IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
FORT WORTH DIVISION

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| EXXON MOBIL CORPORATION, | § | |
| | § | |
| Plaintiff, | § | |
| v. | § | No. 4:16-CV-469-K |
| | § | |
| ERIC TRADD SCHNEIDERMAN, Attorney General of New York, in his official capacity, and MAURA TRACY HEALEY, Attorney General of Massachusetts, in her official capacity, | § | |
| | § | |
| Defendants. | § | |

**APPENDIX IN SUPPORT OF EXXON MOBIL CORPORATION'S OPPOSITION TO ERIC TRADD SCHNEIDERMAN'S MOTION TO DISMISS THE FIRST AMENDED COMPLAINT**

| Exhibit | Description | Page(s) |
|---|---|---|
| N/A | Declaration of Justin Anderson (Dec. 21, 2016) | iv – vi |
| A | Transcript of the AGs United for Clean Power Press Conference, held on March 29, 2016, which was prepared by counsel based on a video recording of the event. The video recording is available at http://www.ag.ny.gov/press-release/ag-schneiderman-former-vice-president-al-gore-and-coalition-attorneys-general-across | MTD App. 1 – MTD App. 21 |
| B | New York Attorney General Subpoena | MTD App. 22 – MTD App. 40 |
| C | Paul Merolli, *New York Attorney General Comments on Exxon Probe*, Oil Daily (Nov. 13, 2015) | MTD App. 41 – MTD App. 43 |
| D | E-mail from Lemuel Srolovic, Bureau Chief, Environmental Protection Bureau, Office of the New York State Attorney General, to Michele Hirshman, Partner, Paul, Weiss, Rifkind, Wharton & Garrison LLP (Nov. 19, 2015 5:58 PM) | MTD App. 44 – MTD App. 48 |

Dated: December 23, 2016

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**CERTIFICATE OF SERVICE**

This is to certify that on this 23rd day of December 2016, a true and correct copy of the foregoing document was filed electronically via the CM/ECF system, which gave notice to all counsel of record pursuant to Local Rule 5.1(d).

/s/ Ralph H. Duggins
RALPH H. DUGGINS

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
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| EXXON MOBIL CORPORATION,<br><br>Plaintiff,<br>v.<br><br>ERIC TRADD SCHNEIDERMAN, Attorney General of New York, in his official capacity, and MAURA TRACY HEALEY, Attorney General of Massachusetts, in her official capacity,<br><br>Defendants. | §<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§ | No. 4:16-CV-469-K |

**DECLARATION OF JUSTIN ANDERSON**

I, Justin Anderson, declare as follows:

1. My name is Justin Anderson. I have been admitted to practice law *pro hac vice* in the U.S. District Court for the Northern District of Texas and am an attorney with the law firm Paul, Weiss, Rifkind, Wharton & Garrison LLP, counsel of record for Exxon Mobil Corporation ("ExxonMobil") in this matter. I am at least 18 years of age and am fully competent in all respects to make this Declaration. I have personal knowledge of the facts stated herein, based on my experience or my consultation with others, or they are known to me in my capacity as counsel for ExxonMobil, and I believe that each of them is true and correct.

2. I submit this declaration in support of ExxonMobil's Opposition to Eric Tradd Schneiderman's Motion to Dismiss the First Amended Complaint.

3. Attached to this declaration as Exhibit A is a transcript of the AGs United for Clean Power Press Conference, held on March 29, 2016, which was prepared by

counsel based on a video recording of the event. The video recording is available at http://www.ag.ny.gov/press-release/ag-schneiderman-former-vice-president-al-gore-and-coalition-attorneys-general-across.

4. Attached to this declaration as Exhibit B is a copy of the subpoena served on ExxonMobil by the New York Attorney General's Office, dated November 4, 2015.

5. Attached to this declaration as Exhibit C is a copy of an article by Paul Merolli published in *Oil Daily* on November 13, 2015, obtained from LexisNexis.

6. Attached to this declaration as Exhibit D is a redacted copy of an email exchange between Lemuel Srolovic, Bureau Chief, Environmental Protection Bureau, Office of the New York State Attorney General and counsel for ExxonMobil, the last of which is dated November 19, 2015.

7. Attached to this declaration as Exhibit E is a copy of an e-mail chain, the last of which is from Michael Meade to Scot Kline and Wendy Morgan and is dated March 22, 2016, obtained from http://eelegal.org/wp-content/uploads/2016/04/Gore-is-adding-star-power-and-words-to-avoid.pdf.

8. Attached to this declaration as Exhibit F is a copy of the Climate Change Coalition Common Interest Agreement, obtained from http://eelegal.org/wp-content/uploads/2016/08/Climate-Change-CIA.pdf.

9. Attached to this declaration as Exhibit G is an excerpt of ExxonMobil's 2015 *Outlook for Energy* report.

10. Attached to this declaration as Exhibit H is an excerpt of ExxonMobil's *Annual Report (Form 10-K)*, dated February 24, 2016.

11. Attached to this declaration as Exhibit I is a copy of the Plea in Intervention of the States of Texas and Alabama in ExxonMobil's state court action against the Virgin Islands Attorney General Claude Walker, dated May 16, 2016 and obtained from https://www.texasattorneygeneral.gov/files/epress/files/2016/2016-05-16_exxon_states_intervention.pdf.

12. Attached to this declaration as Exhibit J is Attorney General Schneiderman's New York state court memorandum of law in support of his motion to compel compliance with the investigative subpoena he issued to ExxonMobil, dated November 14, 2016.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 21, 2016.

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# Exhibit A

# AGs United For Clean Power Press Conference*

**March 29, 2016: 11:35 am – 12:32 pm**

**AG Schneiderman:** Thank you, good morning. I'm New York's Attorney General, Eric Schneiderman. I thank you for joining us here today for what we believe and hope will mark a significant milestone in our collective efforts to deal with the problem of climate change and put our heads together and put our offices together to try and take the most coordinated approach yet undertaken by states to deal with this most pressing issue of our time. I want to thank my co-convener of the conference, Vermont Attorney General, William Sorrel, who has been helping in joining us here and been instrumental in making today's events possible, and my fellow attorneys general for making the trip to New York for this announcement. Many of them had been working for years on different aspects of this problem to try and preserve our planet and reduce the carbon emissions that threaten all of the people we represent. And I'm very proud to be here today with Attorney General George Jepsen of Connecticut, Attorney General Brian Frosh of Maryland, Attorney General Maura Healey of Massachusetts, Attorney General Mark Herring of Virginia, and Attorney General Claude Walker of the U.S. Virgin Islands.

We also have staff representing other attorneys general from across the country, including: Attorney General Kamala Harris of California, Matt Denn of Delaware, Karl Racine of the District of Columbia, Lisa Madigan of Illinois, Tom Miller of Iowa, Janet Mills of Maine, Lori Swanson of Minnesota, Hector Balderas of New Mexico, Ellen Rosenblum of Oregon, Peter Kilmartin of Rhode Island and Bob Ferguson of Washington.

And finally, I want to extend my sincere thanks to Vice President Al Gore for joining us. It has been almost ten years since he galvanized the world's attention on climate change with his documentary *An Inconvenient Truth*.

And, I think it's fair to say that no one in American public life either during or beyond their time in elective office has done more to elevate the debate of our climate change or to expand global awareness about the urgency of the need for collective action on climate change than Vice President Gore. So it's truly an honor to have you here with us today.

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* The following transcript of the AGs United For Clean Power Press Conference, held on March 29, 2016, was prepared by counsel based on a video recording of the event, which is available at http://www.ag.ny.gov/press-release/ag-schneiderman-former-vice-president-al-gore-and-coalition-attorneys-general-across.

# AGs United For Clean Power Press Conference

**March 29, 2016: 11:35 am – 12:32 pm**

So we've gathered here today for a conference – the first of its kind conference of attorneys general dedicated to coming up with creative ways to enforce laws being flouted by the fossil fuel industry and their allies in their short-sighted efforts to put profits above the interests of the American people and the integrity of our financial markets. This conference reflects our commitment to work together in what is really an unprecedented multi-state effort in the area of climate change. Now, we have worked together on many matters before and I am pleased to announce that many of the folks represented here were on the Amicus Brief we submitted to the United States Supreme Court in the *Friedrichs* v. *California Teacher Association* case. We just got the ruling that there was a four-four split so that the American labor movement survives to fight another day. And thanks, thanks to all for that effort and collaboration. It shows what we can do if we work together. And today we are here spending a day to ensure that this most important issue facing all of us, the future of our planet, is addressed by a collective of states working as creatively, collaboratively and aggressively as possible.

The group here was really formed when some of us came together to defend the EPA's Clean Power Plan, the new rules on greenhouse gases. And today also marks the day that our coalition is filing our brief in the Court of Appeals for the District of Columbia. In that important matter we were defending the EPA's rules. There is a coalition of other states on the other side trying to strike down the rules, but the group that started out in that matter together was 18 states and the District of Columbia. We call ourselves The Green 19, but now that Attorney General Walker of the Virgin Islands has joined us our rhyme scheme is blown. We can't be called The Green 19, so now we're The Green 20. We'll come up with a better name at some point.

But, ladies and gentlemen, we are here for a very simple reason. We have heard the scientists. We know what's happening to the planet. There is no dispute but there is confusion, and confusion sowed by those with an interest in profiting from the confusion and creating misperceptions in the eyes of the American public that really need to be cleared up. The U.S. Defense Department, no radical agency, recently called climate change an urgent and growing threat to our national security. We know that last month, February, was the furthest above normal for any month in history since 1880 when they started keeping meteorological records. The facts are evident. This is not a problem ten years or twenty years in the future. [There are] people in New York who saw what happened with the additional storm surge with Super Storm Sandy. We know the water level in New York Harbor is almost a foot higher than it was. The New York State Department of Environmental Conservation, not some radical agency, predicts that if we continue at this pace, we'll have another 1.5 feet of water in New York Harbor. It'll go up by that much in 2050. So today, in the face of the gridlock in Washington, we are assembling a group of state actors to send the message that we are prepared to step into this breach. And one thing we hope all reasonable people can agree on is that every fossil fuel company has a responsibility to be honest with its investors and with the public about the financial and market risks posed by climate change. These are cornerstones of our securities and consumer protection laws.

My office reached a settlement last year based on the enforcement of New York securities laws with Peabody Energy. And they agreed to rewrite their financials because they had been misleading investors and the public about the threat to their own business plan and about the fact that they had very detailed analysis telling them how the price of coal would be going down in the face of actions taken by governments around the world. But they were hiding it from their investors. So they agreed to revise all of their filings with the SEC. And the same week we announced that, we announced that we had served a subpoena on ExxonMobil pursuing that and other theories relating to consumer and securities fraud. So we know, because of what's already out there in the public, that there are companies using the best climate science. They are using the best climate models so that when they spend shareholder dollars to raise their oil rigs, which they are doing, they know how fast the sea level is rising. Then they are drilling in places in the Arctic where they couldn't drill 20 years ago because of the ice sheets. They know how fast the ice sheets are receding. And yet they have told the public for years that there were no "competent models," was the specific term used by an Exxon executive not so long ago, no competent models to project climate patterns, including those in the Arctic. And we know that they paid millions of dollars to support organizations that put out propaganda denying that we can predict or measure the effects of fossil fuel on our climate, or even denying that climate change was happening.

There have been those who have raised the question: aren't you interfering with people's First Amendment rights? The First Amendment, ladies and gentlemen, does not give you the right to commit fraud. And we are law enforcement officers, all of us do work, every attorney general does work on fraud cases. And we are pursuing this as we would any other fraud matter. You have to tell the truth. You can't make misrepresentations of the kinds we've seen here.

And the scope of the problem we're facing, the size of the corporate entities and their alliances and trade associations and other groups is massive and it requires a multi-state effort. So I am very honored that my colleagues are here today assembling with us. We know that in Washington there are good people who want to do the right thing on climate change but everyone from President Obama on down is under a relentless assault from well-funded, highly aggressive and morally vacant forces that are trying to block every step by the federal government to take meaningful action. So today, we're sending a message that, at least some of us – actually a lot of us – in state government are prepared to step into this battle with an unprecedented level of commitment and coordination.

And now I want to turn it over to my great colleague, the co-convener of this conference, Vermont Attorney General William Sorrel.

**AG Sorrel:** I am pleased that the small state of Vermont joins with the big state of New York and are working together to make this gathering today a reality. Truth is that states, large and small, have critical roles to play in addressing environmental quality issues. General Schneiderman has mentioned our filing today in the D.C. Circuit on the Clean Power Plan case. Going back some time, many of the states represented here joined with the federal government suing American Electric Power Company, the company operating several coal-fired electric plants in the Midwest and largely responsible for our acid rain and other air quality issues in the eastern part of the United States, ultimately resulting in what I believe to date is the largest settlement in an environmental case in our country's history. With help from a number of these states, we successfully litigated Vermont's adoption of the so-called California standard for auto emissions in federal court in Vermont, now the standard in the country. And right down to the present day, virtually all of the states represented today are involved in looking at the alleged actions by Volkswagen and the issues relating to emissions from tens of thousands of their diesel automobiles.

But today we're talking about climate change which I don't think there's any doubt, at least in our ranks, is the environmental issue of our time. And in order for us to effectively address this issue, it's going to take literally millions of decisions and actions by countries, by states, by communities and by individuals. And, just very briefly, Vermont is stepping up and doing its part. Our legislature has set goals of 75% reduction – looking from a 1990 base line – a 75% reduction in greenhouse gas emissions by 2050. Similarly, our electric utilities have a goal of 75% use of renewable energy sources by 2032. So, we've been doing our part. Our presence here today is to pledge to continue to do our part. I'm mindful of the fact that I'm between you and the real rock star on this issue, and so I'm going to turn it back to General Schneiderman to introduce the next speaker.

**AG Schneiderman**: Thank you. Thank you. I'm not really a rock star.

[Laughter]

Thank you Bill. It's always a pleasure to have someone here from a state whose U.S. senator is from Brooklyn.

[Laughter]

And doing pretty well for himself. So, Vice President Gore has a very busy schedule. He has been traveling internationally, raising the alarm but also training climate change activists. He rearranged his schedule so he could be here with us to day to meet with my colleagues and I. And there is no one who has done more for this cause, and it is a great pleasure to have him standing shoulder to shoulder with us as we embark on this new round in what we hope will be the beginning of the end of our addiction to fossil fuel and our degradation of the planet. Vice President Al Gore.

