

## EXXONMOBIL SHAREHOLDER RESOLUTION ON CONSEQUENCES OF CLIMATE CHANGE ON DEVELOPING COUNTRIES

*Shareholders ask Exxon Mobil Corporation's ("ExxonMobil's") Board of Directors to establish a task force, which should include both (a) two or more independent directors and (b) relevant company staff, to investigate and report to shareholders on the likely consequences of global climate change between now and 2030, for developing countries, and poor communities in these countries and developed countries, and to compare these outcomes with scenarios in which ExxonMobil takes leadership in developing sustainable energy technologies that can be used by and for the benefit of those most threatened by climate change. The report should be prepared at reasonable expense, omitting proprietary information, and should be made available to shareholders by March 31, 2010.*

### RATIONALE

**Exxon's long term shareholder value will be harmed by its current strategy which is based on its 2030 Outlook. It wrongly depends entirely on growth in demand for oil-based products from developing countries, and it ignores strong scientific evidence, government policy and market forces that are shaping a very different energy future. There is legitimate concern that, unless the company adopts a more proactive set of policies, it will run increased reputational risks and face increased clashes with government regulators in the short term. In the longer term, it may well be too late to respond effectively to changed market demands.**

**1. Exxon asserts that demand for petroleum as an energy source will continue to grow to 2030 entirely because of demand from developing countries.**

In its 2008 "The Outlook for Energy: A View to 2030," ExxonMobil projects that oil, gas and coal will continue to provide the vast majority of the world's energy needs – about 80 percent of global demand through 2030. It believes that growing populations and expanding economies in developing countries will drive growing energy demand by 35% higher by 2030. It asserts that even with significant growth in alternative energies, fossil fuels will remain predominant in the energy mix in 2030.<sup>1</sup>

ExxonMobil attributes the increasing role of oil to rapid growth of the transportation sector in developing countries. By 2030, the company expects that oil will provide about 94 percent of transportation demand because it will remain "the only fuel with the scale, infrastructure and energy density needed to meet the majority of the world's transportation demand."<sup>2</sup>

**2. Exxon projects that by 2030 there will be 28% more carbon emissions from energy use over 2008 levels.<sup>3</sup>**

The company expects a significant decline in carbon emission levels in the United States and Europe due to the relatively modest growth in energy demand, coupled with less carbon-intensive fuels and employment of energy efficient technologies in developed countries. Thus, its projected growth in greenhouse gas emissions (GHG) is attributed to developing countries including China.

**These assertions ignore important signals from the scientific community, governments, the clean technology industry, the market and Exxon's competitors. They also ignore how these forces interact. For example, rising carbon emissions will worsen climate change and the developing countries will be first to suffer. Thus, their economies will suffer and they will be forced to use less fuel.**

According to John Holdren, recently named Assistant to the President for Science and Technology, climate change is a "global climatic disruption" that has already affected the climate patterns in a rapid and harmful way.<sup>4</sup> He stresses that it is certain that climate change is mainly caused by human activities and that three fourths of GHG emissions come from burning coal, oil, and natural gas.<sup>5</sup> Although Exxon has denied this in the past, it now seems to accept at least key parts of the argument.

While climate change threatens the basic elements of life for people around the world, there is a growing consensus that it affects and will affect developing countries worse.<sup>6</sup> Today, global warming is not uniform geographically. We see a significant rise of temperature by an average 0.53 degrees Celsius especially in Asia and the Middle East, as well as in parts of Africa and South America.<sup>7</sup> Poor communities "tend to have more limited adaptive capacities, and are more dependent on climate sensitive resources, such as local water and food supplies."<sup>8</sup>

