### **Energy and Carbon -- Managing the Risks**

ExxonMobil<sup>1</sup> engages in constructive and informed dialogue with a wide variety of stakeholders on a number of energy-related topics. This report seeks to address important questions raised recently by several stakeholder organizations on the topics of global energy demand and supply, climate change policy, and carbon asset risk.

As detailed below, ExxonMobil makes long-term investment decisions based in part on our rigorous, comprehensive annual analysis of the global outlook for energy, an analysis that has repeatedly proven to be consistent with the International Energy Agency *World Energy Outlook*, the U.S. Energy Information Administration *Annual Energy Outlook*, and other reputable, independent sources. For several years, our *Outlook for Energy* has explicitly accounted for the prospect of policies regulating greenhouse gas emissions (GHG). This factor, among many others, has informed investments decisions that have led ExxonMobil to become the leading producer of cleaner-burning natural gas in the United States, for example.

Based on this analysis, we are confident that none of our hydrocarbon reserves are now or will become "stranded." We believe producing these assets is essential to meeting growing energy demand worldwide, and in preventing consumers – especially those in the least developed and most vulnerable economies – from themselves becoming stranded in the global pursuit of higher living standards and greater economic opportunity.

<sup>&</sup>lt;sup>1</sup> As used in this document, "ExxonMobil" means Exxon Mobil Corporation and/or one or more of its affiliated companies. Statements of future events or conditions in this report are forward-looking statements. Actual future results, including economic conditions and growth rates; energy demand and supply sources; efficiency gains; and capital expenditures, could differ materially due to factors including technological developments; changes in law or regulation; the development of new supply sources; demographic changes; and other factors discussed herein and under the heading "Factors Affecting Future Results" in the Investors section of our website at: www.exxonmobil.com. The information provided includes ExxonMobil's internal estimates and forecasts based upon internal data and analyses, as well as publicly available information from external sources including the International Energy Agency. Citations in this document are used for purposes of illustration and reference only and any citation to outside sources does not necessarily mean that ExxonMobil endorses all views or opinions expressed in or by those sources.

### 1. Strong Correlation between Economic Growth and Energy Use

The universal importance of accessible and affordable energy for modern life is undeniable. Energy powers economies and enables progress throughout the world. It provides heat for homes and businesses to protect against the elements; power for hospitals and clinics to run advanced, life-saving equipment; fuel for cooking and transportation; and light for schools and streets. Energy is the great enabler for modern living and it is difficult to imagine life without it. Given the importance of energy, it is little wonder that governments seek to safeguard its accessibility and affordability for their growing populations. It is also understandable that any restrictions on energy production that decrease its accessibility, reliability or affordability are of real concern to consumers who depend upon it.



# Improved Living Standards Depend on Energy

### 2. World Energy Needs Keep Growing

Each year, ExxonMobil analyzes trends in energy and publishes our forecast of global energy requirements in our *Outlook for Energy*. The Outlook provides the foundation for our business and investment planning, and is compiled from the breadth of the company's worldwide experience in and understanding of the energy industry. It is based on rigorous analyses of supply and demand, technological development, economics, and government policies and regulations, and it is consistent with many independent, reputable third-party analyses.

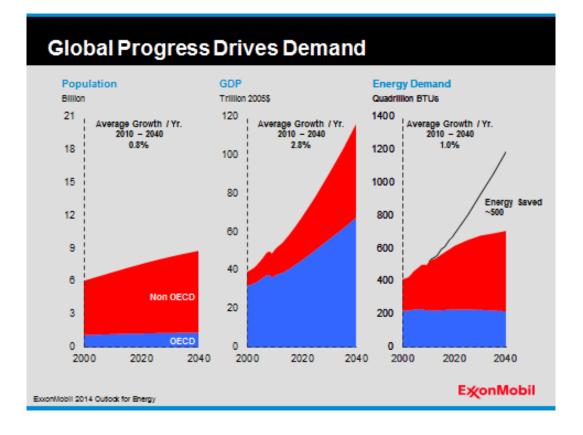
ExxonMobil's current *Outlook for Energy* extends through the year 2040, and contains several conclusions that are relevant to questions raised by stakeholder organizations. Understanding this factual and analytical foundation is crucial to understanding ExxonMobil's investment decisions and approach to the prospect of further constraints on carbon.

<u>World population increases</u>. Ultimately, the focus of ExxonMobil's *Outlook for Energy* – indeed, the focus of our business – is upon people, their economic aspirations and their energy requirements. Accordingly, our analysis begins with demographics. Like many independent analyses, ExxonMobil anticipates the world's population will add two billion people to its current total of seven billion by the end of the Outlook period. The majority of this growth will occur in developing countries.

<u>World GDP grows</u>. The global economy will grow as the world's population increases, and it is our belief that GDP gains will outpace population gains over the Outlook period, resulting in higher living standards. Assuming sufficient, reliable and affordable energy is available, we see world GDP growing at a rate that exceeds population growth through the Outlook period, almost tripling in size from what it was globally in 2000.<sup>2</sup> It is

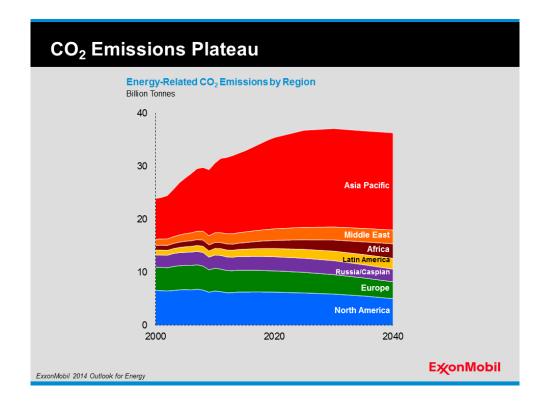
<sup>&</sup>lt;sup>2</sup> We see global GDP approaching \$120 trillion, as compared to \$40 trillion of global GDP in 2000 (all in constant 2005 USA\$'s). GDP per capita will also grow by about 80 percent between 2010 and 2040, despite the increase in population.

largely the poorest and least developed of the world's countries that benefit most from this anticipated growth. However, this level of GDP growth requires more accessible, reliable and affordable energy to fuel growth, and it is vulnerable populations who would suffer most should that growth be artificially constrained.