**VP Gore:** Thank you very much, Eric. Thank you. Thank you very much.

[Applause]

Thank you very much, Attorney General Schneiderman. It really and truly is an honor for me to join you and your colleagues here, Bill Sorrel of Vermont, Maura Healey of Massachusetts, Brian Frosh of Maryland, Mark Herring of Virginia, George Jepsen of Connecticut and Claude Walker from the U.S. Virgin Islands, and the ten (let's see 1, 2, 3, 4, 5) how many other – ten other states . . . eleven other state attorneys general offices that were represented in the meetings that took place earlier, prior to this press conference.

I really believe that years from now this convening by Attorney General Eric Schneiderman and his colleagues here today may well be looked back upon as a real turning point in the effort to hold to account those commercial interests that have been – according to the best available evidence – deceiving the American people, communicating in a fraudulent way, both about the reality of the climate crisis and the dangers it poses to all of us. And committing fraud in their communications about the viability of renewable energy and efficiency and energy storage that together are posing this great competitive challenge to the long reliance on carbon-based fuels. So, I congratulate you, Attorney General, and all of you, and to those attorneys general who were so impressively represented in the meetings here. This is really, really important.

I am a fan of what President Obama has been doing, particularly in his second term on the climate crisis. But it's important to recognize that in the federal system, the Congress has been sharply constraining the ability of the executive branch to fully perform its obligations under [the] Constitution to protect the American people against the kind of fraud that the evidence suggests is being committed by several of the fossil fuel companies, electric utilities, burning coal, and the like. So what these attorneys general are doing is exceptionally important. I remember very well – and I'm not going to dwell on this analogy – but I remember very well from my days in the House and Senate and the White House the long struggle against the fraudulent activities of the tobacco companies trying to keep Americans addicted to the deadly habit of smoking cigarettes and committing fraud to try to constantly hook each new generation of children to replenish their stock of customers who were dying off from smoking-related diseases. And it was a combined effort of the executive branch, and I'm proud that the Clinton-Gore administration played a role in that, but it was a combined effort in which the state attorneys general played the crucial role in securing an historic victory for public health. From the time the tobacco companies were first found out, as evidenced by the historic attorney generals' report of 1964, it took 40 years for them to be held to account under the law. We do not have 40 years to continue suffering the consequences of the fraud allegedly being committed by the fossil fuel companies where climate change is concerned.

In brief, there are only three questions left to be answered about the climate crisis. The first one is: Must we change, do we really have to change? We rely on fossil fuels for more than 80% of all the energy our world uses. In burning it we've reduced poverty and raised standards of living and built this elaborate global civilization, and it looks like it'll be hard to change. So naturally, people wonder: Do we really have to change? The scientific community has been all but unanimous for a long time now. But now mother nature and the laws of physics – harder to ignore than scientists – are making it abundantly clear that we have to change. We're putting 110 million tons of man-made heat trapping global warming pollution into the thin shell of atmosphere surrounding our planet every day, as if it's an open sewer. And the cumulative amount of that man-made global warming pollution now traps as much extra heat energy in the earth's system as would be released by 400,000 Hiroshima-class atomic bombs exploding every 24 hours on the surface of our planet.

It's a big planet, but that's a lot of energy. And it is <u>the</u> reason why temperatures are breaking records almost every year now. 2015 was the hottest year measured since instruments had been used to measure temperature. 2014 was the second hottest. <u>14</u> of the 15 hottest have been in the last 15 years. As the Attorney General mentioned, February continues the trend by breaking all previous records – the hottest in 1,632 months ever measured. Last December 29th, the same unnatural global warming fuel storm system that created record floods in the Midwest went on up to the Arctic and on December 29th, smack in the middle of the polar winter night at the North Pole, temperatures were driven up <u>50 degrees</u> above the freezing point. So the North Pole started thawing in the middle of the winter night. Yesterday the announcement came that it's the smallest winter extent of ice ever measured in the Arctic.

Ninety-three percent of the extra heat goes into the oceans of the world, and that has consequences. When Super Storm Sandy headed across the Atlantic toward this city, it crossed areas of the Atlantic that were nine degrees Fahrenheit warmer than normal and that's what made that storm so devastating. The sea level had already come up because of the ice melting, principally off Greenland and Antarctica. And as the Attorney General mentioned, that's a process now accelerating. But these ocean-based storms are breaking records now. I just came from the Philippines where Super Typhoon Haiyon created 4 million homeless people when it crossed much warmer waters of the Pacific. By the way, it was a long plane flight to get here and I happened to get, just before we took off, the 200-page brief that you all filed in support of the Clean Power Plan. Really excellent work. Footnotes took up a lot of those 200 pages so I'm not claiming to [have] read all 200 of them.

The same extra heat in the oceans is disrupting the water cycle. We all learned in school that the water vapor comes off the oceans and falls as rain or snow over the land and then rushes back to the ocean. That natural life-giving process is being massively disrupted because the warmer oceans put a lot more water vapor up there. And when storm conditions present themselves they, these storms will reach out thousands of kilometers to funnel all that extra humidity and water vapor into these massive record-breaking downpours. And occasionally it creates a snowpocalypse or snowmaggedon but most often, record-breaking floods. We've had seven once-in-a-thousand-year floods in the last ten years in the U.S. Just last week in Louisiana and Arkansas, two feet of rain in four days coming again with what they call the Maya Express off the oceans. And the same extra heat that's creating these record-breaking floods also pull the soil moisture out of the land and create these longer and deeper droughts all around the world on every continent.

Every night on the news now it's like a nature hike through the Book of Revelation. And we're seeing tropical diseases moving to higher latitudes – the Zika virus. Of course the transportation revolution has a lot to do with the spread of Zika and Dengue Fever and Chikungunya and diseases I've never heard of when I was growing up and maybe, probably most of you never did either. But now, they're moving and taking root in the United States. Puerto Rico is part of the United States, by the way – not a state, but part of our nation. Fifty percent of the people in Puerto Rico are estimated to get the Zika virus this year. By next year, eighty percent. When people who are part of the U.S. territory, when women are advised not to get pregnant, that's something new that ought to capture our attention. And in large areas of Central America and South America, women are advised now not to get pregnant for two years until they try to get this brand new viral disease under control.

The list of the consequences continues, and I'm not going to go through it all, but the answer to that first question: "Do we have to change?" is clearly now to any reasonable thinking person: "yes, we have to change." Now the second question is: "Can we change?" And for quite a few years, I will confess to you that, when I answered that question yes, it was based on the projections of scientists and technologists who said, just wait. We're seeing these exponential curves just begin, solar is going to win, wind power is going to get way cheaper, batteries are going to have their day, we're going to see much better efficiency. Well now we're seeing these exponential curves really shoot up dramatically. Almost 75% of all the new investment in the U.S. in new generating capacity last year was in solar and wind – more than half worldwide. We're seeing coal companies go bankrupt on a regular basis now. Australia is the biggest coal exporter in the world. They've just, just the analysis there, they're not going to build any more coal plants because solar and wind are so cheap. And we're seeing this happen all around the world. But, there is an effort in the U.S. to slow this down and to bring it to a halt because part of the group that, again according to the best available evidence, has been committing fraud in trying to convince people that the climate crisis is not real, are now trying to convince people that renewable energy is not a viable option. And, worse than that, they're using their combined political and lobbying efforts to put taxes on solar panels and jigger with the laws to require that installers have to know the serial number of every single part that they're using to put on a rooftop of somebody's house, and a whole series of other phony requirements, unneeded requirements, that are simply for the purpose of trying to slow down this renewable revolution. In the opinion of many who have looked at this pattern of misbehavior and what certainly looks like fraud, they are violating the law. If the Congress would actually work – our democracy's been hacked, and that's another story, not the subject of this press conference – but if the Congress really would allow the executive branch of the federal government to work, then maybe this would be taken care of at the federal level. But these brave men and women, who are the attorneys general of the states represented in this historic coalition, are doing their job and – just as many of them did in the tobacco example – they are now giving us real hope that the answer to that third question: "Will we change?" is going to be "yes." Because those who are using unfair and illegal means to try to prevent the change are likely now, finally, at long last, to be held to account. And that will remove the last barriers to allow the American people to move forward and to redeem the promise of our president and our country in the historic meeting in Paris last December where the United States led the global coalition to form the first global agreement that is truly comprehensive. If the United States were to falter and stop leading the way, then there would be no other leader for the global effort to solve this crisis. By taking the action these attorneys general are taking today, it is the best, most hopeful step I can remember in a long time – that we will make the changes that are necessary.

So, I'll conclude my part in this by, once again, saying congratulations to these public servants for the historic step they are taking today. And on behalf of many people, who I think would say it's alright for me to speak for them, I'd like to say thank you.

**AG Schneiderman**: Thank you very much, and now my other colleagues are going to say a few words. For whatever reason, I've gotten into the habit, since we always seem to do this, we do this in alphabetical order by state, which I learned when I first became an AG but I guess we'll stick with it. Connecticut Attorney General George Jepsen who was our partner in the *Friedrichs* case and stood with me when we announced that we were filing in that case. We've done a lot of good work together. Attorney General Jepsen.

**AG Jepsen:** I'd like to thank Eric and Bill for their leadership on this important issue and in convening this conference and to recognize the man who has done more to make global warming an international issue than anybody on the entire planet – Vice President Al Gore. In the backdrop, in the backdrop of a very dysfunctional Congress, state attorneys general, frequently on a bipartisan, basis have shown that we can stand up and take action where others have not. The Vice President referenced the tobacco litigation, which was before my time but hugely important in setting the tone and the structures by which we do work together. Since becoming attorney general in 2011, we've taken on the big banks and their mortgage servicing issues, a $25 billion settlement. We've taken on Wall Street's Standard & Poor's for mislabeling mortgage-backed securities – as a 20-state coalition – mislabeling mortgage-backed securities as AAA when in fact they were junk. Working together on data privacy issues, and now it's time that we stand up once again and take on what is the most important issue of our generation. We owe it to our children, our children's children, to step up and do the right thing, to work together and I'm committed to it. Thank you.

**AG Schneiderman**: Thank you. And now a relatively new colleague but someone who has brought incredible energy to this fight and who we look forward to working with on this and other matters for a long time to come. Maryland Attorney General Brian Frosh.

**AG Frosh**: Well, first thank you again to General Schneiderman and General Sorrel for putting together this group and it's an honor to be with you, Mr. Vice President. Thank you so much for your leadership. I'm afraid we may have reached that point in the press conference where everything that needs to be said has been said, but everyone who needs to say it hasn't said it yet.

[Laughter]

So, I will try to be brief. Climate change is an existential threat to everybody on the planet. Maryland is exceptionally vulnerable to it. The Chesapeake Bay bisects our state. It defines us geographically, culturally, historically. We have as much tidal shoreline as states as large as California. We have islands in the Chesapeake Bay that are disappearing. We have our capital, Annapolis, which is also the nuisance flood capital of the United States. It's under water way, way, way too often. It's extraordinarily important that we address the problem of climate change. I'm grateful to General Sorrel and General Schneiderman for putting together this coalition of the willing. I'm proud to be a part of it in addressing and supporting the President's Clean Power Plan. What we want from ExxonMobil and Peabody and ALEC is very simple. We want them to tell the truth. We want them to tell the truth so that we can get down to the business of stopping climate change and of healing the world. I think that as attorneys general, as the Vice President said, we have a unique ability to help bring that about and I'm very glad to be part of it.

**AG Schneiderman**: Thank you. And, another great colleague, who has done extraordinary work before and since becoming attorney general working with our office on incredibly important civil rights issues, financial fraud issues, Massachusetts Attorney General Maura Healey.

**AG Healey**: Thank you very much General Schneiderman. Thank you General Schneiderman and General Sorrel for your leadership on this issue. It's an honor for me to be able to stand here today with you, with our colleagues and certainly with the Vice President who, today, I think, put most eloquently just how important this is, this commitment that we make. Thank you for your leadership. Thank you for your continuing education. Thank you for your inspiration and your affirmation.

You know, as attorneys general, we have a lot on our plates: addressing the epidemics of opiate abuse, gun violence, protecting the economic security and well-being of families across this country; all of these issues are so important. But make no mistake about it, in my view, there's nothing we need to worry about more than climate change. It's incredibly serious when you think about the human and the economic consequences and indeed the fact that this threatens the very existence of our planet. Nothing is more important. Not only must we act, we have a moral obligation to act. That is why we are here today.

The science – we do believe in science; we're lawyers, we believe in facts, we believe in information, and as was said, this is about facts and information and transparency. We know from the science and we know from experience the very real consequences of our failure to address this issue. Climate change is and has been for many years a matter of extreme urgency, but, unfortunately, it is only recently that this problem has begun to be met with equally urgent action. Part of the problem has been one of public perception, and it appears, certainly, that certain companies, certain industries, may not have told the whole story, leading many to doubt whether climate change is real and to misunderstand and misapprehend the catastrophic nature of its impacts. Fossil fuel companies that deceived investors and consumers about the dangers of climate change should be, must be, held accountable. That's why I, too, have joined in investigating the practices of ExxonMobil. We can all see today the troubling disconnect between what Exxon knew, what industry folks knew, and what the company and industry chose to share with investors and with the American public.

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We are here before you, all committed to combating climate change and to holding accountable those who have misled the public. The states represented here today have long been working hard to sound the alarm, to put smart policies in place, to speed our transition to a clean energy future, and to stop power plants from emitting millions of tons of dangerous global warming pollution into our air. I will tell you, in Massachusetts that's been a very good thing. Our economy has grown while we've reduced greenhouse gas emissions and boosted clean power and efficiency. We're home to a state with an $11 billion clean energy industry that employs nearly 100,000 people. Last year clean energy accounted for 15% of New England's power production. Our energy efficiency programs have delivered $12.5 billion in benefits since 2008 and are expected to provide another $8 billion over the next three years. For the past five years, Massachusetts has also been ranked number one in the country for energy efficiency. So we know what's possible. We know what progress looks like. But none of us can do it alone. That's why we're here today. We have much work to do, but when we act and we act together, we know we can accomplish much. By quick, aggressive action, educating the public, holding accountable those who have needed to be held accountable for far too long, I know we will do what we need to do to address climate change and to work for a better future. So, I thank AG Schneiderman for gathering us here today and for my fellow attorneys general in their continued effort in this important fight. Thank you.

**AG Schneiderman**: Thank you. And now another great colleague who speaks as eloquently as anyone I've heard about what's happening to his state, and a true hero of standing up in a place where maybe it's not quite as politically easy as it is to do it in Manhattan but someone who is a true aggressive progressive and a great attorney general, Mark Herring from Virginia.