### **Agriculture**

In Africa, for example, agricultural production and the access to food are projected to be severely compromised by climate variability and change. In Asia, climate change will impinge on the sustainable development of most developing countries, as the IPCC says, "...it compounds the pressures on natural resources and the environment associated with rapid urbanization, industrialization, and economic development."<sup>9</sup> Because of increased flooding from the sea and rivers, crop yields might increase up to 20 percent in East and South-East Asia, but they could decrease up to 30 percent in Central and South Asia by the mid 21<sup>st</sup> century.<sup>10</sup> Significant loss of biodiversity and water scarcity are also projected to occur by 2020 in some regions of Australia and New Zealand. There are also expectations of sea-level rise and increase in severity and frequency of storms and coastal flooding by 2050.<sup>11</sup> In Latin America, in drier areas, climate change is projected to lead to salinisation and desertification of agricultural land. Productivity of some important crops could decrease and productivity of livestock is projected to decline. All these risks will have adverse consequences on food security.<sup>12</sup>

## **Economic Development**

Climate changes are expected to have significant negative economic impacts on developing countries, lowering their GDP over the next 20 years. In 2008, researchers from the Universidad del Pacifico del Peru presented a groundbreaking study on the negative impact of climate change in four Andean countries – Bolivia, Colombia, Ecuador and Peru. Researchers found that these countries have suffered enormous economic losses, which could add up to \$30 billion by 2025. This amount is equivalent to 4.5 percent annually of the countries' GDP and could jeopardize their potential economic development.<sup>13</sup>

## **Natural Disasters and Conflicts**

Climate change can cause significant economic damage in India and South East Asia, where we can expect a loss of 9 to 13 percent in GDP by 2100. Moreover, the effects of climate change, especially of severe drought, could add to the violence in conflicts zones. In Sudan today, competition over scarce resources, including water, timber, oil, and land, could spark more fighting unless these issues are addressed. The UN Environmental Report states that “ignoring these environmental issues will ensure that some political and social problems remain unsolvable and [are] likely to worsen.”<sup>14</sup>

## **China**

In China, the adverse affects of climate change can be seen in agriculture, livestock breeding, forestry, natural ecosystems, water resources, and coastal zones.<sup>15</sup> Current research shows that, over the last century, GHG concentrations in the country have substantially increased and the temperature has increased much more than in any other region on the planet, with the possible exception of polar regions.<sup>16</sup> Over the past two decades, there has been a continuous drought in Northern China and flooding in Southern China.<sup>17</sup> Climate warming has an impact on the speed of plant growth, shortening the crop growing period. There is evidence that food production in China could further decrease by 10 percent between 2030 and 2050 if no action is taken to reduce emissions.

## **EFFECTS ON DEVELOPED COUNTRIES**

*Can developed country demand for petroleum products take up the slack if Exxon's projections for demand growth in developing countries fails to eventuate?*

## **United States**

ExxonMobil's energy predictions for 2030 are in sharp contrast with the current U.S. government position on climate change. In his 2009 Budget Message to Congress, President Obama underscored the fact that the United States cannot afford any longer to depend so heavily on foreign oil and other fossil fuels to

power the economy.<sup>18</sup> The administration has rebuked the oil industry, arguing that “businesses must not sink money into high-carbon infrastructure unless they are willing to lose their investments within a few years.”<sup>19</sup> The President stressed that “the more we learn about global warming, the more we see that failure to wean ourselves off of fossil fuels also jeopardizes our economy and our planet.”<sup>20</sup> The government is committed to reducing GHG emissions by approximately 14 percent below 2005 levels by 2020, and approximately 83 percent below 2005 levels by 2050.<sup>21</sup>

The US is also preparing itself to integrate its policies and action into a global agreement, where China will also play a major role. In her recent visit to China Secretary Of State Clinton focused on climate change at the expense of other issues such as Human Rights.