<u>Energy demand grows with population and GDP</u>. As the world becomes more populous and living standards improve over the Outlook period, energy demand will increase as well. We see the world requiring 35 percent more energy in 2040 than it did in 2010. The pace of this energy demand increase is higher than the population growth rate, but less than global GDP growth rate. Greater energy efficiency is a key reason why energy demand growth trails economic growth. We see society implementing policy changes that will promote energy efficiency, which will serve to limit energy demand growth. We also see many governments adopting policies that promote the switch to less carbonintensive fuels, such as natural gas. As noted in the chart above, energy demand in 2040 could be almost double what it would be without the anticipated efficiency gains. ExxonMobil believes that efficiency is one of the most effective tools available to manage greenhouse gas emissions, and accordingly our company is making significant contributions to energy efficiency, both in our own operations and in our products.

<u>Energy-related CO2 emissions stabilize and start decreasing</u>. As the world's population grows and living standards increase, we believe GHG emissions will plateau and start decreasing during the Outlook period. In the OECD countries, energy-based GHG emissions have already peaked and are declining. Our views in this regard are similar to other leading, independent forecasts.<sup>3</sup>



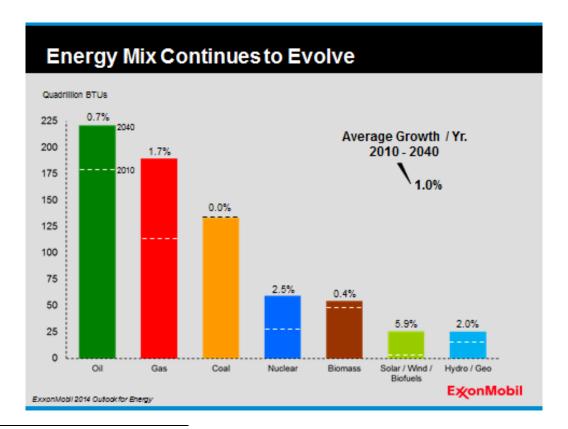
As part of our Outlook process, we do not project overall atmospheric GHG concentration, nor do we model global average temperature impacts.<sup>4</sup> However, we do project an energy-related CO2 emissions profile through 2040, and this can be compared

<sup>&</sup>lt;sup>3</sup> For example, the IEA predicts that energy-related emissions will grow by 20%, on trend but slightly higher than our Outlook. See <u>www.worldenergyOutlook.org</u>.

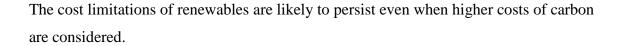
<sup>&</sup>lt;sup>4</sup> These would require data inputs that are well beyond our company's ability to reasonably measure or verify.

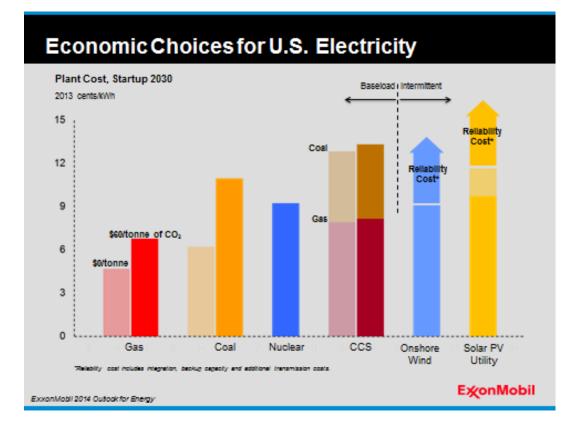
to the energy-related CO2 emissions profiles from various scenarios outlined by the Intergovernmental Panel on Climate Change (IPCC). When we do this, our Outlook emissions profile through 2040 would closely approximate the IPCC's intermediate RCP 4.5 emissions profile pathway in shape, but is slightly under it in magnitude.<sup>5</sup>

<u>All economic energy sources are needed to meet growing global demand.</u> In analyzing the evolution of the world's energy mix, we anticipate renewables growing at the fastest pace among all sources through the Outlook period. However, because they make a relatively small contribution compared to other energy sources, renewables will continue to comprise about 5 percent of the total energy mix by 2040. Factors limiting further penetration of renewables include scalability, geographic dispersion, intermittency (in the case of solar and wind), and cost relative to other sources.



<sup>5</sup> The IPCC RCP 4.5 scenario extends 60 years beyond our Outlook period to the year 2100, and incorporates a full carbon cycle analysis. The relevant time horizons differ and we do not forecast potential climate impacts as part of our Outlook, and therefore cannot attest to their accuracy.





### 3. Climate Change Risk

ExxonMobil takes the risk of climate change seriously, and continues to take meaningful steps to help address the risk and to ensure our facilities, operations and investments are managed with this risk in mind.

Many governments are also taking these risks seriously, and are considering steps they can take to address them. These steps may vary in timing and approach, but regardless, it is our belief they will be most effective if they are informed by global energy demand and supply realities, and balance the economic aspirations of consumers.

### 4. Carbon Budget and Carbon Asset Risk Implications

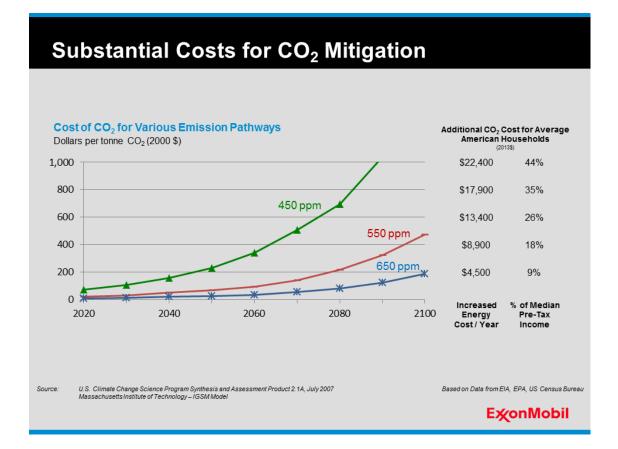
One focus area of stakeholder organizations relates to what they consider the potential for a so-called carbon budget. Some are advocating for this mandated carbon budget in order to achieve global carbon-based emission reductions in the range of 80 percent through the year 2040, with the intent of stabilizing world temperature increases not to exceed 2 degrees Celsius by 2100 (i.e., the "low carbon scenario"). A concern expressed by some of our stakeholders is whether such a "low carbon scenario" could impact ExxonMobil's reserves and operations – i.e., whether this would result in unburnable proved reserves of oil and natural gas.