**AG Herring**: Thank you, Eric. Good afternoon. In Virginia, climate change isn't some theoretical issue. It's real and we are already dealing with its consequences. Hampton Roads, which is a coastal region in Virginia, is our second most populated region, our second biggest economy and the country's second most vulnerable area as sea levels rise. The area has the tenth most valuable assets in the world threatened by sea level rise. In the last 85 years the relative sea level in Hampton Roads has risen 14 inches – that's well over a foot – in just the last century.

Some projections say that we can expect an additional two to five feet of relative sea level rise by the end of this century – and that would literally change the face of our state. It would cripple our economy and it could threaten our national security as Norfolk Naval, the world's largest naval base, is impacted. Nuisance flooding that has increased in frequency will become the norm. They call it blue sky flooding. Storm surges from tropical systems will threaten more homes, businesses and residents. And even away from the coast, Virginians are expected to feel the impact of climate change as severe weather becomes more dangerous and frequent. Just a few weeks ago, we had a highly unusual February outbreak of tornadoes in the Commonwealth that was very damaging and unfortunately deadly.

Farming and forestry is our number one industry in Virginia. It's a $70 billion industry in Virginia that supports around 400,000 jobs and it's going to get more difficult and expensive. And, the Commonwealth of Virginia local governments and the navy are already spending millions to build more resilient infrastructure, with millions and millions more on the horizon. To replace just one pier at Norfolk Naval is about $35 to $40 million, and there are 14 piers, so that would be around a half billion right there.

As a Commonwealth and a nation, we can't put our heads in the sand. We must act and that is what today is about. I am proud to have Virginia included in this first of its kind coalition which recognizes the reality and the pressing threat of man-made climate change and sea level rise. This group is already standing together to defend the Clean Power Plan – an ambitious and achievable plan – to enjoy the health, economic and environmental benefits of cleaner air and cleaner energy. But there may be other opportunities and that's why I have come all the way from Virginia. I am looking forward to exploring ideas and opportunities, to partner and collaborate, if there are enforcement actions we need to be taking, if there are legal cases we need to be involved in, if there are statutory or regulatory barriers to growing our clean energy sectors and, ultimately, I want to work together with my colleagues here and back in Virginia to help combat climate change and to shape a more sustainable future.

And for any folks who would say the climate change is some sort of made-up global conspiracy, that we're wasting our time, then come to Hampton Roads. Come to Norfolk and take a look for yourselves. Mayor Fraim would love to have you.

**AG Schneiderman**: Thank you. And our closer, another great colleague who has traveled far but comes with tremendous energy to this cause and is an inspiration to us all, U.S. Virgin Islands Attorney General Claude Walker.

**AG Walker**: Thank you. Thank you, General Schneiderman, Vice President Gore. One of my heroes, I must say. Thank you. I've come far to New York to be a part of this because in the Virgin Islands and Puerto Rico, we experience the effects of global warming. We see an increase in coral bleaching, we have seaweeds, proliferation of seaweeds in the water, all due to global warming. We have tourism as our main industry, and one of the concerns that we have is that tourists will begin to see this as an issue and not visit our shores. But also, residents of the Virgin Islands are starting to make decisions about whether to live in the Virgin Islands – people who have lived there for generations, their families have lived there for generations. We have a hurricane season that starts in June and it goes until November. And it's incredibly destructive to have to go through hurricanes, tropical storms annually. So people make a decision: Do I want to put up with this, with the power lines coming down, buildings being toppled, having to rebuild annually? The strengths of the storms have increased over the years. Tropical storms now transform into hurricanes. When initially they were viewed as tropical storms but as they get close to the land, the strength increases. So we're starting to see people make decisions about whether to stay in a particular place, whether to move to higher ground – which is what some have said – as you experience flooding, as you experience these strong storms. So we have a strong stake in this, in making sure that we address this issue.

We have launched an investigation into a company that we believe must provide us with information about what they knew about climate change and when they knew it. And we'll make our decision about what action to take. But, to us, it's not an environmental issue as much as it is about survival, as Vice President Gore has stated. We try as attorneys general to build a community, a safe community for all. But what good is that if annually everything is destroyed and people begin to say: Why am I living here?

So we're here today to support this cause and we'll continue. It could be David and Goliath, the Virgin Islands against a huge corporation, but we will not stop until we get to the bottom of this and make it clear to our residents as well as the American people that we have to do something transformational. We cannot continue to rely on fossil fuel. Vice President Gore has made that clear. We have to look at renewable energy. That's the only solution. And it's troubling that as the polar caps melt, you have companies that are looking at that as an opportunity to go and drill, to go and get more oil. Why? How selfish can you be? Your product is destroying this earth and your strategy is, let's get to the polar caps first so we can get more oil to do what? To destroy the planet further? And we have documents showing that. So this is very troubling to us and we will continue our fight. Thank you.

**AG Schneiderman**: Thank you and Eric. And I do want to note, scripture reports David was not alone in fact, Brother Walker. Eric and Matt will take on-topic questions.

**Moderator**: Please just say your name and publication.

**Press Person**: John [inaudible] with *The New York Times*. I count two people who have actually said that they're launching new investigations. I'm wondering if we could go through the list and see who's actually in and who is not in yet.

**AG Schneiderman**: Well, I know that prior to today, it was, and not every investigation gets announced at the outset as you know, but it had already been announced that New York and California had begun investigations with those stories. I think Maura just indicated a Massachusetts investigation and the Virgin Islands has, and we're meeting with our colleagues to go over a variety of things. And the meeting goes on into the afternoon. So, I am not sure exactly where everyone is. Different states have – it's very important to understand – different states have different statutes, different jurisdictions. Some can proceed under consumer protection law, some securities fraud laws, there are other issues related to defending taxpayers and pension funds. So there are a variety of theories that we're talking about and collaborating and to the degree to which we can cooperate, we share a common interest, and we will. But, one problem for journalists with investigations is, part of doing an investigation is you usually don't talk a lot about what you're doing after you start it or even as you're preparing to start it.

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**Press Person**: Shawn McCoy with *Inside Sources*. A *Bloomberg Review* editorial noted that the Exxon investigation is preposterous and a dangerous affirmation of power. *The New York Times* has pointed out that Exxon has published research that lines up with mainstream climatology and therefore there's not a comparison to Big Tobacco. So is this a publicity stunt? Is the investigation a publicity stunt?

**AG Schneiderman**: No. It's certainly not a publicity stunt. I think the charges that have been thrown around – look, we know for many decades that there has been an effort to influence reporting in the media and public perception about this. It should come as no surprise to anyone that that effort will only accelerate and become more aggressive as public opinion shifts further in the direction of people understanding the imminent threat of climate change and other government actors, like the folks represented here step up to the challenge. The specific reaction to our particular subpoena was that the public reports that had come out, Exxon said were cherry picked documents and took things out of context. We believe they should welcome our investigation because, unlike journalists, we will get every document and we will be able to put them in context. So I'm sure that they'll be pleased that we're going to get everything out there and see what they knew, when they knew it, what they said and what they might have said.

**Press Person**: David [inaudible] with *The Nation.* Question for General Schneiderman. What do you hope to accomplish with your Exxon investigation? I'm thinking with reference to Peabody where really there was some disclosure requirements but it didn't do a great deal of [inaudible]. Is there a higher bar for Exxon? What are the milestones that you hope to achieve after that investigation?

**AG Schneiderman**: It's too early to say. We started the investigation. We received a lot of documents already. We're reviewing them. We're not pre-judging anything, but the situation with oil companies and coal companies is somewhat different because the coal companies right now are, the market is already judging the coal industry very harshly. Coal companies, including Peabody, are teetering on the brink. The evidence that we advanced and what was specifically disclosed about Peabody were pretty clear cut examples of misrepresentations made in violation with the Securities and Exchange Commission, made to investors. It's too early to say what we're going to find with Exxon but we intend to work as aggressively as possible, but also as carefully as possible. We're very aware of the fact that everything we do here is going to be subject to attack by folks who have a huge financial interest in discrediting us. So we're going to be aggressive and creative but we are also going to be as careful and meticulous and deliberate as we can.

**VP Gore**: Could I respond to the last couple of questions just briefly. And in doing so, I'd like to give credit to the journalistic community and single out the Pulitzer Prize winning team at *InsideClimate News*, also the *Los Angeles Times* and the student-led project at Columbia School of Journalism under Steve Coll. And the facts that were publicly presented during, in those series of articles that I have mentioned, are extremely troubling, and where Exxon Mobil in particular is concerned. The evidence appears to indicate that, going back decades, the company had information that it used for the charting of its plan to explore and drill in the Arctic, used for other business purposes information that largely was consistent with what the mainstream scientific community had collected and analyzed. And yes, for a brief period of time, it did publish some of the science it collected, but then a change came, according to these investigations. And they began to make public statements that were directly contrary to what their own scientists were telling them. Secondly, where the analogy to the tobacco industry is concerned, they began giving grants – according to the evidence collected – to groups that specialize in climate denial, groups that put out information purposely designed to confuse the public into believing that the climate crisis was not real. And according to what I've heard from the preliminary inquiries that some of these attorneys general have made, the same may be true of information that they have put out concerning the viability of competitors in the renewable energy space. So, I do think the analogy may well hold up rather precisely to the tobacco industry. Indeed, the evidence indicates that, that I've seen and that these journalists have collected, including the distinguished historian of science at Harvard, Naomi Oreskes wrote the book *The Merchants of Doubt* with her co-author, that they hired several of the very same public relations agents that had perfected this fraudulent and deceitful craft working for the tobacco companies. And so as someone who has followed the legislative, the journalistic work very carefully, I think the analogy does hold up.

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**Press Person**: [inaudible] with *InsideClimate News*. Along the lines of talking about that analogy: from a legal framework, can you talk about a comparison, similarities and differences between this potential case and that of Big Tobacco?

**AG Schneiderman**: Well, again, we're at the early stages of the case. We are not pre-judging the evidence. We've seen some things that have been published by you and others, but it is our obligation to take a look at the underlying documentation and to get at all the evidence, and we do that in the context of an investigation where we will not be talking about every document we uncover. It's going to take some time, but that's another reason why working together collectively is so important. And we are here today because we are all committed to pursuing what you might call an all-levers approach. Every state has different laws, different statutes, different ways of going about this. The bottom line is simple. Climate change is real, it is a threat to all the people we represent. If there are companies, whether they are utilities or they are fossil fuel companies, committing fraud in an effort to maximize their short-term profits at the expense of the people we represent, we want to find out about it. We want to expose it, and we want to pursue them to the fullest extent of the law.

**Moderator**: Last one.

**Press Person**: Storms, floods will arise they are all going to continue to destroy property and the taxpayers . . .

**Moderator**: What's your name and . . .

**Press Person**: Oh, sorry. Matthew Horowitz from *Vice*. Taxpayers are going to have to pay for these damages from our national flood insurance claims. So if fossil fuel companies are proven to have committed fraud, will they be held financially responsible for any sorts of damages?

**AG Schneiderman**: Again, it's early to say but certainly financial damages are one important aspect of this but, and it is tremendously important and taxpayers – it's been discussed by my colleagues – we're already paying billions and billions of dollars to deal with the consequences of climate change and that will be one aspect of – early foreseeing, it's far too early to say. But, this is not a situation where financial damages alone can deal with the problem. We have to change conduct, and as the Vice President indicated, other places in the world are moving more rapidly towards renewables. There is an effort to slow that process down in the United States. We have to get back on that path if we're going to save the planet and that's ultimately what we're here for.

**Moderator**: We're out of time, unfortunately. Thank you all for coming.

# Exhibit B

STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

**SUBPOENA FOR PRODUCTION OF DOCUMENTS**
**THE PEOPLE OF THE STATE OF NEW YORK**

**TO:** **S. Jack Balagia, Jr.**
**Vice-President and General Counsel**
**Exxon Mobil Corporation**
**Corporate Headquarters**
**5959 Las Colinas Boulevard**
**Irving, Texas 75039-2298**

**WE HEREBY COMMAND YOU**, pursuant to New York State Executive Law Section 63(12) and Section 2302(a) of the New York State Civil Practice Law and Rules, to deliver and turn over to Eric T. Schneiderman, the Attorney General of the State of New York, or a designated Assistant Attorney General, on the **4th day of December, 2015** by 10:00 a.m., or any agreed upon adjourned date or time, at the at the offices of the New York State Office of the Attorney General, 120 Broadway, 26th Floor, New York, New York 10271, all documents and information requested in the attached Schedule in accordance with the instructions and definitions contained therein in connection with an investigation to determine whether an action or proceeding should be instituted with respect to repeated fraud or illegality as set forth in the New York State Executive Law Article 5, Section 63(12), violations of the deceptive acts and practices law as set forth in New York State General Business Law Article 22-A, potential fraudulent practices in respect to stocks, bonds and other securities as set forth in New York State General Business Law Article 23-A, and any related violations, or any matter which the Attorney General deems pertinent thereto.

**PLEASE TAKE NOTICE** that under the provisions of Article 23 of the New York State Civil Practice Laws and Rules, you are bound by this subpoena to produce the documents requested on the date specified and any adjourned date. Pursuant to New York State Civil Practice Laws and Rules Section 2308(b)(1), your failure to do so subjects you to, in addition to any other lawful punishment, costs, penalties and damages sustained by the State of New York State as a result of your failure to so comply.

**PLEASE TAKE NOTICE** that the Attorney General deems the information and documents requested by this Subpoena to be relevant and material to an investigation and inquiry undertaken in the public interest.

**WITNESS, Honorable Eric T. Schneiderman,** Attorney General of the State of New York, this 4th day of November, 2015.

By: ______________________

Lemuel M. Srolovic
Kevin G. W. Olson
Mandy DeRoche

Office of the Attorney General
Environmental Protection Bureau

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New York, New York 10271
(212) 416-8448 (telephone)
(212) 416-6007 (facsimile)

## SCHEDULE 1

### A. General Definitions and Rules of Construction

1. "All" means each and every.

2. "Any" means any and all.

3. "And" and "or" shall be construed either disjunctively or conjunctively as necessary to bring within the scope of the Subpoena all information or Documents that might otherwise be construed to be outside of its scope.

4. "Communication" means any conversation, discussion, letter, email, memorandum, meeting, note or other transmittal of information or message, whether transmitted in writing, orally, electronically or by any other means, and shall include any Document that abstracts, digests, transcribes, records or reflects any of the foregoing. Except where otherwise stated, a request for "Communications" means a request for all such Communications.

5. "Concerning" means, directly or indirectly, in whole or in part, relating to, referring to, describing, evidencing or constituting.

6. "Custodian" means any Person or Entity that, as of the date of this Subpoena, maintained, possessed, or otherwise kept or controlled such Document.