### **European Union**

With its embrace of the Kyoto protocol, The European Union has long been at the forefront of international efforts to combat climate change. In January 2007, as part of an integrated climate change and energy policy, the European Commission set out proposals and options for an ambitious global agreement. As a first step in this effort to transform Europe into a highly energy-efficient, low-carbon economy, they committed to cutting emissions by at least 20 percent of 1990 levels regardless of what other countries decide to do. In addition, the developing countries are requesting forcefully support from the developed countries in combating climate change. As the EU and the US consider mechanisms to meet global reduction of greenhouse gas emissions of 80% by 2050, with reductions of close to 20% by 2020, these plans are including support for greenhouse gas-reducing technologies in developing countries.

### **DEVELOPING COUNTRIES’ CLIMATE CHANGE STRATEGIES RUN COUNTER TO EXXON’S PROJECTIONS**

Brazil has developed a “National Plan on Climate Change” to counter deleterious effects in its energy, forestry and agriculture, waste and transport industries.<sup>22</sup> The core of this plan is to reduce GHG emissions by relying on renewable sources of energy including hydropower, biomass and wind. China has also set in its “National Climate Change Programme 2008” several goals with mitigation benefits. The country is pursuing a 20 percent reduction of energy consumption per unit GDP by 2010, and an increase of renewables share in total primary energy supply (TPES) to 10 percent by 2010. China expects to reduce emissions by 15 percent in 2020 from 2005 levels. Mexico has also proposed ambitious goals to curb emissions. Its reduction target is 50 percent below 2002 levels by 2050. India too is planning to promote renewables, including biofuels and solar. It is expected that India will reduce its emissions by 12 percent in 2020 from 2005 levels.<sup>23</sup> South Africa has recognized the need for aggressive national emissions reduction targets – 40 percent by 2020, 60 percent by 2050, and 80 percent by 2050. South Korea plans to increase its share of renewables from 2.3 percent in 2006 to 5

percent in 2011, and up to 9 percent in 2030. The country is projected to reduce emissions by 19 percent in 2020 from 2002 levels. Some of these goals will not be met but, on a global basis, more such plans will emerge.<sup>24</sup>

For an integrated oil company, it is simply not prudent to assume any increase in oil demand never mind Exxon's projection of 35% increase by 2030.<sup>25</sup>

### **IS IT REASONABLE FOR A PETROLEUM COMPANY TO PUT ALL ITS EGGS IN THE BASKET OF ASSUMING THAT TECHNOLOGY WILL NOT ALLOW CONSUMERS TO MAKE A SWITCH TO DIFFERENT ENERGY SOURCES BY 2030?**

#### **Clean Tech**

In spite of the credit crisis and lower oil prices, investments in clean technology grew by 4.7% in 2008 to \$155.4 billion<sup>26</sup> and are projected to grow further due to government support, especially the U.S. stimulus plan. Already the advances in technology have been faster than projected just a few years ago. Although some technologies, such as third generation biofuel still face challenges, others, such as solar, are rapidly coming down in cost. The electric car is receiving attention, investments and is making progress. Particularly noteworthy is the emphasis China is putting on the electric car.

#### **Electric Cars in China**

In April 2009, the Chinese government announced its intentions to become the world's leading producer of hybrid and all-electric vehicles.<sup>27</sup> The decision to invest heavily in hybrid vehicles is expected to have significant environmental and economic impacts. By investing in electric vehicles, China is expected to reduce substantially its carbon emissions and the levels of urban air pollution. The country will create new jobs and increase exports. Moreover, by becoming a leading producer of electric cars, China is determined to cut its dependence on oil.

Observers and industry peers all recognize that China is well positioned to lead in this new energy efficient venture. The Chinese government has been prominent with its stringent fuel efficiency standards and in 2008 reduced its tax on smaller cars.<sup>28</sup> As a result, the sale of cars with smaller engines has surged and many multinational automakers are transferring their latest energy efficiency technology to China. For example, it is reported that Ford is currently transferring its "Eco-boost" engine technology to its Chinese joint venture.<sup>29</sup> Internally, the Chinese government is increasing subsidies for the use of hybrid or all-electric vehicle and is setting up electric car charging stations in many cities. China wants to raise its annual production capacity to 500,000 hybrid or all-electric cars by the end of 2011, from 2,100 in 2008.