The "low carbon scenario" would require CO2 prices significantly above current price levels. In 2007, the U.S. Climate Change Science Program published a study that examined, among other things, the global CO2 cost needed to drive investments and transform the global energy system, in order to achieve various atmospheric CO2 stabilization pathways. The three pathways shown in the chart below are from the MIT IGSM model used in the study, and are representative of scenarios with assumed climate policies that stabilize GHGs in the atmosphere at various levels, from 650 ppm CO2 down to 450 ppm CO<sub>2</sub>, a level approximating the level asserted to have a reasonable chance at meeting the "low carbon scenario." Meeting the 450 ppm pathway requires large, immediate reductions in emissions with overall net emissions becoming negative in the second half of the century. Non-fossil energy sources, like nuclear and renewables, along with carbon capture and sequestration, are deployed in order to transform the energy system. Costs for CO2 required to drive this transformation are modeled. In general, CO2 costs rise with more stringent stabilization targets and with time. Stabilization at 450 ppm would require CO2 prices significantly above current price levels, rising to over \$200 per ton by 2050. By comparison, current EU Emissions Trading System prices are approximately \$8 to \$10 per ton of CO2.

In the right section of the chart below, different levels of added CO2 are converted to estimated added annual energy costs for an average American family earning the median

8

income. For example, by 2030 for the 450ppm CO2 stabilization pathway, the average American household would face an added CO2 cost of almost \$2,350 per year for energy, amounting to about 5 percent of total before-tax median income. These costs would need to escalate steeply over time, and be more than double the 2030 level by mid-century. Further, in order to stabilize atmospheric GHG concentrations, these CO2 costs would have to be applied across both developed and developing countries.

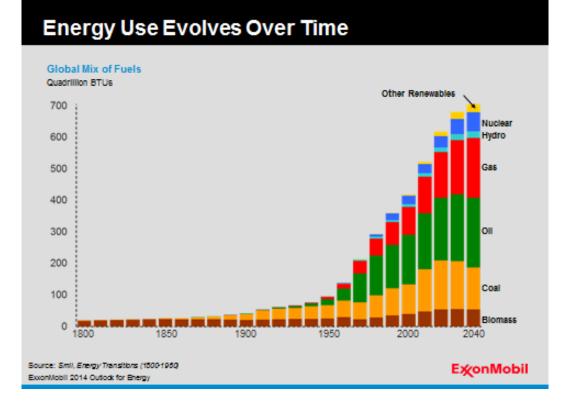


In 2008, the International Energy Agency estimated that reducing greenhouse gas emissions to just 50 percent below 2005 levels by 2050 would require \$45 trillion in added energy supply and infrastructure investments.<sup>6</sup> In this scenario, the IEA estimated that *each year* between 2005 and 2050 the world would need to construct 24 to 32 one-thousand-megawatt nuclear plants, build 30 to 35 coal plants with carbon capture and

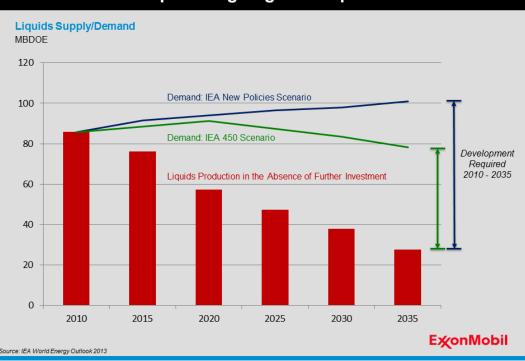
<sup>&</sup>lt;sup>6</sup> See IEA Energy Technology Perspectives 2008, Scenarios & Strategies to 2050.

sequestration capabilities, and install 3,700 to 17,800 wind turbines of four megawatt capacity.

<u>Transforming the energy system will take time</u>. Energy use and mix evolve slowly due to the vast size of the global energy system. As shown in the chart below, biomass like wood was the primary fuel for much of humanity's existence. Coal supplanted biomass as the primary energy source around 1900; it was not until the middle of the 20<sup>th</sup> century before oil overtook coal as the primary source of energy. We believe the transition to lower carbon energy sources will also take time, despite rapid growth rates for such sources. Traditional energy sources have had many decades to scale up to meet the enormous energy needs of the world. As discussed above, renewable sources, such as solar and wind, despite very rapid growth rates, cannot scale up quickly enough to meet global demand growth while at the same time displacing more traditional sources of energy.



<u>A "low carbon scenario" will impact economic development.</u> Another consideration related to the "low carbon scenario" is that capping of carbon-based fuels would likely harm those least economically developed populations who are most in need of affordable, reliable and accessible energy.<sup>7</sup> Artificially restricting supplies can also increase costs, and increasing costs would not only impact the affordability and accessibility of energy, especially to those least able to pay, it could impact the rate of economic development and living standards for all. Increasing energy costs leads to a scarcity of affordable, reliable and accessible energy and can additionally lead to social instability. While the risk of regulation where GHG emissions are capped to the extent contemplated in the "low carbon scenario" during the Outlook period is always possible, it is difficult to envision governments choosing this path in light of the negative implications for economic growth and prosperity that such a course poses, especially when other avenues may be available, as discussed further below.



# All Scenarios Require Ongoing Development

<sup>&</sup>lt;sup>7</sup> According to the International Energy Agency, 2.6 billion people still rely on biomass for cooking and over 15% of the world's population lacks access to electricity (<u>http://www.iea.org/topics/energypoverty/</u>).

Even in a "low carbon scenario," hydrocarbon energy sources are still needed. The IEA in its World Energy Outlook 2013 examined production of liquids from currently-producing fields, in the absence of additional investment, versus liquids demand, for both their lead "*New Policies Scenario*" and for a "450 Scenario." As shown in the chart above, in both scenarios, there remains significant liquids demand through 2035, and there is a need for ongoing development and investment. Without ongoing investment, liquids demand will not be met, leaving the world short of oil.