7. "Document" is used herein in the broadest sense of the term and means all records and other tangible media of expression of whatever nature however and wherever created, produced or stored (manually, mechanically, electronically or otherwise), including without limitation all versions whether draft or final, all annotated or nonconforming or other copies, electronic mail ("e-mail"), instant messages, text messages, Blackberry or other wireless device messages, voicemail, calendars, date books, appointment books, diaries, books, papers, files, notes, confirmations, accounts statements, correspondence, memoranda, reports, records, journals, registers, analyses, plans, manuals, policies, telegrams, faxes, telexes, wires, telephone logs, telephone messages, message slips, minutes, notes or records or transcriptions of conversations or Communications or meetings, tape recordings, videotapes, disks, and other electronic media, microfilm, microfiche, storage devices, press releases, contracts, agreements, notices and summaries. Any non-identical version of a Document constitutes a separate Document within this definition, including without limitation drafts or copies bearing any notation, edit, comment, marginalia, underscoring, highlighting, marking, or any other alteration of any kind resulting in any difference between two or more otherwise identical Documents. In the case of Documents bearing any notation or other marking made by highlighting ink, the term Document means the original version bearing the highlighting ink, which original must be produced as opposed to any copy thereof. Except where otherwise stated, a request for "Documents" means a request for all such Documents.

8. "Entity" means without limitation any corporation, company, limited liability company or corporation, partnership, limited partnership, association, or other firm or similar body, or any unit, division, agency, department, or similar subdivision thereof.

9. "Identify" or "Identity," as applied to any Document means the provision in writing of information sufficiently particular to enable the Attorney General to request the Document's production through subpoena or otherwise, including but not limited to: (a) Document type (letter, memo, etc.); (b) Document subject matter; (c) Document date; and (d) Document author(s), addressee(s) and recipient(s). In lieu of identifying a Document, the Attorney General will accept production of the Document, together with designation of the Document's Custodian, and identification of each Person You believe to have received a copy of the Document.

10. "Identify" or "Identity," as applied to any Entity, means the provision in writing of such Entity's legal name, any d/b/a, former, or other names, any parent, subsidiary, officers, employees, or agents thereof, and any address(es) and any telephone number(s) thereof.

11. "Identify" or "Identity," as applied to any natural person, means and includes the provision in writing of the natural person's name, title(s), any aliases, place(s) of employment, telephone number(s), e-mail address(es), mailing addresses and physical address(es).

12. "Person" means any natural person, or any Entity.

13. "Sent" or "received" as used herein means, in addition to their usual meanings, the transmittal or reception of a Document by physical, electronic or other delivery, whether by direct or indirect means.

14. "Subpoena" means this subpoena and any schedules, appendices, or attachments thereto.

15. The use of the singular form of any word used herein shall include the plural and vice versa. The use of any tense of any verb includes all other tenses of the verb.

16. The references to Communications, Custodians, Documents, Persons, and Entities in this Subpoena encompass all such relevant ones worldwide.

## B. Particular Definitions

1. "You" or "Your" means ExxonMobil Corporation, ExxonMobil Oil Corporation, any present or former parents, subsidiaries, affiliates, directors, officers, partners, employees, agents, representatives, attorneys or other Persons acting on its behalf, and including predecessors or successors or any affiliates of the foregoing.

2. "Climate Change" means global warming, Climate Change, the greenhouse effect, a change in global average temperatures, sea level rise, increased concentrations of carbon dioxide and other Greenhouse Gases and/or any other potential effect on the earth's physical and biological systems as a result of anthropogenic emissions of carbon dioxide

and other Greenhouse Gases, in any way the concept is described by or to You.

3. "Fossil Fuel" or "Fossil Fuels" means all energy sources formed from fossilized remains of dead organisms, including oil, gas, bitumen and natural gas, but excluding coal. For purposes of this subpoena, the definition includes also fossil fuels blended with biofuels, such as corn ethanol blends of gasoline. The definition excludes renewable sources of energy production, such as hydroelectric, geothermal, solar, tidal, wind, and wood.

4. "Greenhouse Gases" or "GHGs" meanscarbon dioxide, methane, nitrous oxide, hydroflurocarbons, perfluorocarbons and sulfur hexafloride.

5. "Renewable Energy" means renewable sources of energy production, such as hydroelectric, geothermal, solar, tidal, wind, and wood.

## C. Instructions

1. Preservation of Relevant Documents and Information; Spoliation. You are reminded of your obligations under law to preserve Documents and information relevant or potentially relevant to this Subpoena from destruction or loss, and of the consequences of, and penalties available for, spoliation of evidence. No agreement, written or otherwise, purporting to modify, limit or otherwise vary the terms of this Subpoena, shall be construed in any way to narrow, qualify, eliminate or otherwise diminish your aforementioned preservation obligations. Nor shall you act, in reliance upon any such agreement or otherwise, in any manner inconsistent with your preservation obligations under law. No agreement purporting to modify, limit or otherwise vary your preservation obligations under law shall be construed as in any way narrowing, qualifying, eliminating or otherwise diminishing such aforementioned preservation obligations, nor shall you act in reliance upon any such agreement, unless an Assistant Attorney General confirms or acknowledges such agreement in writing, or makes such agreement a matter of record in open court.

2. Possession, Custody, and Control. The Subpoena calls for all responsive Documents or information in your possession, custody or control. This includes, without limitation, Documents or information possessed or held by any of your officers, directors, employees, agents, representatives, divisions, affiliates, subsidiaries or Persons from whom you could request Documents or information. If Documents or information responsive to a request in this Subpoena are in your control, but not in your possession or custody, you shall promptly Identify the Person with possession or custody.

3. Documents No Longer in Your Possession. If any Document requested herein was formerly in your possession, custody or control but is no longer available, or no longer exists, you shall submit a statement in writing under oath that: (a) describes in detail the nature of such Document and its contents; (b) Identifies the Person(s) who prepared such Document and its contents; (c) Identifies all Persons who have seen or had possession of such Document; (d) specifies the date(s) on which such Document was prepared, transmitted or received; (e) specifies the date(s) on which such Document became unavailable; (f) specifies the reason why such Document is unavailable, including

without limitation whether it was misplaced, lost, destroyed or transferred; and if such Document has been destroyed or transferred, the conditions of and reasons for such destruction or transfer and the Identity of the Person(s) requesting and performing such destruction or transfer; and (g) Identifies all Persons with knowledge of any portion of the contents of the Document.

4. No Documents Responsive to Subpoena Requests. If there are no Documents responsive to any particular Subpoena request, you shall so state in writing under oath in the Affidavit of Compliance attached hereto, identifying the paragraph number(s) of the Subpoena request concerned.

5. Format of Production. You shall produce Documents, Communications, and information responsive to this Subpoena in electronic format that meets the specifications set out in Attachments 1 and 2.

6. Existing Organization of Documents to be Preserved. Regardless of whether a production is in electronic or paper format, each Document shall be produced in the same form, sequence, organization or other order or layout in which it was maintained before production, including but not limited to production of any Document or other material indicating filing or other organization. Such production shall include without limitation any file folder, file jacket, cover or similar organizational material, as well as any folder bearing any title or legend that contains no Document. Documents that are physically attached to each other in your files shall be accompanied by a notation or information sufficient to indicate clearly such physical attachment.

7. Document Numbering. All Documents responsive to this Subpoena, regardless of whether produced or withheld on ground of privilege or other legal doctrine, and regardless of whether production is in electronic or paper format, shall be numbered in the lower right corner of each page of such Document, without disrupting or altering the form, sequence, organization or other order or layout in which such Documents were maintained before production. Such number shall comprise a prefix containing the producing Person's name or an abbreviation thereof, followed by a unique, sequential, identifying document control number.

8. Privilege Placeholders. For each Document withheld from production on ground of privilege or other legal doctrine, regardless of whether a production is electronic or in hard copy, you shall insert one or more placeholder page(s) in the production bearing the same document control number(s) borne by the Document withheld, in the sequential place(s) originally occupied by the Document before it was removed from the production.

9. Privilege. If You withhold or redact any Document responsive to this Subpoena on ground of privilege or other legal doctrine, you shall submit with the Documents produced a statement in writing under oath, stating: (a) the document control number(s) of the Document withheld or redacted; (b) the type of Document; (c) the date of the Document; (d) the author(s) and recipient(s) of the Document; (e) the general subject matter of the Document; and (f) the legal ground for withholding or redacting the Document. If the legal ground for withholding or redacting the Document is attorney-

client privilege, you shall indicate the name of the attorney(s) whose legal advice is sought or provided in the Document.

10. Your Production Instructions to be Produced. You shall produce a copy of all written or otherwise recorded instructions prepared by you concerning the steps taken to respond to this Subpoena. For any unrecorded instructions given, you shall provide a written statement under oath from the Person(s) who gave such instructions that details the specific content of the instructions and any Person(s) to whom the instructions were given.

11. Cover Letter. Accompanying any production(s) made pursuant to this Subpoena, You shall include a cover letter that shall at a minimum provide an index containing the following: (a) a description of the type and content of each Document produced therewith; (b) the paragraph number(s) of the Subpoena request to which each such Document is responsive; (c) the Identity of the Custodian(s) of each such Document; and (d) the document control number(s) of each such Document.

12. Affidavit of Compliance. A copy of the Affidavit of Compliance provided herewith shall be completed and executed by all natural persons supervising or participating in compliance with this Subpoena, and you shall submit such executed Affidavit(s) of Compliance with Your response to this Subpoena.

13. Identification of Persons Preparing Production. In a schedule attached to the Affidavit of Compliance provided herewith, you shall Identify the natural person(s) who prepared or assembled any productions or responses to this Subpoena. You shall further Identify the natural person(s) under whose personal supervision the preparation and assembly of productions and responses to this Subpoena occurred. You shall further Identify all other natural person(s) able competently to testify: (a) that such productions and responses are complete and correct to the best of such person's knowledge and belief; and (b) that any Documents produced are authentic, genuine and what they purport to be.

14. Continuing Obligation to Produce. This Subpoena imposes a continuing obligation to produce the Documents and information requested. Documents located, and information learned or acquired, at any time after your response is due shall be promptly produced at the place specified in this Subpoena.

15. No Oral Modifications. No agreement purporting to modify, limit or otherwise vary this Subpoena shall be valid or binding, and you shall not act in reliance upon any such agreement, unless an Assistant Attorney General confirms or acknowledges such agreement in writing, or makes such agreement a matter of record in open court.

16. Time Period. The term "Time Period 1" as used in this Subpoena shall be from January 1, 2005 through the date of the production. The term "Time Period 2" shall be from January 1, 1977 through the date of the production.

### D. Documents to be Produced

1. All Documents and Communications, within Time Period 2, Concerning any research, analysis, assessment, evaluation, modeling or other consideration performed by You, on Your behalf, or with funding provided by You Concerning the causes of Climate Change.

2. All Documents and Communications, within Time Period 2, Concerning any research, analysis, assessment, evaluation, modeling (including the competency or accuracy of such models) or other consideration performed by You, on Your behalf, or with funding provided by You, Concerning the impacts of Climate Change, including but not limited to on air, water and land temperatures, sea-level rise, ocean acidification, extreme weather events, arctic ice, permafrost and shipping channels, precipitation, flooding, water supplies, desertification, agricultural and food supplies, built environments, migration, and security concerns, including the timing of such impacts.

3. All Documents and Communications, within Time Period 2, Concerning the integration of Climate Change-related issues (including but not limited to (a) future demand for Fossil Fuels, (b) future emissions of Greenhouse Gases from Fossil Fuel extraction, production and use, (c) future demand for Renewable Energy, (d) future emissions of Greenhouse Gases from Renewable Energy extraction, production and use, (e) Greenhouse Gas emissions reduction goals, (f) the physical risks and opportunities of Climate Change, and (g) impact on Fossil Fuel reserves into Your business decisions, including but not limited to financial projections and analyses, operations projections and analyses, and strategic planning performed by You, on Your behalf, or with funding provided by You.

4. All Documents and Communications, within Time Period 1, Concerning whether and how You disclose the impacts of Climate Change (including but not limited to regulatory risks and opportunities, physical risks and opportunities, Greenhouse Gas emissions and management, indirect risks and opportunities, International Energy Agency scenarios for energy consumption, and other carbon scenarios) in Your filings with the U.S. Securities and Exchange Commission and in Your public-facing and investor-facing reports including but not limited to Your *Outlook For Energy* reports, Your *Energy Trends, Greenhouse Gas Emissions, and Alternative Energy* reports, and Your *Energy and Carbon - Managing the Risks* Report.

5. All Documents and Communications, within Time Period 1, presented to Your board of directors Concerning Climate Change

6. All Documents and Communications Concerning Climate Change, within Time Period 1, prepared by or for trade associations or industry groups, or exchanged between You and trade associations or industry groups, or sent from or to trade associations or industry groups, including but not limited to the: (i) American Petroleum Institute; (ii) Petroleum Industry Environmental Conservation Association; (IPIECA); (iii) US Oil & Gas Association; (iv) Petroleum Marketers Association of America; and (v) Empire State Petroleum Association.

7. All Documents and Communications, within Time Period 1, related to Your support or funding for organizations relating to communications or research of Climate Change, including decisions to cease funding or supporting such organizations.

8. All Documents and Communications, within Time Period 1, created, recommended, sent, and/or distributed by You, on Your behalf, or with funding provided by You, Concerning marketing, advertising, and/or communication about Climate Change including but not limited to (a) policies, procedures, practices, memoranda and similar instructive or informational materials; (b) marketing or communication strategies or plans, (c) flyers, promotional materials, and informational materials; (d) scripts, Frequently Asked Questions, Q&As, and/or other guidance documents; (e) slide presentations, power points or videos; (f) written or printed notes from or video or audio recordings of speeches, seminars or conferences; (g) all Communications with and presentations to investors; and/or (h) press releases.

9. All Documents and Communications, within Time Period 1, that are exemplars of all advertisements, flyers, promotional materials, and informational materials of any type, (including but not limited to web-postings, blog-postings, social media-postings, print advertisements, radio and television advertisements, brochures, posters, billboards, flyers and disclosures) used, published, or distributed by You, on Your behalf, or with funding provided by You, Concerning Climate Change including but not limited to (a) a copy of each print advertisement placed in New York State; (b) a DVD format copy of each television advertisement that ran in New York State; (c) an audio recording of each radio advertisement that ran in New York State and the audio portion of each internet advertisement; and (d) a printout, screenshot or copy of each advertisement, information, or communication provided via the internet, email, Facebook, Twitter, You Tube, or other electronic communications system.

10. All Documents and Communications, within Time Period 1, substantiating or refuting the claims made in the materials identified in response to Demand Nos. 4, 8 and 9.