## WHAT DOES THE BEHAVIOR OF OTHER MAJOR ENERGY COMPANIES SUGGEST ABOUT THE REALISM OF EXXON'S ASSUMPTIONS?

Most of the big oil and gas companies have made a strong commitment to act on climate change. They have recognized the need to act immediately and progressively to reduce GHG emissions and to build sustainable energy future. Most companies have firmly integrated climate change into their core business strategies and made substantive investments in developing renewable energy sources such as biofuels, wind, solar, and others. Many have built strong internal organizational capabilities supported by good business understanding and skills to address climate change as a business risk and new opportunity. This is driven by the recognition at the top of the corporate structure that energy markets are changing, and that, in order to be successful in the future, energy companies need to adjust to this new business environment.

**BP** was among the first in the industry to recognize the dangers of global warming. In his 1997 speech at Stanford University, Lord Browne, the then CEO of BP called for the need to act immediately to reduce carbon emissions across worldwide operations of the company.<sup>30</sup> It then built a strong internal capability structure with many initiatives designed to reduce carbon emissions and help shape future alternative forms of energy. BP's climate change commitment is most evident in the creation of a special business unit on low-carbon solutions called BP Alternative Energy. This business has included solar, wind, hydrogen power with CCS, and gas-fired power generation.

Early on **Shell** also acknowledged the threat of climate change and called for action by governments, the oil industry and oil users. For Jeroen van der Veer, CEO of Shell, the debate today should be on how to "turn CO2 management into a business opportunity and lead the search for responsible ways to manage CO2, use energy more efficiently and provide extra energy the world needs to grow."<sup>31</sup> In its most recent "Blueprint," Shell states that fossil fuels will provide only a half of global supply in the future and sees an increasing role for renewables – some 33 percent of future energy supply in 2050 as compared to today's 3 percent.<sup>32</sup> Shell recently announced that it will focus exclusively on biofuels in line with its original strategy to explore different renewable energy sources and identify those where it thought it could add value.

**ConocoPhillips** is another oil company that is taking actions to expand its business planning processes to address GHG emissions and to develop GHG targets for its operations. The ultimate goal is to "[s]low, stop and ultimately *reverse the rate of growth* in global GHG emissions."<sup>33</sup> The company calls for stabilization of GHG concentrations to prevent dangerous interference with the climate system and to enable economic development in a sustainable way. A strong proponent of climate change public policy, ConocoPhillips was the first major U.S. oil company to call for a federal global warming emission cap and joined BP in the U.S. Climate Action Partnership to pursue that goal.

**Chevron** has as its top climate change priority the reduction of GHG emissions.<sup>34</sup> The company has a well-developed internal organizational structure with strong climate change intellectual capital designed to meet future energy challenges with low-carbon solutions. For years Chevron's subsidiary *Chevron Energy Solutions* has been developing and constructing environmentally sound projects that increase energy efficiency and reduce energy costs for public institutions and businesses. *Chevron Technology Ventures* has invested more than \$2.5 billion in renewable projects and technologies.

ExxonMobil's approach to climate change is substantively different from its peers. While all the oil majors believe that fossil fuels will continue to be a major source of energy in the future, Exxon's projections of 80 percent are by far the highest. In contrast to industry estimates and commitments, Exxon's 2008 Energy Outlook calls for a less aggressive course of investments in renewables in the immediate future. ExxonMobil's overall approach to climate change lacks the recognition that fossil fuels are a major source of risk to the company and society - and misses the opportunity to set GHG emissions reduction targets by 2030. This gap is crucial for explaining Exxon's energy portfolio and attitude. In any attempt to confront climate change, the ultimate purpose of any energy scenario would be to find ways to drastically reduce GHG emissions. Exxon fails to do that.<sup>35</sup> The company only repeats the well-known facts of growing energy demand and sees the only answer in a course that is both familiar and comfortable for its executives.