ExxonMobil believes that although there is always the possibility that government action may impact the company, the scenario where governments restrict hydrocarbon production in a way to reduce GHG emissions 80 percent during the Outlook period is highly unlikely. The Outlook demonstrates that the world will require all the carbon-based energy that ExxonMobil plans to produce during the Outlook period.<sup>8</sup> Also, as discussed above, we do not anticipate society being able to supplant traditional carbon-based forms of energy with other energy forms, such as renewables, to the extent needed to meet this carbon budget during the Outlook period.

### 5. Managing the Risk

<u>ExxonMobil's actions</u>. ExxonMobil addresses the risk of climate change in several concrete and meaningful ways. We do so by improving energy efficiency and reducing emissions at our operations, and by enabling consumers to use energy more efficiently through the advanced products we manufacture. In addition, we conduct and support extensive research and development in new technologies that promote efficiency and reduce emissions.

<sup>&</sup>lt;sup>8</sup> ExxonMobil's proved reserves at year-end 2013 are estimated to be produced on average within sixteen years, well within the Outlook period. See Exxon Mobil Corporation 2013 Financial & Operating Review, p. 22. It is important to note that this sixteen year average reserves-to-production ratio does not mean that the company will run out of hydrocarbons in sixteen years, since it continues to add proved reserves from its resource base and has successfully replaced more than 100% of production for many years. See Item 2 Financial Section of ExxonMobil's 2013 Form 10-K for ExxonMobil's proved reserves, which are determined in accordance with current SEC definitions.

In our operations, we apply a constant focus on efficiency that enables us to produce energy to meet society's needs using fewer resources and at a lower cost.

For example, ExxonMobil is a leader in cogeneration at our facilities, with equity ownership in more than 100 cogeneration units at more than 30 sites with over 5200 megawatts of capacity. This capacity, which is equivalent to the electricity needs of approximately 2.5 million U.S. households, reduces the burden on outside power and grid suppliers and can reduce the resulting emissions by powering ExxonMobil's operations in a more efficient and effective manner.

We also constantly strive to reduce the emission intensity of our operations. Cumulative savings, for example, between 2009 and 2012 amounted to 8.4 million metric tons of greenhouse gases.

Many of ExxonMobil's products also enable consumers to be more energy efficient and therefore reduce greenhouse gas emissions. Advancements in tire liner technology developed by ExxonMobil allow drivers to save fuel. Our synthetic lubricants also improve vehicle engine efficiency. And lighter weight plastics developed by ExxonMobil reduce vehicle weights, further contributing to better fuel efficiency. <sup>9</sup>

ExxonMobil is also the largest producer of natural gas in the United States, a fuel with a variety of consumer uses, including heating, cooking and electricity generation. Natural gas emits up to 60 percent less CO2 than coal when used as the source for power generation.

Research is another area in which ExxonMobil is contributing to energy efficiency and reduced emissions. We are on the forefront of technologies to lower greenhouse gas emissions. For example, ExxonMobil operates one of the world's largest carbon capture

<sup>&</sup>lt;sup>9</sup> Using ExxonMobil fuel-saving technologies in one-third of U.S. vehicles, for example, could translate into a saving of about 5 billion gallons of gasoline, with associated greenhouse gas emissions savings equivalent to taking about 8 million cars off the road.

and sequestration (CCS) operations at our LaBarge plant in Wyoming. It is a co-venturer in another project, the Gorgon natural gas development in Australia, which when operational will have the largest saline reservoir CO2 injection facility in the world. The company is leveraging its experience with CCS in developing new methods for capturing CO2, which can reduce costs and increase the application of carbon capture for society. ExxonMobil also is actively engaged, both internally and in partnership with renowned universities and institutions, in research on new break-through technologies for energy.

The company also engineers its facilities and operations robustly with extreme weather considerations in mind. Fortification to existing facilities and operations are addressed, where warranted due to climate or weather events, as part of ExxonMobil's Operations Integrity Management System.

ExxonMobil routinely conducts life cycle assessments (LCAs), which are useful to understand whether a technology can result in environmental improvements across a broad range of factors. For example, in 2011 we conducted a LCA in concert with Massachusetts Institute of Technology and Synthetic Genomics Inc. to assess the impact of algal biofuel production on GHG emissions, land use, and water use. The study demonstrated the potential that algae fuels can be produced with freshwater consumption equivalent to petroleum refining, and enable lower GHG emissions. A more recent LCA demonstrated that "well-to-wire" GHG emissions from shale gas are about half that of coal, and not significantly different than emissions of conventional gas.

In addition, ExxonMobil is involved in researching emerging technologies that can help mitigate the risk of climate change. For example, the company has conducted research into combustion fundamentals with automotive partners in order to devise concepts to improve the efficiency and reduce emissions of internal combustion engines.

ExxonMobil has also developed technology for an on-board hydrogen-powered fuel cell that converts other fuels into hydrogen directly under a vehicle's hood, thereby eliminating the need for separate facilities for producing and distributing hydrogen. This

14

technology can be up to 80 percent more fuel efficient and emit 45 percent less CO2 than conventional internal combustion engines. The company is also a founding member of the Global Climate and Energy Project at Stanford University, a program that seeks to develop fundamental, game-changing scientific breakthroughs that could lower GHG emissions.

<u>Government policy</u>. Addressing climate risks is one of many important challenges that governments face on an ongoing basis, along with ensuring that energy supplies are affordable and accessible to meet societal needs.

Energy companies like ExxonMobil can play a constructive role in this decision-making process by sharing our insights on the most effective means of achieving society's goals given the workings of the global energy system and the realities that govern it.

The introduction of rising CO2 costs will have a variety of impacts on the economy and energy use in every sector and region within any given country. Therefore, the exact nature and pace of GHG policy initiatives will likely be affected by their impact on the economy, economic competitiveness, energy security and the ability of individuals to pay the related costs.

Governments' constraints on use of carbon-based energy sources and limits on greenhouse gas emissions are expected to increase throughout the Outlook period. However, the impact of these rising costs of regulations on the economy we expect will vary regionally throughout the world and will not rise to the level required for the "low carbon scenario." These reasonable constraints translate into costs, and these costs will help drive the efficiency gains that we anticipate will serve to curb energy growth requirements for society as forecasted over the Outlook period.