11. All Documents and Communications sufficient to identify any New York State consumer who has complained to You, or to any state, county or municipal consumer protection agency located in New York State, Concerning Your actions with respect to Climate Change; and for each New York State consumer identified: (i) each complaint or request made by or on behalf of a consumer, (ii) all correspondence between the consumer, his or her representative, and You, (iii) recordings and notes of all conversations between the consumer and You, and (iv) the resolution of each complaint, if any.

# APPENDIX 1

## Electronic Document Production Specifications

Unless otherwise specified and agreed to by the Office of Attorney General, all responsive documents must be produced in LexisNexis® Concordance® format in accordance with the following instructions. Any questions regarding electronic document production should be directed to the Assistant Attorney General whose telephone number appears on the subpoena.

1. Concordance Production Components. A Concordance production consists of the following component files, which must be produced in accordance with the specifications set forth below in Section 7.

   A. ***Metadata Load File.*** A delimited text file that lists in columnar format the required metadata for each produced document.

   B. ***Extracted or OCR Text Files.*** Document-level extracted text for each produced document or document-level optical character recognition ("OCR") text where extracted text is not available.

   C. ***Single-Page Image Files.*** Individual petrified page images of the produced documents in tagged image format ("TIF"), with page-level Bates number endorsements.

   D. ***Opticon Load File.*** A delimited text file that lists the single-page TIF files for each produced document and defines (i) the relative location of the TIF files on the production media and (ii) each document break.

   E. ***Native Files.*** Native format versions of non-printable or non–print friendly produced documents.

2. Production Folder Structure. The production must be organized according to the following standard folder structure:
   - data\ (contains production load files)
   - images\ (contains single-page TIF files, with subfolder organization)
     \0001, \0002, \0003…
   - native files\ (contains native files, with subfolder organization)
     \0001, \0002, \0003…
   - text\ (contains text files, with subfolder organization)
     \0001, \0002, \0003…

3. De-Duplication. You must perform global de-duplication of stand-alone documents and email families against any prior productions pursuant to this or previously related subpoenas.

4. Paper or Scanned Documents. Documents that exist only in paper format must be scanned to single-page TIF files and OCR'd. The resulting electronic files should be

pursued in Concordance format pursuant to these instructions. You must contact the Assistant Attorney General whose telephone number appears on the subpoena to discuss (i) any documents that cannot be scanned, and (ii) how information for scanned documents should be represented in the metadata load file.

5. Structured Data. Before producing structured data, including but not limited to relational databases, transactional data, and xml pages, you must first speak to the Assistant Attorney General whose telephone number appears on the subpoena. Spreadsheets are not considered structured data.

6. Media and Encryption. All documents must be produced on CD, DVD, or hard-drive media. All production media must be encrypted with a strong password, which must be delivered independently from the production media.

7. Production File Requirements.

A. ***Metadata Load File***

- Required file format:
  - ASCII or UTF-8
  - Windows formatted CR + LF end of line characters, including full CR + LF on last record in file.
  - .dat file extension
  - Field delimiter: (ASCII decimal character 20)
  - Text Qualifier: þ (ASCII decimal character 254). Date and pure numeric value fields do not require qualifiers.
  - Multiple value field delimiter: ; (ASCII decimal character 59)
- The first line of the metadata load file must list all included fields. All required fields are listed in Attachment 2.
- Fields with no values must be represented by empty columns maintaining delimiters and qualifiers.
- ***Note:*** All documents must have page-level Bates numbering (except documents produced only in native format, which must be assigned a document-level Bates number). The metadata load file must list the beginning and ending Bates numbers (BEGDOC and ENDDOC) for each document. For document families, including but not limited to emails and attachments, compound documents, and uncompressed file containers, the metadata load file must also list the Bates range of the entire document family (ATTACHRANGE), beginning with the first Bates number (BEGDOC) of the "parent" document and ending with the last Bates number (ENDDOC) assigned to the last "child" in the document family.
- Date and Time metadata must be provided in separate columns.
- Accepted date formats:
  - mm/dd/yyyy
  - yyyy/mm/dd
  - yyyymmdd
- Accepted time formats:
  - hh:mm:ss (if not in 24-hour format, you must indicate am/pm)

  - o hh:mm:ss:mmm

B. ***Extracted or OCR Text Files***

- You must produce individual document-level text files containing the full extracted text for each produced document.
- When extracted text is not available (for instance, for image-only documents) you must provide individual document-level text files containing the document's full OCR text.
- The filename for each text file must match the document's beginning Bates number (BEGDOC) listed in the metadata load file.
- Text files must be divided into subfolders containing no more than 500 to 1000 files.

C. ***Single-Page Image Files (Petrified Page Images)***

- Where possible, all produced documents must be converted into single-page tagged image format ("TIF") files. See Section 7.E below for instructions on producing native versions of documents you are unable to convert.
- Image documents that exist only in non-TIF formats must be converted into TIF files. The original image format must be produced as a native file as described in Section 7.E below.
- For documents produced only in native format, you must provide a TIF placeholder that states "Document produced only in native format."
- Each single-page TIF file must be endorsed with a unique Bates number.
- The filename for each single-page TIF file must match the unique page-level Bates number (or document-level Bates number for documents produced only in native format).
- Required image file format:
  - o CCITT Group 4 compression
  - o 2-Bit black and white
  - o 300 dpi
  - o Either .tif or .tiff file extension.
- TIF files must be divided into subfolders containing no more than 500 to 1000 files. Where possible documents should not span multiple subfolders.

D. ***Opticon Load File***

- Required file format:
  - o ASCII
  - o Windows formatted CR + LF end of line characters
  - o Field delimiter: , (ASCII decimal character 44)
  - o No Text Qualifier
  - o .opt file extension
- The comma-delimited Opticon load file must contain the following seven fields (as indicated below, values for certain fields may be left blank):
  - o ALIAS or IMAGEKEY – the unique Bates number assigned to each page of the production.
  - o VOLUME – this value is optional and may be left blank.

  - RELATIVE PATH – the filepath to each single-page image file on the production media.
  - DOCUMENT BREAK – defines the first page of a document. The only possible values for this field are "Y" or blank.
  - FOLDER BREAK – defines the first page of a folder. The only possible values for this field are "Y" or blank.
  - BOX BREAK – defines the first page of a box. The only possible values for this field are "Y" or blank.
  - PAGE COUNT – this value is optional and may be left blank.
- ***Example*:**
  ABC00001,,IMAGES\0001\ABC00001.tif,Y,,,2
  ABC00002,,IMAGES\0001\ABC00002.tif,,,,
  ABC00003,,IMAGES\0002\ABC00003.tif,Y,,,1
  ABC00004,,IMAGES\0002\ABC00004.tif,Y,,,1

E. ***Native Files***

- Non-printable or non–print friendly documents (including but not limited to spreadsheets, audio files, video files and documents for which color has significance to document fidelity) must be produced in their native format.
- The filename of each native file must match the document's beginning Bates number (BEGDOC) in the metadata load file and retain the original file extension.
- For documents produced only in native format, you must assign a single document-level Bates number and provide an image file placeholder that states "Document produced only in native format."
- The relative paths to all native files on the production media must be listed in the NATIVEFILE field of the metadata load file.
- Native files that are password-protected must be decrypted prior to conversion and produced in decrypted form. In cases where this cannot be achieved the document's password must be listed in the metadata load file. The password should be placed in the COMMENTS field with the format Password: <PASSWORD>.
- You may be required to supply a software license for proprietary documents produced only in native format.

## APPENDIX 2

### Required Fields for Metadata Load File

| FIELD NAME | FIELD DESCRIPTION | FIELD VALUE EXAMPLE[1] |
|---|---|---|
| DOCID | Unique document reference (can be used for de-duplication). | ABC0001 or ###.######.### |
| BEGDOC | Bates number assigned to the first page of the document. | ABC0001 |
| ENDDOC | Bates number assigned to the last page of the document. | ABC0002 |
| BEGATTACH | Bates number assigned to the first page of the parent document in a document family (*i.e.*, should be the same as BEGDOC of the parent document, or PARENTDOC). | ABC0001 |
| ENDATTACH | Bates number assigned to the last page of the last child document in a family (*i.e.*, should be the same as ENDDOC of the last child document). | ABC0008 |
| ATTACHRANGE | Bates range of entire document family. | ABC0001 - ABC0008 |
| PARENTDOC | BEGDOC of parent document. | ABC0001 |
| CHILDDOCS | List of BEGDOCs of all child documents, delimited by ";" when field has multiple values. | ABC0002; ABC0003; ABC0004… |
| COMMENTS | Additional document comments, such as passwords for encrypted files. | |
| NATIVEFILE | Relative file path of the native file on the production media. | .\Native_File\Folder\...\BEGDOC.ext |
| SOURCE | For scanned paper records this should be a description of the physical location of the original paper record. For loose electronic files this should be the name of the file server or workstation where the files were gathered. | Company Name, Department Name, Location, Box Number… |
| CUSTODIAN | Owner of the document or file. | Firstname Lastname, Lastname, Firstname, User Name; Company Name, Department Name... |
| FROM | Sender of the email. | Firstname Lastname < FLastname @domain > |

[1] Examples represent possible values and not required format unless the field format is specified in Attachment 1.

| FIELD NAME | FIELD DESCRIPTION | FIELD VALUE EXAMPLE[1] |
|---|---|---|
| TO | All to: members or recipients, delimited by ";" when field has multiple values. | Firstname Lastname < FLastname @domain >; Firstname Lastname < FLastname @domain >; … |
| CC | All cc: members, delimited by ";" when field has multiple values. | Firstname Lastname < FLastname @domain >; Firstname Lastname < FLastname @domain >; … |
| BCC | All bcc: members, delimited by ";" when field has multiple values | Firstname Lastname < FLastname @domain >; Firstname Lastname < FLastname @domain >; … |
| SUBJECT | Subject line of the email. | |
| DATERCVD | Date that an email was received. | mm/dd/yyyy, yyyy/mm/dd, or yyyymmdd |
| TIMERCVD | Time that an email was received. | hh:mm:ss AM/PM or hh:mm:ss |
| DATESENT | Date that an email was sent. | mm/dd/yyyy, yyyy/mm/dd, or yyyymmdd |
| TIMESENT | Time that an email was sent. | hh:mm:ss AM/PM or hh:mm:ss |
| CALBEGDATE | Date that a meeting begins. | mm/dd/yyyy, yyyy/mm/dd, or yyyymmdd |
| CALBEGTIME | Time that a meeting begins. | hh:mm:ss AM/PM or hh:mm:ss |
| CALENDDATE | Date that a meeting ends. | mm/dd/yyyy, yyyy/mm/dd, or yyyymmdd |
| CALENDTIME | Time that a meeting ends. | hh:mm:ss AM/PM or hh:mm:ss |
| CALENDARDUR | Duration of a meeting in hours. | 0.75, 1.5… |
| ATTACHMENTS | List of filenames of all attachments, delimited by ";" when field has multiple values. | AttachmentFileName.; AttachmentFileName.docx; AttachmentFileName.pdf;… |
| NUMATTACH | Number of attachments. | 1, 2, 3, 4…. |
| RECORDTYPE | General type of record. | IMAGE; LOOSE E-MAIL; E-MAIL; E-DOC; IMAGE ATTACHMENT; LOOSE E-MAIL ATTACHMENT; E-MAIL ATTACHMENT; E-DOC ATTACHMENT |
| FOLDERLOC | Original folder path of the produced document. | Drive:\Folder\...\...\ |
| FILENAME | Original filename of the produced document. | Filename.ext |
| DOCEXT | Original file extension. | html, xls, pdf |

| FIELD NAME | FIELD DESCRIPTION | FIELD VALUE EXAMPLE[1] |
|---|---|---|
| DOCTYPE | Name of the program that created the produced document. | Adobe Acrobat, Microsoft Word, Microsoft Excel, Corel WordPerfect… |
| TITLE | Document title (if entered). | |
| AUTHOR | Name of the document author. | Firstname Lastname; Lastname, First Name; FLastname |
| REVISION | Number of revisions to a document. | 18 |
| DATECREATED | Date that a document was created. | mm/dd/yyyy, yyyy/mm/dd, or yyyymmdd |
| TIMECREATED | Time that a document was created. | hh:mm:ss AM/PM or hh:mm:ss |
| DATEMOD | Date that a document was last modified. | mm/dd/yyyy, yyyy/mm/dd, or yyyymmdd |
| TIMEMOD | Time that a document was last modified. | hh:mm:ss AM/PM or hh:mm:ss |
| FILESIZE | Original file size in bytes. | 128, 512, 1024… |
| PGCOUNT | Number of pages per document. | 1, 2, 10, 100… |
| IMPORTANCE | Email priority level if set. | Low, Normal, High |
| TIFFSTATUS | Generated by the Law Pre-discovery production tool (leave blank if inapplicable). | Y, C, E, W, N, P |
| DUPSTATUS | Generated by the Law Pre-discovery production tool (leave blank if inapplicable). | P |
| MD5HASH | MD5 hash value computed from native file (a/k/a file fingerprint). | BC1C5CA6C1945179FEE144F25F 51087B |
| SHA1HASH | SHA1 hash value | B68F4F57223CA7DA3584BAD7E CF111B8044F8631 |
| MSGINDEX | Email message ID | |

## AFFIDAVIT OF COMPLIANCE WITH SUBPOENA

State of }

County of }

I, ______________________________, being duly sworn, state as follows:

1. I am employed by __________________ in the position of __________________;

2. The enclosed production of documents and responses to the Subpoena of the Attorney General of the State of New York, dated November 4, 2015 (the "Subpoena") were prepared and assembled under my personal supervision;

3. I made or caused to be made a diligent, complete and comprehensive search for all Documents and information requested by the Subpoena, in full accordance with the instructions and definitions set forth in the Subpoena;

4. The enclosed production of documents and responses to the Subpoena are complete and correct to the best of my knowledge and belief;

5. No Documents or information responsive to the Subpoena have been withheld from this production and response, other than responsive Documents or information withheld on the basis of a legal privilege or doctrine;

6. All responsive Documents or information withheld on the basis of a legal privilege or doctrine have been identified on a privilege log composed and produced in accordance with the instructions in the Subpoena;

7. The Documents contained in these productions and responses to the Subpoena are authentic, genuine and what they purport to be;

8. Attached is a true and accurate record of all persons who prepared and assembled any productions and responses to the Subpoena, all persons under whose personal supervision the preparation and assembly of productions and responses to the Subpoena occurred, and all persons able competently to testify: (a) that such productions and responses are complete and correct to the best of such person's knowledge and belief; and (b) that any Documents produced are authentic, genuine and what they purport to be; and

9. Attached is a true and accurate statement of those requests under the Subpoena as to which no responsive Documents were located in the course of the aforementioned search.