Although Exxon has acknowledged that climate change is now a serious issue, its actions and the document on which it bases its long term strategy tell a very different story. Exxon appears exclusively committed to fossil fuels which are widely believed to cause major human problems and face new and severe regulatory oversight. This poses a serious risk of a diminishing demand profile and creates reputational issues. It is, therefore, a poor and risky use of shareholder resources.

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<sup>1</sup> "Summary," "Energy Intensity" and "Global Energy Demand & CO2 Emissions," in *The Outlook for Energy: A View to 2030*, ExxonMobil, December 2008.

<sup>2</sup> "Global Transportation," in *The Outlook for Energy: A View to 2030*, ExxonMobil, December 2008.

<sup>3</sup> "Global Energy Demand & CO2 Emissions," in *The Outlook for Energy: A View to 2030*, ExxonMobil, December 2008.

<sup>4</sup> Today, we see how permafrost is thawing and glaciers are shrinking, the Arctic summer sea ice is disappearing, and the surface melting on Greenland is expanding. Sea levels are rising and we witness an increase in major floods per decade. We witness increasing patterns of evaporation and precipitation that make some regions wetter and some drier.

<sup>5</sup> John P. Holdren, "Global Climatic Disruption: Risks and Opportunities," presentation at the Investor Summit on Climate Change, UN Foundation, UNFIP, CERES, UN Headquarters, New York, February 14, 2008.

<sup>6</sup> Sir Nicholas Stern, "Part II: The Impacts of Climate Change on growth and development" in [Stern Review: The Economics of Climate Change](http://www.hm-treasury.gov.uk/stern_review_report.htm), p. 56, 2005. See: [http://www.hm-treasury.gov.uk/stern\\_review\\_report.htm](http://www.hm-treasury.gov.uk/stern_review_report.htm).

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<sup>7</sup> John P. Holdren, “Global Climatic Disruption: Risks and Opportunities,” presentation at the Investor Summit on Climate Change, UN Foundation, UNFIP, CERES, UN Headquarters, New York, February 14, 2008. Slide based on J. Hansen et al., PNAS 103:14288-293 (2006).

<sup>8</sup> IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22, p. 12.

<sup>9</sup> IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22, p. 13.

<sup>10</sup> IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22, p. 13.

<sup>11</sup> IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22, p. 13.

<sup>12</sup> IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 7-22, p. 14.

<sup>13</sup> Keith R, “Climate Change May Hit Andean Nations Hard,” in *The Temas Blog*, June 12, 2008, <http://www.temasactuales.com/temasblog/environmental-protection/climate-change-may-hit-andean-nations-hard/>

<sup>14</sup> “Canary You Hear Me Now?,” in *Grist*, June 25, 2007, <http://www3.grist.org/news/daily/2007/06/25/>

<sup>15</sup> Lin Erda, Xu Yinlong, Wu Shaohong, Ju Hui, and Ma Shiming, “China’s National Assessment Report of Climate Change (II): Climate Change Impacts and Adaptation,” in *Advances in Climate Change Research*, 3 (Suppl.): 6-11, 2007, p. 1.

<sup>16</sup> Ding Yihui, Ren Guoyu, Shi Guangyu, Gong Peng, Zheng Xunhua, Zhai Panmao, Zhang De’er, Zhao Zongci, Wang Shaowu, Wang Huijun, Luo Yong, Chen Deliang, Gao Xuejie, and Dan Xiaosu, “China’s National Assessment Report of Climate Change (I): Climate Change in China and the Future Trend,” in *Advances in Climate Change Research*, 3 (Suppl.): 1-5, 2007, p. 1.

<sup>17</sup> “Impacts of Climate Change and Adaptation,” in *The People’s Republic of China Initial National Communication on Climate Change*, Beijing, October 2004, p. 6.