We also see these reasonable constraints leading to a lower carbon energy mix over the Outlook period, which can serve to further reduce greenhouse gas emissions. For example, fuel switching to cleaner burning fuels such as natural gas has significantly

15

contributed to the United States reducing greenhouse gas emissions last year to levels not seen since 1994. Furthermore, the impact of efficiency is expected to help stabilize and eventually to reduce GHG emissions over the Outlook period, as discussed previously. These constraints will also likely result in dramatic global growth in natural gas consumption at the expense of other forms of energy, such as coal.

We see the continued focus on efficiency, conservation and fuel switching as some of the most effective and balanced ways society can address climate change within the Outlook period in a manner that avoids the potentially harmful and destabilizing consequences that the artificial capping of needed carbon-based energy sources implied within the "low carbon scenario" can cause.<sup>10</sup>

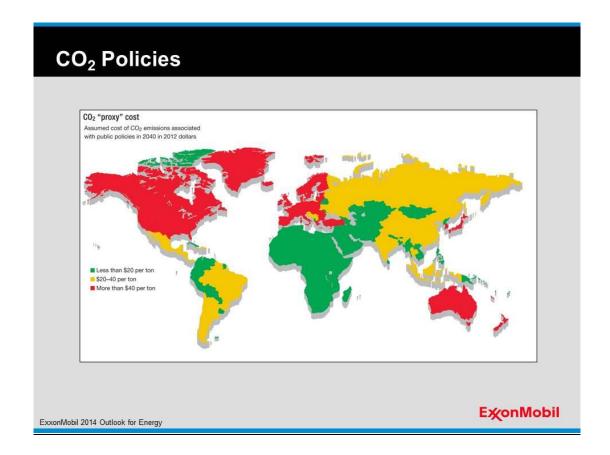
### 6. Planning Bases and Investments

ExxonMobil is committed to disciplined investing in attractive opportunities through the normal fluctuations in business cycles. Projects are evaluated under a wide range of possible economic conditions and commodity prices that are reasonably likely to occur, and we expect them to deliver competitive returns through the cycles. We do not publish the economic bases upon which we evaluate investments due to competitive considerations. However, we apply prudent and substantial safety margins in our planning assumptions to help ensure robust returns. In assessing the economic viability of proved reserves, we do not believe a scenario consistent with reducing GHG emissions by 80 percent by 2050, as suggested by the "low carbon scenario," lies within the "reasonably likely to occur" range of planning assumptions, since we consider the scenario highly unlikely.

The company also stress tests its oil and natural gas capital investment opportunities, which provides an added margin of safety against uncertainties, such as those related to technology, costs, geopolitics, availability of required materials, services, and labor, etc.

<sup>&</sup>lt;sup>10</sup> Permitting the freer trade and export of natural gas is but one way, for example, where countries that rely on more carbon-intense forms of energy can increase their use of cleaner-burning fuels.

Such stress testing differs from alternative scenario planning, such as alternate Outlooks, which we do not develop, but stress testing provides us an opportunity to fully consider different economic scenarios in our planning and investment process. The Outlook is reviewed at least annually, and updated as needed to reflect changes in views and circumstances, including advances in technology.



We also address the potential for future climate-related controls, including the potential for restriction on emissions, through the use of a proxy cost of carbon. This proxy cost of carbon is embedded in our current *Outlook for Energy*, and has been a feature of the report for several years. The proxy cost seeks to reflect all types of actions and policies that governments may take over the Outlook period relating to the exploration, development, production, transportation or use of carbon-based fuels. Our proxy cost,

which in some areas may approach \$80/ton over the Outlook period<sup>11</sup>, is not a suggestion that governments should apply specific taxes. It is also not the same as a "social cost of carbon," which we believe involves countless more assumptions and subjective speculation on future climate impacts. It is simply our effort to quantify what we believe government policies over the Outlook period could cost to our investment opportunities. Perhaps most importantly, we require that all our business segments include, where appropriate, GHG costs in their economics when seeking funding for capital investments. We require that investment proposals reflect the climate-related policy decisions we anticipate governments making during the Outlook period and therefore incorporate them as a factor in our specific investment decisions.

When governments are considering policy options, ExxonMobil advocates an approach that ensures a uniform and predictable cost of carbon; allows market prices to drive solutions; maximizes transparency to stakeholders; reduces administrative complexity; promotes global participation; and is easily adjusted to future developments in climate science and policy impacts. We continue to believe a revenue-neutral carbon tax is better able to accommodate these key criteria than alternatives such as cap-and-trade.

Our views are based on our many years of successful energy experience worldwide and are similar to long-term energy demand forecasts of the International Energy Agency. As discussed previously, we see population, GDP and energy needs increasing for the world over the Outlook period, and that *all* economically viable energy sources will be required to meet these growing needs. We believe that governments will carefully balance the risk of climate change against other pressing social needs over the Outlook period, including the need for accessible, reliable and affordable energy, and that an artificial capping of carbon-based fuels to levels in the "low carbon scenario" is highly unlikely.

<sup>&</sup>lt;sup>11</sup> As noted in our Outlook, this amount varies from country to country, with that amount generally equating to OECD countries, and lower amounts applying to non-OECD countries.

### 7. Capital Allocation

ExxonMobil maintains capital allocation discipline with rigorous project evaluation and investment selectivity, while consistently returning cash to our shareholders. Our capital allocation approach is as follows:

- I. Invest in resilient, attractive business opportunities
- II. Pay a reliable and growing dividend
- III. Return excess cash to shareholders through the purchase of shares.

Although the company does not incorporate the "low carbon scenario" in its capital allocation plans, a key strategy to ensure investment selectivity under a wide range of economic assumptions is to maintain a very diverse portfolio of oil and gas investment opportunities. This diversity – in terms of resource type and corresponding development options (oil, gas, NGLs, onshore, offshore, deepwater, conventional, unconventional, LNG, etc.) and geographic dispersion is unparalleled in the industry. Further, the company does not believe current investments in new reserves are exposed to the risk of stranded assets, given the rising global need for energy as discussed earlier.

