year, we will begin to see big changes in households related to this transition. Home heating systems will have to become fully electric to avail of renewable energy grid penetration. Off-grid micro-generation energy options will come on stream as battery storage costs continue to decline. Transport will be revolutionized with driverless electric cars, new charging infrastructure and innovative forms of sustainable transport. The new sharing economy, as demonstrated in bike and car sharing schemes worldwide, will facilitate further innovation in transport.

Some corporations are already shifting operations toward a circular economy as part of this transition. Traditionally, we have operated in a linear economy that promotes the "take, make and throw away" model, contributing to ever expanding consumption and waste. The World Economic

Where Is The World Going? How Do We Get There First?

Forum reports there will be more plastic in our oceans than fish by 2050 if we keep producing and failing to dispose of plastic at current rates. Public appetite for single use packaging, plastic microbeads, and other fossil fuel derived products is at an all-time low. Investment in how to bring more circularity into the economy, where the waste from one industry becomes the fuel for the next, is on the rise.

In 2016, IKEA's head of sustainability, Steve Howard, pronounced *"If we look on a global basis, in the West we have probably hit peak stuff. We talk about peak oil. I'd say we've hit peak red meat, peak sugar, peak stuff ... peak home furnishings,"* explaining the new state of affairs could be called "peak curtains" but that changes in consumption were an opportunity for companies to rethink the way they did business and explaining Ikea's long-term goal to build a "circular Ikea" to repair and recycle their products. Over the next year, technologies like 3-D printing and mobile sharing apps will continue to enable innovation and new enterprise development in line with the concept of a circular economy.

By the end of next year, more countries will begin efforts to be first movers on decarbonization of their energy and transport sectors. Costa Rica is already powered entirely by renewables; Denmark received 40 percent of its energy supply from wind power alone and plans to be 100 percent renewable by 2050; Scotland is using wind power to supply nearly 100 percent of the country's household needs; and Sweden has been producing more energy from biomass crops than from fossil fuels since 2010; and Brazil's has become the fastest growing solar market in the world.

It is also important to consider state policies. In the United States, several states are implementing policies that differ from those advanced at the Federal level. About 1,200 bipartisan state and local governments, businesses and universities have established the 'We Are Still In' movement, declaring continued support for the Paris Agreement, and the newly formed United States Climate Alliance will now convene states committed to upholding the Agreement.

California, the world's sixth largest economy, extended their cap-and-trade incentive program for corporations to 2030. Moreover, the state leads among its peers in electric vehicle adoption and total solar residential solar installations. Three U.S. cities are now fossil fuel free in their energy supplies and 25 other cities have committed to the transition to entirely clean and renewable energy. Burlington, Vermont, which once relied on coal, has been 100 percent renewable since 2014, and now uses hydropower, landfill methane, wind, solar and biomass energy and Aspen, Colorado is already running on 100 percent renewable energy, mostly from wind and water. Larger cities are also on their way to 100 percent renewable status, most notably Las Vegas - now the largest city in the U.S. to run its municipal buildings and equipment on 100 percent renewable energy sources.

Some of the states leading the transition are surprising: Kansas led the nation in renewable energy generation between 2011-15 and Hawaii ranked first in residential solar power. Texas— a state typically associated with oil-production— reached over 20 percent wind penetration in 2017 and, thanks to developments in the solar sector, increased in-state job-growth by 34 percent between 2014-2015. Ideologically conservative states like South Dakota, Wyoming and North Dakota

lead the nation in total clean energy jobs per thousand people and rank high for in-state power generation and planned capacity from renewable sources. Overall, the International Renewable Energy Agency reported the United States saw explosive growth in renewable energy jobs, with solar jobs up 82 percent and wind jobs up 100 percent over the past three years.

In 2018, global efforts toward the next Industrial Revolution will undoubtedly ramp up. The world is now looking to private corporations to resolve the most challenging environmental issues without government oversight, and to do it while maintaining economic growth. Global industries must now also become the moral compass for the world if we are going overcome the most challenging environmental issues mankind has ever faced.

Environmental scientist, Dr. Cara Augustenborg, provided technical expertise for this article.



280 Park Avenue, 4th Floor
New York, NY 10017

Teneo is a global advisory firm that works exclusively with the CEOs and leaders of the world's largest and most complex companies providing strategic counsel across their full range of key objectives and issues. Comprised of the most senior talent, we work collaboratively to solve the most complex issues. Our teams integrate the disciplines of strategic communications, investment banking, management consulting, political risk analysis, talent development, risk management, digital analytics, corporate governance, government affairs and corporate restructuring to solve for the most complex business and reputational challenges and opportunities. The Firm was founded in June 2011 by Declan Kelly, Doug Band and Paul Keary and now has more than 700 employees located in 17 offices around the world.

For more information contact teneoinsights@teneoholdings.com or visit teneoholdings.com