<sup>18</sup> President Barak Obama, “President’s Message,” in *A New Era of Responsibility: Renewing America’s Promise*, Office of Management and Budget, U.S. Government Printing Office, Washington D.C, 2009, p. 21, <http://www.whitehouse.gov/omb/budget/>

<sup>19</sup> Fiona Harvey, “Take Green Path, US Business Warned,” in *Financial Times*, Wednesday, April 8, 2009, p. 3.

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<sup>20</sup> President Barak Obama, "President's Message," in *A New Era of Responsibility: Renewing America's Promise*, Office of Management and Budget, U.S. Government Printing Office, Washington D.C, 2009, p. 21, <http://www.whitehouse.gov/omb/budget/>

<sup>21</sup> President Barak Obama, "President's Message," in *A New Era of Responsibility: Renewing America's Promise*, Office of Management and Budget, U.S. Government Printing Office, Washington D.C, 2009, p. 21, <http://www.whitehouse.gov/omb/budget/>

<sup>22</sup> Niklas Hohne and Sara Moltmann, "Developing Countries' Climate Plans", Ecofys, CCAP Future Action Dialogue, Wellington, New Zealand, 2-4 February 2009,.

<sup>23</sup> Niklas Hohne and Sara Moltmann, "Developing Countries' Climate Plans", Ecofys, CCAP Future Action Dialogue, Wellington, New Zealand, 2-4 February 2009.

<sup>24</sup> Niklas Hohne and Sara Moltmann, "Developing Countries' Climate Plans", Ecofys, CCAP Future Action Dialogue, Wellington, New Zealand, 2-4 February 2009.

<sup>25</sup> "Global Transportation," in *The Outlook for Energy: A View to 2030*, ExxonMobil, December 2008. Exxon says that currently we use 44 MBDOE for transportation of which 98% is oil, in 2030 they project that the use will be 62 MBDOE of which 94% will be oil, which means oil in transport goes from 43.12 to 58.28, which is a 35% increase.

<sup>26</sup> Joel Makower, Ron Pernick and Clint Wilder, *Clean Energy Trends 2009*, Clean Edge, March 2009, p. 2.

<sup>27</sup> Keith Bradsher, "China Vies to Be World's Leader in Electric Cars," in *The New York Times*, April 1, 2009.

<sup>28</sup> Keith Bradsher, "China's Influence Grows Along With Its Car Sales," in *The New York Times*, April 21, 2009.

<sup>29</sup> Keith Bradsher, "China's Influence Grows Along With Its Car Sales," in *The New York Times*, April 21, 2009.

<sup>30</sup> Lord Browne, "Where BP Stands On Global Climate Change", address at Stanford University, May 19, 1997, [http://www.bp.com/pressoffice/speeches/sp\\_970519.htm](http://www.bp.com/pressoffice/speeches/sp_970519.htm) or booklet from BP London or BP America offices, 1997.

<sup>31</sup> Jeroen van der Veer, Chief Executive, [http://www.shell.com/home/content/responsible\\_energy/environment/climate\\_change/our\\_approach\\_to\\_climate\\_change/e/approach\\_to\\_climate\\_change.html](http://www.shell.com/home/content/responsible_energy/environment/climate_change/our_approach_to_climate_change/e/approach_to_climate_change.html)

<sup>32</sup> "Shell Energy Scenarios to 2050," [http://www.shell.com/home/content/aboutshell/our\\_strategy/shell\\_global\\_scenarios/dir\\_global\\_scenarios/\\_07112006.html](http://www.shell.com/home/content/aboutshell/our_strategy/shell_global_scenarios/dir_global_scenarios/_07112006.html)

<sup>33</sup> [http://www.conocophillips.com/social/values\\_policies/climate/index.htm](http://www.conocophillips.com/social/values_policies/climate/index.htm)

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