### 8. Optional Reserves Disclosure under SEC Rules

Some have suggested that ExxonMobil consider availing itself of an optional disclosure available to securities issuers under Item 1202 of SEC Regulation S-K.<sup>12</sup> That SEC item provides, among other things, that "the registrant may, but is not required to, disclose, in the aggregate, an estimate of reserves estimated for each product type based on different price and cost criteria, such as a range of prices and costs that may reasonably be

<sup>&</sup>lt;sup>12</sup> The rules were subject to comment at the time that they were proposed. See Modernization of Oil and Gas Reporting, Securities and Exchange Commission, 17 CFR Parts 210, 211, 229, and 249 [Release Nos. 33-8995; 34-59192; FR-78; File Nos. S7-15-08] at p. 66. (*www.sec.gov/rules/final/2008/33-8995.pdf*) ExxonMobil also provided comments to the proposed provision. See Letter of Exxon Mobil Corporation to Ms. Florence Harmon, Acting Secretary, Securities and Exchange Commission, September 5, 2008, File Number S7-15-08 – Modernization of the Oil and Gas Reporting Requirements at p. 24.

achieved, including standardized futures prices or management's own forecasts." Proponents ask the company to use this option to identify the price sensitivity of its reserves, with special reference to long-lived unconventional reserves such as oil sands.

We believe the public reporting of reserves is best done using the historical price basis as required under Item 1202(a) of Regulation S-K, rather than the optional sensitivity analysis under Item 1202(b), for several reasons. First and most importantly, historical prices are a known quantity and reporting on this basis provides information that can be readily compared between different companies and over multiple years.<sup>13</sup> Proved reserve reporting using historical prices is a conservative approach that gives investors confidence in the numbers being reported.

Using speculative future prices, on the other hand, would introduce uncertainty and potential volatility into the reporting, which we do not believe would be helpful for investors. In fact, we believe such disclosure could be misleading. Price forecasts are subject to considerable uncertainty. While ExxonMobil tests its project economics to ensure they will be robust under a wide variety of possible future circumstances, we do not make predictions or forecasts of future oil and gas prices. If reserves determined on a speculative price were included in our SEC filings, we believe such disclosure could potentially mislead investors, or give such prices greater weight in making investment decisions than would be warranted.

We are also concerned that providing the optional sensitivity disclosure could enable our competitors to infer commercial information about our projects, resulting in commercial harm to ExxonMobil and our shareholders. We note that none of our key competitors to our knowledge provide the Item 1202(b) sensitivity disclosure.

<sup>&</sup>lt;sup>13</sup> We note the rules under 1202(a) use an average of monthly prices over the year rather than a single "spot" price, thus helping to reduce the effects of short-term volatility that often characterize oil and gas prices.

Lastly, we note that even when sensitivity disclosure under Item 1202(b) is included in a filing, the price and cost assumptions must be ones the company believes are reasonable. This disclosure item is therefore not intended or permitted to be a vehicle for exploring extreme scenarios.

For all the above reasons, we do not believe including the sensitivity disclosure under Item 1202(b) in our SEC filings would be prudent or in the best interest of our shareholders.

### 9. Summary

In summary, ExxonMobil's *Outlook for Energy* continues to provide the basis for our long-term investment decisions. Similar to the forecasts of other independent analysts, our Outlook envisions a world in which populations are growing, economies are expanding, living standards are rising, and, as a result, energy needs are increasing. Meeting these needs will require all economic energy sources, especially oil and natural gas.

Our *Outlook for Energy* also envisions that governments will enact policies to constrain carbon in an effort to reduce greenhouse gas emissions and manage the risks of climate change. We seek to quantify the cumulative impact of such policies in a proxy cost of carbon, which has been a consistent feature of our *Outlook for Energy* for many years.

We rigorously consider the risk of climate change in our planning bases and investments. Our investments are stress tested against a conservative set of economic bases and a broad spectrum of economic assumptions to help ensure that they will perform adequately, even in circumstances that the company may not foresee, which provides an additional margin of safety. We also require that all significant proposed projects include a cost of carbon – which reflects our best assessment of costs associated with potential GHG regulations over the Outlook period – when being evaluated for investment. Our *Outlook for Energy* does not envision the "low carbon scenario" advocated by some because the costs and the damaging impact to accessible, reliable and affordable energy resulting from the policy changes such a scenario would produce are beyond those that societies, especially the world's poorest and most vulnerable, would be willing to bear, in our estimation.

In the final analysis, we believe ExxonMobil is well positioned to continue to deliver results to our shareholders and deliver energy to the world's consumers far into the future. Meeting the economic needs of people around the world in a safe and environmentally responsible manner not only informs our *Outlook for Energy* and guides our investment decisions, it is also animates our business and inspires our workforce.

### **10. Additional Information**

There were additional information requests raised by some in the course of engagement with the groups with whom we have been dialoguing. These are addressed in the Appendix.

# Appendix

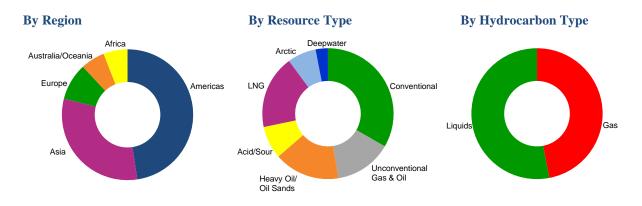
<u>Topic</u>	<u>Page</u>
Proved Reserves	24
Resource Base	25
Oil & Gas Production Outlook	26
CAPEX Outlook	27
Oil & Gas Exploration and	
Production Earnings and	
Unit Profitability	28
Production Prices and	
Production Costs	29
Wells-to-Wheels GHG emissions seriatim	30

# **EXXONMOBIL PROVED RESERVES - AT DECEMBER 31, 2013**

	United States	Canada/ S. Amer. (2)	Europe	Africa	Asia	Australia/ Oceania	Total	Worldwide	Canada/ S. Amer. (2)	Canada/ S. Amer. (2)	Total
				Crude Oil				Natural Gas Liquids (2)	Bitumen	Synthetic Oil	
Total liquids proved reserves (1) (millions of barrels)	2,338	284	273	1,193	3,308	155	7,551	1,479	3,630	579	13,239
Total natural ass proved recence (4)			ļ	Natural Gas							
Total natural gas proved reserves (1) (billions of cubic feet)	26,301	1,235	11,694	867	24,248	7,515	71,860	-		-	71,860
Oil-Equivalent Total All Products (3) (millions of oil-equivalent barrels)	6,722	490	2,222	1,338	7,349	1,407	19,528	1,479	3,630	579	25,216