______________________________ ______________________________
Signature of Affiant Date

______________________________
Printed Name of Affiant

**********

Subscribed and sworn to before me
this 4th day of December 2015.

_______________________________
Notary Public

My commission expires:

______________________

# Exhibit C

Oil Daily

**November** 13, 2015 Friday

**SECTION:** FEATURES

**LENGTH:** 725 words

## HEADLINE: New York Attorney General Comments on Exxon Probe

**BODY:**

**New York Attorney General** Eric Schneiderman has offered details about the scope and rationale for his office's **investigation** of whether **Exxon** Mobil misled investors and the public by concealing facts about **climate** change and the risks it might pose to the oil and gas industry.

Unlike the **New York attorney general's** previous **probes** into four electric utilities -- Dynegy, AES, Xcel and Dominion -- and coal giant Peabody Energy, the scope of the **Exxon investigation** will be much broader than mere disclosure of **climate** risk in reports to investors.

Over the past eight years, New York **investigated** the utility companies -- three of which had plans to build more coal-fired power plants -- and Peabody for allegedly failing to warn investors of risks related to **climate** change in their filings to the Securities and Exchange Commission (SEC).

In contrast, the **Exxon probe** is seeking to find out if there were "inconsistencies" in how **Exxon** used its **climate** change research and knowledge since the late 1970s to make business decisions versus how it presented that information to investors and the public. Schneiderman's office has said the **probe** could be expanded to other oil companies.

The New York state **investigation** was spurred by accusations from <em>InsideClimateNews</em> and the <em>Los Angeles Times </em>that **Exxon** buried internal research dating back to the late 1970s that showed a link between burning fossil fuels and **global warming**, but that the company subsequently funded **climate**-change denial groups. The company rejects the allegations ( OD Oct.23'15 ).

Schneiderman told a gathering sponsored by <em>Politico </em>in New York on Thursday that **Exxon** appeared to be "doing very good work in the 1980s on **climate** research" but that its "corporate strategy seemed to shift" later.

He said the company had funded organizations that were "aggressive **climate** deniers" such as the American Enterprise Institute, the American Legislative Exchange Council, and the American Petroleum Institute.

The **New York attorney general** said his **probe** was still at the "very beginning" and its subsequent course would depend on **Exxon's** "response to our subpoena." **Exxon** is currently assessing its response.

Schneiderman noted his office's assertive past efforts to "take action on **climate** change" and said the **Exxon probe** was "one aspect to it." He said society's failure to address **climate** change would be "viewed poorly by history."

**Exxon** and others have described the **investigation** as politically motivated. It has been facilitated by New York's controversial Martin Act, which gives the attorney general and his staff extraordinary powers to **investigate** and prosecute fraud ( OD Nov.12'15 ).

**Exxon** has also said that <em>InsideClimateNews</em> and the <em>LA Times</em> "cherry-picked" information from its past research -- which it said never came to definitive conclusions on the complex science of **climate** change -- and took this information out of context.

Schneiderman said his office would be the judge of that. "We've issued a subpoena so we can read all the documents since 1977 and can see what the context was," he said.

**Exxon** began disclosing **climate** risk in its SEC filings in 2006, after current Chief Executive Rex Tillerson took the helm and adopted a much softer line on **climate** change than his predecessor, Lee Raymond.

However, Schneiderman said that as recently as 2010 an **Exxon** official still asserted that there "is no competent model" to assess **climate** change and its impacts.

"This is a well-run company full of engineers and we would assume its research would reflect that," he said.

Legal experts say it could be difficult for Schneiderman to make a case against **Exxon**, citing the gradual evolution of **climate** science over the years, the wide leeway granted by the SEC on disclosure of **climate** risk, and the challenge of establishing a direct link between adverse impacts of **climate** change and the practices of an individual company.

Nevertheless, they also point out that the **New York attorney general** wields a powerful weapon in the form of the broadly written Martin Act.

The state law, which dates from 1921, targets "all deceitful practices contrary to the plain rules of common honesty." It can result in civil or criminal charges -- and big financial penalties -- without requiring any proof of intent to defraud.

Paul Merolli, Washington

**LOAD-DATE:** November 19, 2015

# Exhibit D

[redacted]

**From:** Lemuel Srolovic [mailto:Lemuel.Srolovic@ag.ny.gov]
**Sent:** Thursday, November 19, 2015 5:58 PM
**To:** Hirshman, Michele <mhirshman@paulweiss.com>; Wells Jr., Theodore V <twells@paulweiss.com>; Patrick J. Conlon <patrick.j.conlon@exxonmobil.com>
**Cc:** Steven Glassman <Steven.Glassman@ag.ny.gov>; Berse, Farrah R <fberse@paulweiss.com>; Mandy DeRoche <Mandy.DeRoche@ag.ny.gov>; Monica Wagner <Monica.Wagner@ag.ny.gov>; Kevin Olson <Kevin.Olson@ag.ny.gov>
**Subject:** RE: Exxon Subpoena

Michele, Ted and Pat –

As discussed yesterday, this confirms that the Attorney General's office has agreed to extend the return date of the subpoena on Exxon to January 11, 2016 subject to further extensions by agreement. This will also confirm our understanding that, by producing documents in accordance with our discussions prior to the return date as extended, Exxon is not waiving any right to seek to quash or otherwise object to the subpoena. Likewise, the Attorney General's office is not waiving any right to compel compliance with the subpoena.

We would also like to confirm the steps that Exxon has taken to preserve documents and information potentially responsive to the subpoena. Michele indicated at our first meeting that Exxon had instituted a litigation hold but we are not clear whether that was imposed on all custodians of potentially responsive documents and information or a smaller group of custodians. Please let us know the full extent of the hold that has been imposed.

Regards,

Lem

---

**From:** Hirshman, Michele [mailto:mhirshman@paulweiss.com]
**Sent:** Tuesday, November 17, 2015 10:43 AM
**To:** Monica Wagner; Lemuel Srolovic; Wells Jr., Theodore V

**Cc:** Steven Glassman; Patrick J. Conlon; Berse, Farrah R
**Subject:** Re: Exxon Subpoena

We can make it work. Let us know if we need a conf call number and we can circulate.

Michele Hirshman
Paul, Weiss, Rifkind, Wharton & Garrison LLP
1285 Avenue of the Americas | New York, NY 10019-6064
(212) 373-3747 (Direct Phone) | (212) 492-0747 (Direct Fax)
mailto:MHirshman@paulweiss.com | http://www.paulweiss.com

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**From:** Hirshman, Michele
**Sent:** Tuesday, November 17, 2015 10:02 AM
**To:** Monica Wagner; Lemuel Srolovic; Wells Jr., Theodore V
**Cc:** Steven Glassman; Patrick J. Conlon; Berse, Farrah R
**Subject:** Re: Exxon Subpoena

We'll connect on our side and get back to you.

Michele Hirshman
Paul, Weiss, Rifkind, Wharton & Garrison LLP
1285 Avenue of the Americas | New York, NY 10019-6064
(212) 373-3747 (Direct Phone) | (212) 492-0747 (Direct Fax)
mailto:MHirshman@paulweiss.com | http://www.paulweiss.com

---

**From:** Monica Wagner
**Sent:** Tuesday, November 17, 2015 9:55 AM
**To:** Hirshman, Michele; Lemuel Srolovic; Wells Jr., Theodore V
**Cc:** Steven Glassman; Patrick J. Conlon; Berse, Farrah R
**Subject:** RE: Exxon Subpoena

Thursday doesn't work well for us. Would Wednesday, November 18, at 4:00 work for your team?

---

**From:** Hirshman, Michele [mailto:mhirshman@paulweiss.com]
**Sent:** Monday, November 16, 2015 5:33 PM
**To:** Lemuel Srolovic; Wells Jr., Theodore V
**Cc:** Steven Glassman; Monica Wagner; Patrick J. Conlon; Berse, Farrah R
**Subject:** Re: Exxon Subpoena

Lem:

Following up on your proposal that we speak the middle of this week, would you (and your team) be available on November 19 at 3:30 pm? We can circulate a call-in number.

Thanks.

Michele

Michele Hirshman
Paul, Weiss, Rifkind, Wharton & Garrison LLP
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**From:** Lemuel Srolovic
**Sent:** Friday, November 13, 2015 6:09 PM
**To:** Wells Jr., Theodore V; Hirshman, Michele
**Cc:** Steven Glassman; Monica Wagner
**Subject:** Exxon Subpoena

Ted and Michele --

Thank you for coming in yesterday. You have proposed that Exxon produce a relatively small subset of documents responsive to our subpoena on January 11 and that we meet to discuss further production on December 10. We would be willing to extend the return date of the subpoena if we can agree that Exxon will do (1) a limited production on or before December 3 as described below and (2) a second production on or before January 11 as described below. Both of those productions should be made on a rolling basis. Those productions are consistent with your suggestion, with which we agree, that we prioritize our requests, focusing on key documents and custodians. We also agree that a follow-on meeting on Thursday, December 10, 2015 to discuss further production should be our next step.

Documents to be produced on or before December 3, 2015:
- Internal organization chart(s).
- Documents responsive to Request No. 5, including the annual briefings to the board of directors to which Exxon's 2014 Carbon Disclosure Project Response refers.
- Reports regarding climate change generated for management during the transition period between CEOs in or about the years 2005 and 2006.

Documents to be produced on or before January 11, 2016:
- Non-email documents and communications responsive to the subpoena that are in the custody of the two heads of the "climate change" group that you identified yesterday and any other employees in that group.
- Responsive non-email documents and communications in the custody of the employees in the "corporate-wide global climate change and GHG issue management team with national and regional subteams" as identified on page 34 of the company's 2014 Corporate Citizenship Report.
- Reports generated for management that are responsive to Request No. 3 for Time Period 1.
- Non e-mail documents and communications, including drafts, concerning the Energy Trends, Greenhouse Gas Emissions, and Alternative Energy and Energy and Carbon – Managing the Risks reports that are in the custody of the primary authors of those reports, with the relevant corresponding documents responsive to Request No. 10.
- Documents responsive to Request No. 9, with the relevant corresponding documents responsive to Request No. 10.

Please let us know whether you agree by the middle of next week.

Regards,

Lem

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Environmental Protection Bureau
New York State Attorney General
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# Exhibit E

**Kline, Scot**

**From:** Michael Meade <Michael.Meade@ag.ny.gov>
**Sent:** Tuesday, March 22, 2016 4:51 PM
**To:** Kline, Scot; Morgan, Wendy
**Cc:** Lemuel Srolovic; Peter Washburn; Eric Soufer; Damien LaVera; Daniel Lavoie; Natalia Salgado; Brian Mahanna
**Subject:** RE: Climate Change Coalition

A couple of updates to report back to the group. First, after a follow up conversation with our AG, Al Gore will now be joining us for part of the day on 3/29. This will certainly add a little star power to the announcement!

We will also be joined by MA AG Healey, which will bring our total number of AG's to a grand total of 7. I'm waiting to hear back from New Mexico, which is our possible 8th Attorney General. On the staff side, a total of 16 states (including DC and USVI) will be joining us for the meetings.

**From:** Kline, Scot [mailto:scot.kline@vermont.gov]
**Sent:** Tuesday, March 22, 2016 11:41 AM
**To:** Michael Meade; Morgan, Wendy
**Cc:** Lemuel Srolovic; Peter Washburn; Eric Soufer; Damien LaVera; Daniel Lavoie; Natalia Salgado; Brian Mahanna
**Subject:** RE: Climate Change Coalition

Mike:

Looks good. One suggestion. We are thinking that use of the term "progressive" in the pledge might alienate some. How about "affirmative," "aggressive," "forceful" or something similar?

Thanks.

Scot

**From:** Michael Meade [mailto:Michael.Meade@ag.ny.gov]
**Sent:** Monday, March 21, 2016 2:59 PM
**To:** Kline, Scot <scot.kline@vermont.gov>; Morgan, Wendy <wendy.morgan@vermont.gov>
**Cc:** Lemuel Srolovic <Lemuel.Srolovic@ag.ny.gov>; Peter Washburn <Peter.Washburn@ag.ny.gov>; Eric Soufer <Eric.Soufer@ag.ny.gov>; Damien LaVera <Damien.LaVera@ag.ny.gov>; Daniel Lavoie <Daniel.Lavoie@ag.ny.gov>; Natalia Salgado <Natalia.Salgado@ag.ny.gov>; Brian Mahanna <Brian.Mahanna@ag.ny.gov>
**Subject:** Climate Change Coalition

Wendy and Scott,

Below are the broad goals and principles that we'd like to lay out as part of the coalition announcement next week. The filing of the brief and the defense of the EPA regs will highlight these principles. Let us know if you have any thoughts or edits to this. If it looks okay to you, I'll forward this around to the other offices when we have a draft release ready to go out. I'll also be asking the offices to contribute a quote from their respective AG's for the press release.

Let me know if you have any questions or comments.

*******************************

## Climate Coalition of Attorneys General

Principles:

- **Climate Change is Real**

The evidence that global temperatures have been rising over the last century-plus is unequivocal.

- **Climate Change Pollution Is The Primary Driver**

Natural forces do not explain the observed global warming trend.

- **People Are Being Harmed**

Climate change represents a clear and present danger to public health, safety, our environment and our economy -- now and in the future.

- **Immediate Action Is Necessary**

Climate change – and its impacts – is worsening. We must act now to reduce emissions of climate change pollution to minimize its harm to people now and in the future.

Pledge:

We pledge to work together to fully enforce the State and federal laws that require progressive action on climate change and that prohibit false and misleading statements to the public, consumers and investors regarding climate change.

- **Support Progressive Federal Action; Act Against Federal Inaction**

Support the federal government when it takes progressive action to address climate change, and press the federal government when it fails to take necessary action.

- **Support State and Regional Action**

Provide legal support to progressive state and regional actions that address climate change, supporting states in their traditional role as laboratories of innovation.

- **Defend Progress**

Serve as a backstop against efforts to impede or roll-back progress on addressing climate change.

- **Support Transparency And Disclosure**

Ensure that legally-required disclosures of the impacts of climate change are fully and fairly communicated to the public.

- **Engage The Public**

Raise public awareness regarding the impacts to public health, safety, our environment and our economy caused by climate change.