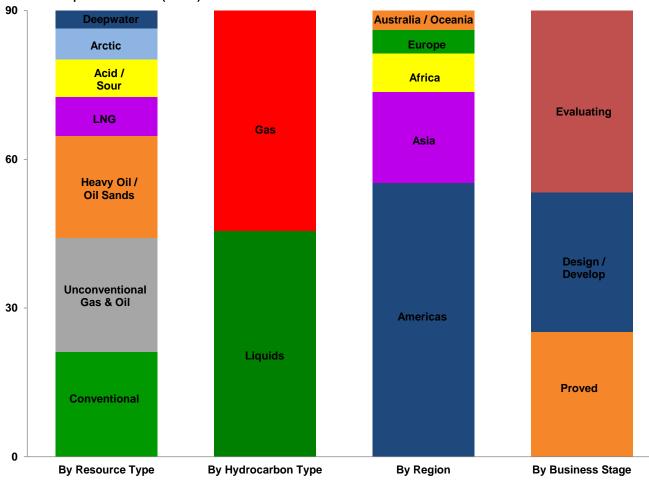
### **Proved Reserves Distribution** (4)

(percent, oil equivalent barrels)



- (1) Source: ExxonMobil 2013 Form 10-K (pages 103 and 106).
- (2) Includes total proved reserves attributable to Imperial Oil Limited, in which there is a 30.4 percent noncontrolling interest. Refer to ExxonMobil 2013 Form 10-K (pages 103, 104, and 106) for more details.
- (3) Natural gas is converted to oil-equivalent basis at six million cubic feet per one thousand barrels.
- (4) Source: ExxonMobil 2013 Financial and Operating Review (page 22).

# **EXXONMOBIL RESOURCE BASE – AT DECEMBER 31, 2013 (1)**

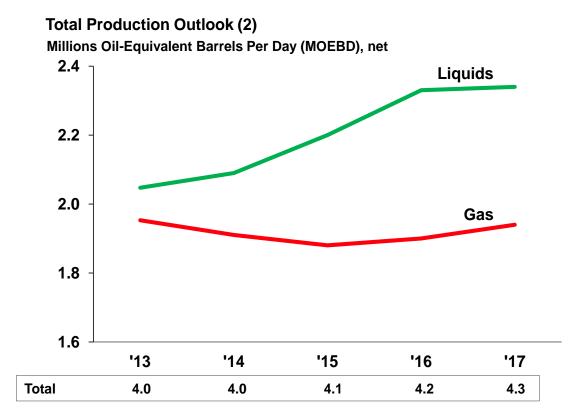


**Billion Oil-Equivalent Barrels (BOEB)** 

(1) Source: 2013 ExxonMobil Financial & Operating Review (page 21) and 2014 Analyst Meeting (slide 49).

**Note:** ExxonMobil's resource base includes quantities of oil and gas that are not yet classified as proved reserves under SEC definitions, but that we believe will ultimately be developed. These quantities are also not intended to correspond to "probable" or "possible" reserves under SEC rules.

# **EXXONMOBIL OIL & GAS PRODUCTION OUTLOOK (1)**

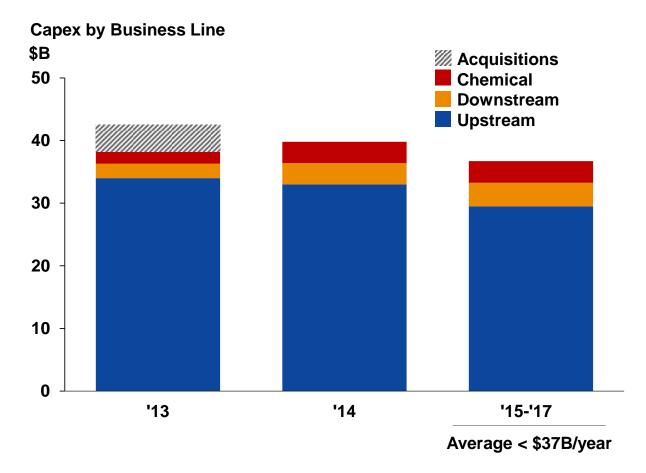


- Total production outlook
  - 2014: Flat
  - 2015 2017: up 2-3% per year
- Liquids outlook
  - 2014: up 2%
  - 2015 2017: up 4% per year
- Gas outlook
  - 2014: down 2%
  - 2015 2017: up 1% per year

<sup>(1)</sup> Source 2014 ExxonMobil Analyst Meeting (slide 32).

<sup>(2) 2013</sup> production excludes the impact of UAE onshore concession expiry and Iraq West Qurna 1 partial divestment. Production outlook excludes impact from future divestments and OPEC quota effects. Based on 2013 average price (\$109 Brent).

# **EXXONMOBIL CAPEX OUTLOOK (1)**



- Expect to invest \$39.8B in 2014
  - Reduced Upstream spending
  - Selective Downstream and Chemical investments
- Average less than \$37B per year from 2015 to 2017

(1) Source 2014 ExxonMobil Analyst Meeting (slide 33).

# EXXONMOBIL OIL & GAS EXPLORATION AND PRODUCTION EARNINGS AND UNIT PROFITABILITY (1)

The revenue, cost, and earnings data are shown both on a total dollar and a unit basis, and are inclusive of non-consolidated and Canadian oil sands operations.

	Total Revenues and Costs, Including Non-Consolidated Interests and Oil Sands								Revenues and Costs per Unit of Sales or Production (2)					
-		Canada/		-					Canada/					
	United	South				Australia/		United	South	Outside				
	States	America	Europe	Africa	Asia	Oceania	Total	States	America	Americas	Worldw ide			
2013	(millions of dollars)								(dollars per unit of sales)					
Revenue														
Liquids	13,350	7,558	6,751	18,811	28,440	1,596	76,506	84.87	75.28	101.92	95.25			
Natural gas	3,880	360	11,384	6	13,477	539	29,646	3.00	2.80	8.77	6.86			
									(dollars per barrel of net oil-equivalent production)					
Total revenue	17,230	7,918	18,135	18,817	41,917	2,135	106,152	46.20	63.93	78.86	69.66			
Less costs:														
Production costs														
excluding taxes	4,742	3,965	3,318	2,396	2,423	654	17,498	12.72	32.02	8.56	11.48			
Depreciation and depletion	5,133	989	2,050	3,269	2,635	334	14,410	13.76	7.99	8.07	9.46			
Exploration expenses	413	386	260	288	997	92	2,436	1.11	3.12	1.59	1.60			
Taxes other than income	1,617	94	4,466	1,583	9,146	427	17,333	4.33	0.74	15.21	11.37			
Related income tax	1,788	542	4,956	6,841	14,191	202	28,520	4.79	4.38	25.50	18.72			
Results of producing activities	3,537	1,942	3,085	4,440	12,525	426	25,955	9.49	15.68	19.93	17.03			
Other earnings (3)	662	(495)	302	59	234	(118)	644	1.77	(4.00)	0.47	0.42			
Total earnings, excluding														
power and coal	4,199	1,447	3,387	4,499	12,759	308	26,599	11.26	11.68	20.40	17.45			
Power and coal	(8)	-	-	-	250	-	242							
Total earnings	4,191	1,447	3,387	4,499	13,009	308	26,841	11.23	11.68	20.64	17.61			
										$1 \sqrt{a} \sqrt{4}$	18.03			

Unit Earnings Excluding NCI Volumes (4) 18.03

(1) Source: ExxonMobil 2013 Financial and Operating Review (page 56).

- (2) The per-unit data are divided into two sections: (a) revenue per unit of sales from ExxonMobil's own production; and, (b) operating costs and earnings per unit of net oil-equivalent production. Units for crude oil and natural gas liquids are barrels, while units for natural gas are thousands of cubic feet. The volumes of crude oil and natural gas liquids production and net natural gas production available for sale used in this calculation are shown on pages 48 and 49 of ExxonMobil's 2013 Financial & Operating Review. The volumes of natural gas were converted to oil-equivalent barrels based on a conversion factor of 6 thousand cubic feet per barrel.
- (3) Includes earnings related to transportation operations, LNG liquefaction and transportation operations, sale of third-party purchases, technical services agreements, other nonoperating activities, and adjustments for noncontrolling interests.
- (4) Calculation based on total earnings (net income attributable to ExxonMobil) divided by net oilequivalent production less noncontrolling interest (NCI) volumes.

## **EXXONMOBIL**

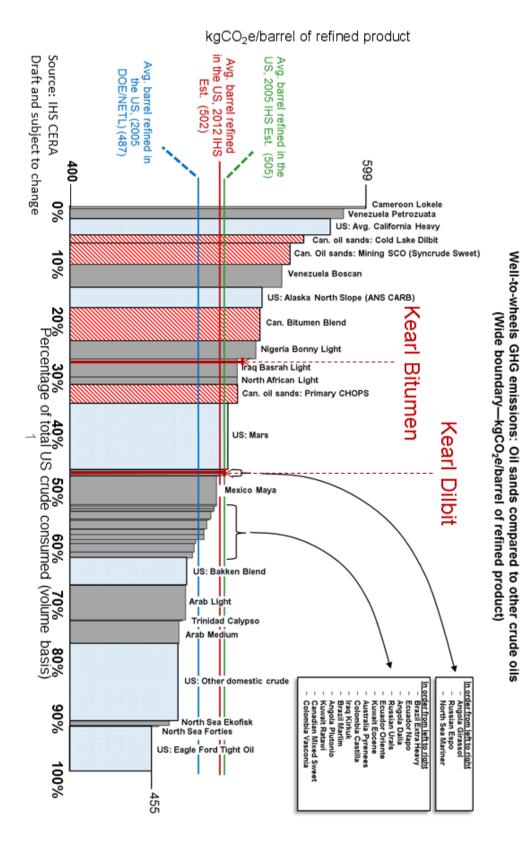
# **PRODUCTION PRICES AND PRODUCTION COSTS (1)**

The table below summarizes average production prices and average production costs by geographic area and by product type.

	United	Canada/				Australia/	
	States	S. America	Europe	Africa	Asia	Oceania	Total
During 2013		(dollars per unit)					
Total							
Average production prices (2)							
Crude oil, per barrel	95.11	98.91	106.49	108.73	104.98	107.92	104.01
NGL, per barrel	44.24	44.96	65.36	75.24	61.64	59.55	56.26
Natural gas, per thousand cubic feet	3.00	2.80	9.59	2.79	8.53	4.20	6.86
Bitumen, per barrel	-	59.63	-	-	-	-	59.63
Synthetic oil, per barrel	-	93.96	-	-	-	-	93.96
Average production costs, per oil-equivalent barrel - total (3)	12.72	32.02	12.42	13.95	4.41	16.81	11.48
Average production costs, per barrel - bitumen (3)	-	34.30	-	-	-	-	34.30
Average production costs, per barrel - synthetic oil (3)	-	50.94	-	-	-	-	50.94

(1) Source: ExxonMobil 2013 Form 10-K (page 9)

- (2) Revenue per unit of sales from ExxonMobil's own production. (See ExxonMobil's 2013 Financial & Operating Review, page 56.) Revenue in this calculation is the same as in the Results of Operations disclosure in ExxonMobil's 2013 Form 10-K (page 97) and does not include revenue from other activities that ExxonMobil includes in the Upstream function, such as oil and gas transportation operations, LNG liquefaction and transportation operations, coal and power operations, technical service agreements, other nonoperating activities and adjustments for noncontrolling interests, in accordance with Securities and Exchange Commission and Financial Accounting Standards Board rules.
- (3) Production costs per unit of net oil-equivalent production. (See ExxonMobil's 2013 inancial & Operating Review, page 56.) The volumes of natural gas were converted to oil-equivalent barrels based on a conversion factor of 6 thousand cubic feet per barrel. Production costs in this calculation are the same as in the Results of Operations disclosure in ExxonMobil's 2013 Form 10-K (page 97) and do not include production costs from other activities that ExxonMobil includes in the Upstream function, such as oil and gas transportation operations, LNG liquefaction and transportation operations, coal and power operations, technical service agreements, other nonoperating activities and adjustments for noncontrolling interests, in accordance with Securities and Exchange Commission and Financial Accounting Standards Board rules. Depreciation & depletion, exploration costs, and taxes are not included in production costs.



# Seriatim of crudes processed in US in 2012

30