# Exhibit F

# CLIMATE CHANGE COALITION COMMON INTEREST AGREEMENT

This Common Interest Agreement ("Agreement") is entered into by the undersigned Attorneys General of the States, Commonwealths, and Territories (the "Parties") who are interested in advancing their common legal interests in limiting climate change and ensuring the dissemination of accurate information about climate change. The Parties mutually agree:

1. Common Legal Interests. The Parties share common legal interests with respect to the following topics: (i) potentially taking legal actions to compel or defend federal measures to limit greenhouse gas emissions, (ii) potentially conducting investigations of representations made by companies to investors, consumers and the public regarding fossil fuels, renewable energy and climate change, (iii) potentially conducting investigations of possible illegal conduct to limit or delay the implementation and deployment of renewable energy technology, (iv) potentially taking legal action to obtain compliance with federal and state laws governing the construction and operation of fossil fuel and renewable energy infrastructure, or (v) contemplating undertaking one or more of these legal actions, including litigation ("Matters of Common Interest").

2. Shared Information. It is in the Parties' individual and common interests to share documents, mental impressions, strategies, and other information regarding the Matters of Common Interest and any related investigations and litigation ("Shared Information"). Shared Information shall include (1) information shared in organizing a meeting of the Parties on March 29, 2016, (2) information shared at and after the March 29 meeting, pursuant to an oral common interest agreement into which the Parties entered at the meeting and renewed on April 12, 2016, and (3) information shared after the execution of this Agreement.

3. Legends on Documents. To avoid misunderstandings or inadvertent disclosure, all documents exchanged pursuant to this Agreement should bear the legend "Confidential – Protected by Common Interest Privilege" or words to that effect. However, the inadvertent failure to include such a legend shall not waive any privilege or protection available under this Agreement or otherwise. In addition, any Party may, where appropriate, also label documents exchanged pursuant to this Agreement with other appropriate legends, such as, for example, "Attorney-Client Privileged" or "Attorney Work Product." Oral communications among the Parties shall be deemed confidential and protected under this Agreement when discussing Matters of Common Interest.

4. Non-Waiver of Privileges. The exchange of Shared Information among Parties—including among Parties' staff and outside advisors—does not diminish in any way the privileged and confidential nature of such information. The Parties retain all applicable privileges and claims to confidentiality, including the attorney client privilege, work product privilege, common interest privilege, law enforcement privilege, deliberative process privilege and exemptions from disclosure under any public records laws that may be asserted to protect against disclosure of Shared Information to non-Parties (hereinafter collectively referred to as "Privileges").

5. Nondisclosure. Shared Information shall only be disclosed to: (i) Parties; (ii) employees or agents of the Parties, including experts or expert witnesses; (iii) government officials involved with the enforcement of antitrust, environmental, consumer protection, or securities laws who have agreed in writing to abide by the confidentiality restrictions of this Agreement; (iv) criminal enforcement authorities; (v) other persons, provided that all Parties consent in advance; and (vi) other persons as provided in paragraph 6. A Party who provides Shared Information may also impose additional conditions on the disclosure of that Shared Information. Nothing in this Agreement prevents a Party from using the Shared Information for law enforcement purposes, criminal or civil, including presentation at pre-trial and trial-related proceedings, to the extent that such presentation does not (i) conflict with other agreements that the Party has entered into, (ii) interfere with the preservation of the Privileges, or (iii) conflict with court orders and applicable law.

6. Notice of Potential Disclosure. The Parties agree and acknowledge that each Party is subject to applicable freedom of information or public records laws, and nothing in this Agreement is intended to alter or limit the disclosure requirements of such laws. If any Shared Information is demanded under a freedom of information or public records law or is subject to any form of compulsory process in any proceeding ("Request"), the Party receiving the Request shall: (i) immediately notify all other Parties (or their designees) in writing; (ii) cooperate with any Party in the course of responding to the Request; and (iii) refuse to disclose any Shared Information unless required by law.

7. Inadvertent Disclosure. If a Party discloses Shared Information to a person not entitled to receive such information under this Agreement, the disclosure shall be deemed to be inadvertent and unintentional and shall not be construed as a waiver of any Party's right under law or this Agreement. Any Party may seek additional relief as may be authorized by law.

8. Independently Obtained Information. Provided that no disclosure is made of Shared Information obtained pursuant to this Agreement, nothing in this Agreement shall preclude a Party from (a) pursuing independently any subject matter, including subjects reflected in Shared Information obtained by or subject to this Agreement or (b) using or disclosing any information, documents, investigations, or any other materials independently obtained or developed by such Party.

9. Related Litigation. The Parties continue to be bound by this Agreement in any litigation or other proceeding that arises out of the Matters of Common Interest.

10. Parties to the Agreement. This Agreement may be executed in counterparts. All potential Parties must sign for their participation to become effective.

11. Withdrawal. A Party may withdraw from this Agreement upon thirty days written notice to all other Parties. Withdrawal shall not terminate, or relieve the withdrawing Party of any obligation under this Agreement regarding Shared Information received by the withdrawing Party before the effective date of the withdrawal.

12. Modification. This writing is the complete Agreement between the Parties, and any modifications must be approved in writing by all Parties.

Dated: May 18, 2016

Michele Van Gelderen

Michele Van Gelderen
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Dated: May 3, 2016

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Dated: May 2, 2016

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Dated: May 2, 2016

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Dated: April 29, 2016

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Dated: April 29, 2016

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Dated: May 9, 2016

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Dated: May 10th, 2016

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Dated: April 29, 2016

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Dated: MAY 1, 2016

L J Watson

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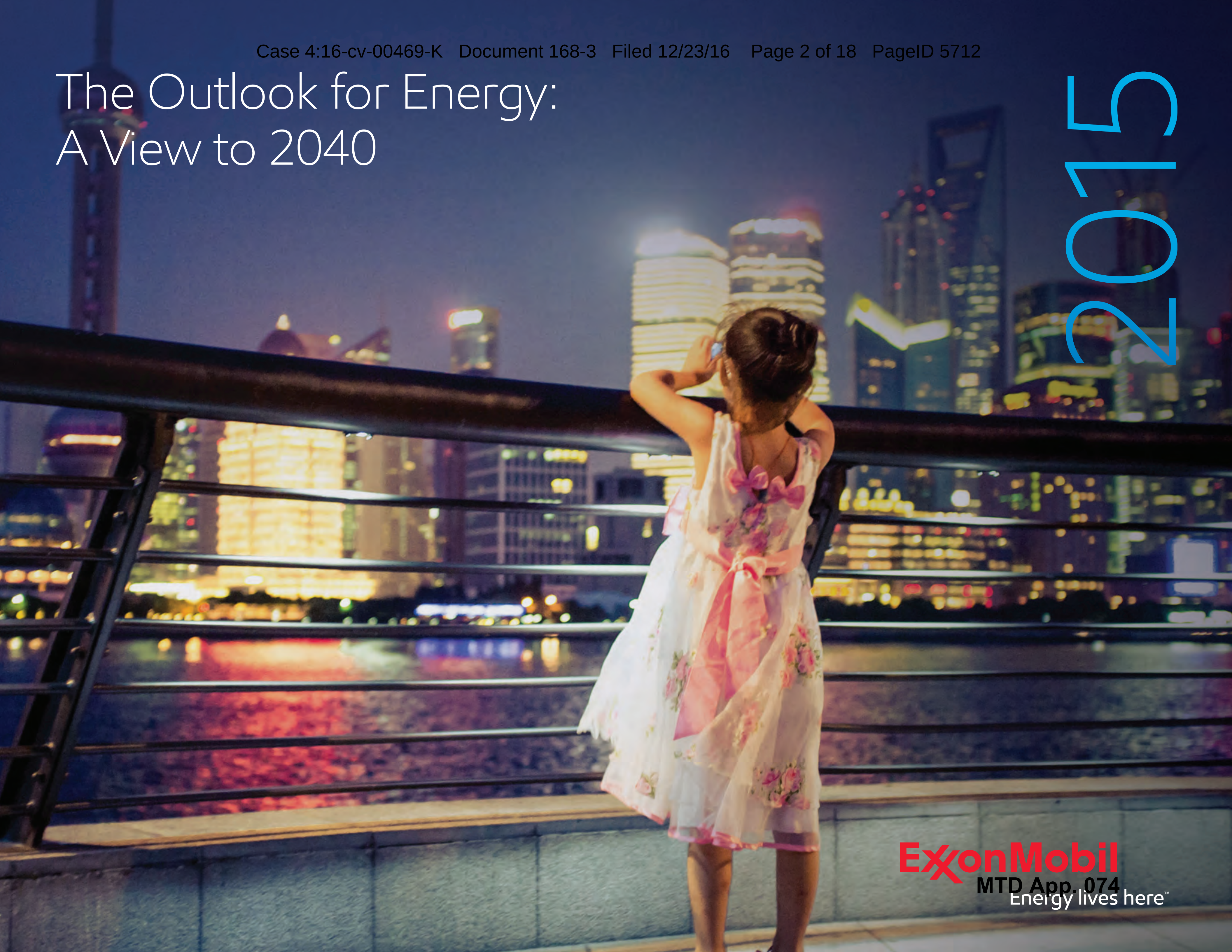
# Exhibit G

# The Outlook for Energy: A View to 2040

2015

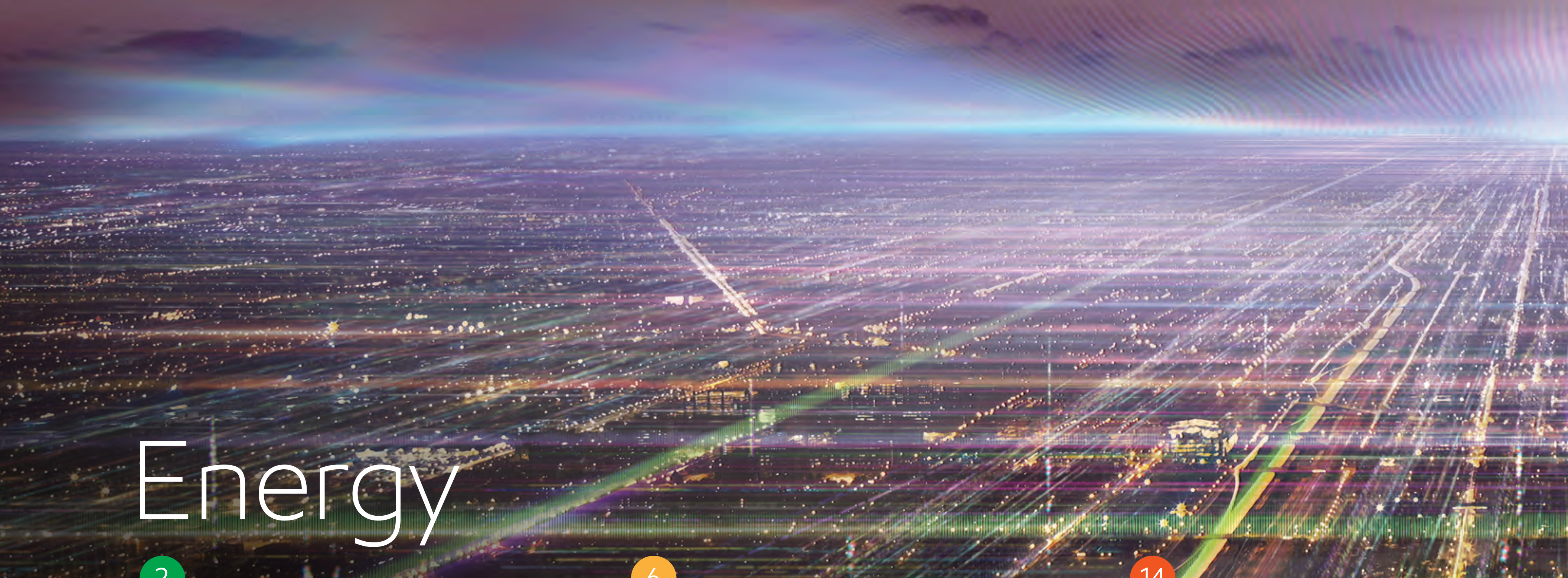


ExxonMobil

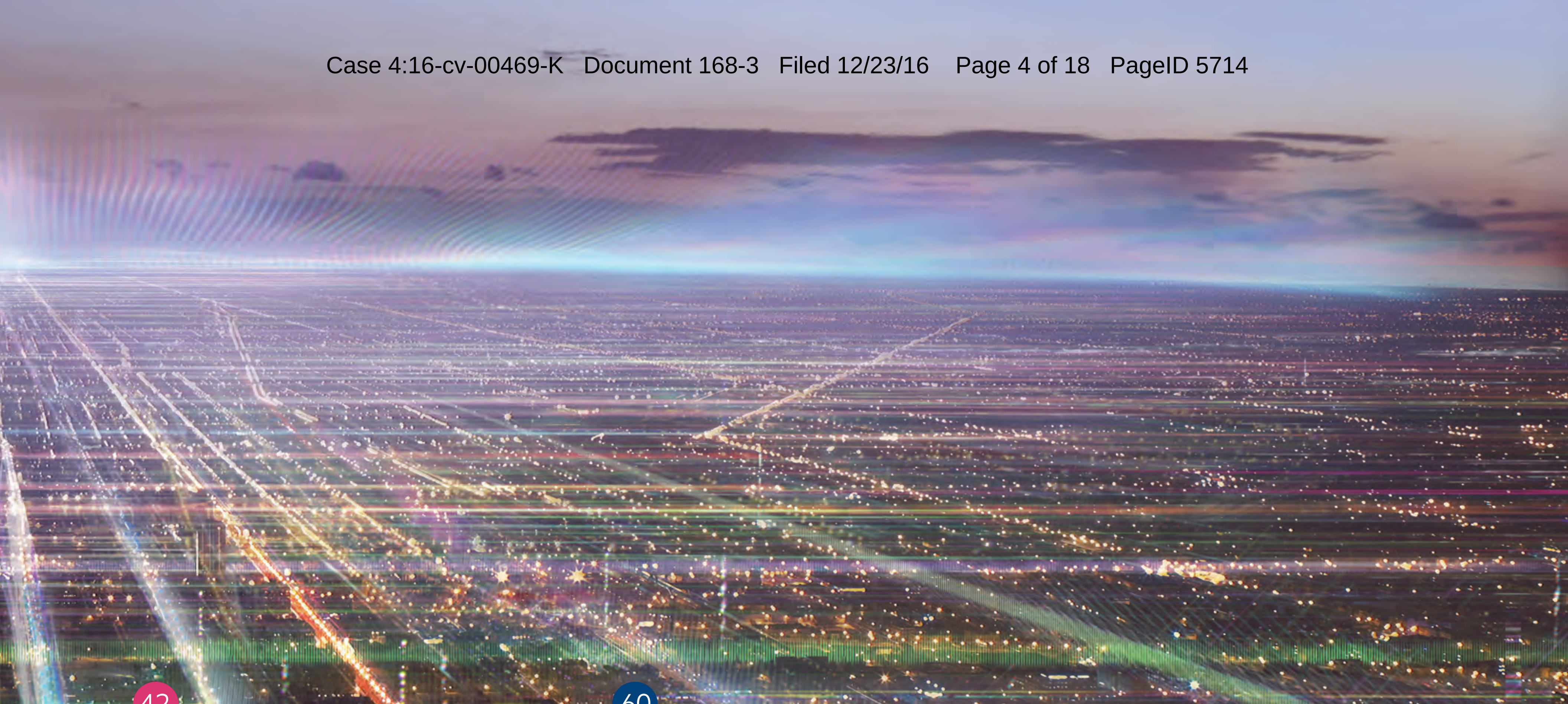
Energy lives here™

MTD App. 074

The Outlook for Energy: A View to 2040

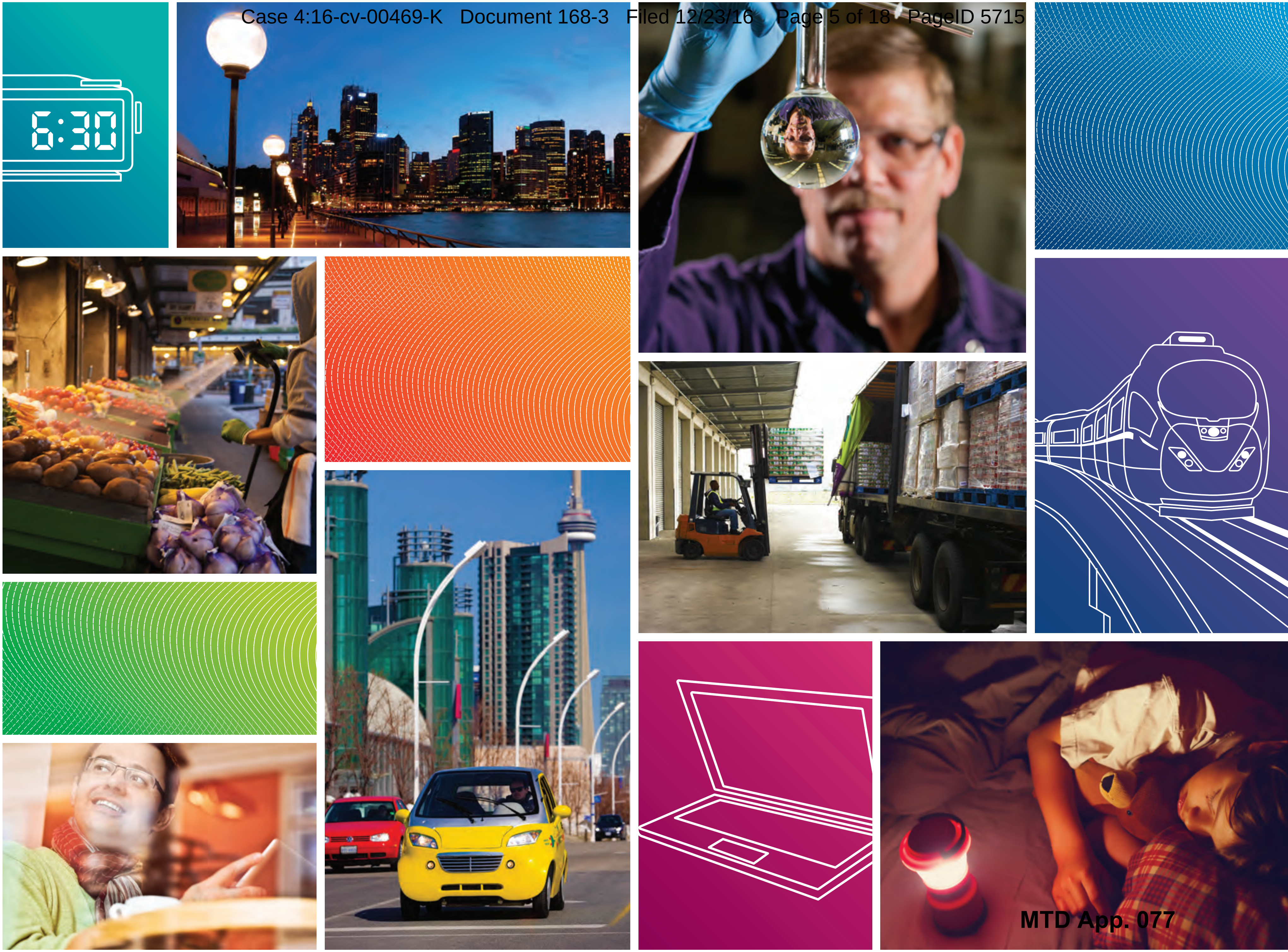


# Energy





*The Outlook for Energy* is our long-term global view of energy demand and supply. Its findings help guide our long-term investments, and we share *The Outlook* to help promote better understanding of the issues shaping the world's energy future. Updated each year, this edition covers the period to 2040.




MTD App. 077

# Why energy?

A house. A car. Lights at night and heat in the winter. A refrigerator to keep food fresh and a stove for cooking. A better education and a good job. Modern health care. Wireless communications. Technology and innovation. The freedom to focus one's daily activities on something more than mere subsistence.

These are among the many benefits of modern energy.

During the past century, growth in the availability and use of modern fuels — including electricity — has radically enhanced the lives of billions. But the progress enabled by modern energy has not reached everyone.

Some nations have prospered more than others, in part reflecting the pace of transitioning to modern energy coupled with modern technologies. As recently as 1990, developed economies (as defined by membership in the Organisation for Economic Co-operation and Development or OECD) consumed more than 50 percent of the world's energy, despite having only 20 percent of its population. Even today, some 80 years after Franklin Delano Roosevelt declared, "Electricity is no longer a luxury," one out of every five people in the world still has no access to electricity. Even more lack modern cooking fuels.

However, as *The Outlook* shows, the coming decades are poised for a dramatic new chapter in the story of human progress. Economic growth in China, India and other non-OECD countries will enable some 3 billion people to rise into the ranks of the middle class — the largest collective increase in living standards in history. This means new demand for food, for travel, for electricity, for housing, schools and hospitals, and for businesses meeting countless needs. It means better lives for billions.

Will non-OECD countries follow the same path the OECD did during the previous century? In many ways, no. New technologies are reshaping not only our economies and our societies, but also how people use energy. While demand is rising, supplies are shifting to lower-carbon fuels. Efficiency is curbing growth in both energy demand and emissions. The net effect of these changes is best seen in OECD nations, where economies are expanding while energy demand and emissions are already starting to fall.

The benefits of modern technology and energy are self-evident, especially to those who are only now beginning to gain access. To help enable billions to reach the middle class and living standards to rise, the question remains — as always — how to expand the benefits of modern technology and energy while protecting the environment. Answers to that question will continue to be found through practical choices backed by human ingenuity. The good news is that practical options to meet people's needs for reliable, affordable energy continue to expand.

So why energy?

Because energy is vital in our everyday lives.

# Modern energy for modern living

Gains in living standards over the past two centuries have been enabled in large part by a transition to modern energy sources.

One element driving this transition is the "energy density" of various energy types. Fuels high in energy content use less space and are often the easiest to transport for various uses. This helps explain why gasoline is prevalent as a transportation fuel and why people in high-rise buildings do not rely on wood for heating and cooking.

To help compare energy content, we've converted some sources of energy used today to one of mankind's earliest forms of energy: wood logs used as fuel for fire.

**5 logs** (3.5 inch diameter, 16 inch length) = **1 gallon gasoline** = **13,000 AA batteries**

**21 logs**

Daily OECD* energy demand per person

(Non-OECD demand is only 6 logs per person)

=

**4 logs**

Household use

+

**3 logs**

Personal transportation

+

## Comfort and security

Fire was the first form of light and heat, providing safety, comfort and security after dark.

Kerosene and other petroleum products became widely used for their low cost and versatility versus solid fuels.

Lighting for cities is provided by one of the most convenient energy types — electricity.

Then — Now

## Personal mobility

It used to take 25 days to travel 2,000 miles by stagecoach.

By the 1860s, the trip could be made in 2 weeks by steam locomotive.

The same distance can now be traveled by a gasoline-powered car in just 3 days.

Then — Now

*The Organisation for Economic Co-operation and Development

MTD App. 079

# Energy fit for modern purposes

When selecting a type of energy for a particular need, many factors are considered including practicality, convenience and cost. Energy content is often "lost" in burning a log or charging a battery, and logs of wood can't easily power a car nonstop for 300 miles. Gasoline has advantages on the road, but doesn't compete well with batteries for powering a smartphone.

Technology and energy work together to provide practical solutions. This is what makes modern living standards possible and why we use a diversity of fuels.

3 logs
Commercial buildings

+

3 logs
Commercial transportation

+

8 logs
Industrial use

## Productive workspaces

Before the late 19th century, office buildings generally did not exceed five stories because of construction costs and the lack of elevators.

Steel frame construction, elevators, electric lighting and air conditioning enabled taller buildings, which maximized real estate.

Modern insulation, lighting and temperature control have greatly improved commercial building energy-efficiency.

Then — Now

## Travel and trade

With the use of wind power in 1620, the Mayflower took 66 days to cross the Atlantic.

The invention of steam-powered ships allowed the same trip to be made in two weeks.

Modern aircraft and jet fuel make flights across the Atlantic faster, taking less than 8 hours.

Then — Now

## Modern manufacturing

Prior to the Industrial Revolution, factory locations were near fast-flowing streams to use water power.

The invention of the steam engine helped accelerate the Industrial Revolution and the demand for coal.

Modern manufacturing equipment now requires energy dense fuels like natural gas and electricity.

Then — Now

This has always been the case. But the increasingly dynamic nature of our world poses new challenges. The pace of change in technology development, information sharing, and economic opportunities and challenges is accelerating. There are more buyers, more sellers, more choices, more competition — and more options — than ever before. In this environment, free markets and free trade are vital. They foster open, competitive playing fields that enable individuals and society to quickly adopt new technologies, pursue new business ventures, and buy and sell whatever goods they may need — including energy. This freedom expands economic opportunities for people and therefore helps create wealth and boost living standards.

Ongoing progress poses the dual challenge of meeting the world's energy needs while managing the environmental effects — including climate change — of energy use. There is no single or simple solution to this challenge. The reality is that abundant energy enables modern life, and greater access to energy is fundamental to reducing poverty and advancing standards of living for billions of people. The responsible course of action requires meeting this imperative of human progress while also enacting public policies that promote the search for meaningful solutions to the risks of climate change.

Government can facilitate development, economic growth and environmental protection through policies that promote free trade and open markets — as well as innovation, private investment and general prosperity. To aid in long-term planning and investment, policy frameworks should be transparent and predictable, with general rules that are easy to understand and applied consistently. Sound regulatory and permitting processes are also important to facilitating investment.

At the same time, energy consumers — businesses and individuals — will continue to exert tremendous influence on energy trends through their choices regarding the amount and type of energy they use. In most cases, consumers will choose whichever energy provides the most value in meeting their needs. But technology can expand and reshape those choices. One example is the tremendous growth we project in hybrid cars through 2040 as they become cost-competitive with conventional vehicles.

Other innovators, entrepreneurs and investors also will continue to play a key role, as will the energy industry itself. The IEA has estimated that meeting global energy demand will require about $66 trillion in investment through 2040. Our industry remains committed to expanding energy choices through technological innovation, responsible operations and sustained investment in energy.

Understanding the factors that drive the world's energy needs — and likely choices to meet those needs — is the mission of *The Outlook*. By sharing *The Outlook* with the public, we hope to broaden that understanding among individuals, businesses and governments. Because energy matters to everyone, and we all play a role in shaping its future.

**Billion cubic feet per day (BCFD)** This is used to define volumetric rates of natural gas. One billion cubic feet per day of natural gas is enough to meet about 2 percent of the natural gas used in homes around the world. Six billion cubic feet per day of natural gas is equivalent to about 1 million oil-equivalent barrels per day.

**British thermal unit (BTU)** A BTU is a standard unit of energy that can be used to measure any type of energy source. The energy content of one gallon of gasoline is about 125,000 BTUs. "Quad" refers to a quadrillion BTUs.

**Hydrogen fuel cell vehicle** A type of light-duty vehicle where the fuel is hydrogen contained in a 10,000 psi tank. This hydrogen is passed through a fuel cell that then provides electricity to power the vehicle.

**Key Growth** A grouping of 10 countries expected to represent an increasingly significant share of the global energy market due to rising populations and living standards. These countries include Brazil, Egypt, Indonesia, Iran, Mexico, Nigeria, Saudi Arabia, South Africa, Thailand and Turkey.

**Light-duty vehicle (LDV)** A classification of road vehicles that includes cars, light trucks and sport-utility vehicles (SUV).

**Liquefied natural gas (LNG)** Natural gas (predominantly methane) that has been super-chilled for conversion to liquid form for ease of transport.

**Liquefied petroleum gas (LPG)** A classification of hydrocarbon fuel including propane, butane and other similar hydrocarbons with low molecular weight.

**Million oil-equivalent barrels per day (MBDOE)** This term provides a standardized unit of measure for different types of energy sources (oil, gas, coal, etc.) based on energy content relative to a typical barrel of oil. One million oil-equivalent barrels per day is enough energy to fuel about 5 percent of the light-duty vehicles on the world's roads today.

**Natural Gas Liquids (NGL)** A liquid fuel produced in association with natural gas. NGLs are components of natural gas that are separated from the gaseous state into liquid form during natural gas processing.

**Organisation for Economic Co-operation and Development (OECD)** A forum of 34 member nations that promote policies that will improve the economic and social well-being of people around the world.

**OECD32** Although Mexico and Turkey are OECD member countries, their significant population, economic and energy demand growth closely resemble that of the other countries in the Key Growth group so they have been included there. As such, the OECD32 is used to denote the remaining countries of the OECD when a comparison to the Key Growth countries is made.

**Plug-in Hybrid Electric Vehicle (PHEV)** A type of light duty vehicle that uses an electric motor to drive the wheels. Unlike other electric vehicles, a PHEV also has a conventional internal combustion engine (ICE) that can charge its battery using petroleum fuels if needed.

**Primary energy** Includes energy in the form of oil, natural gas, coal, nuclear, hydro, geothermal, wind, solar and bioenergy sources (biofuels, municipal solid waste, traditional biomass). It does not include electricity or market heat, which are secondary energy types reflecting conversion/production from primary energy sources.

**Secondary energy** Energy types reflecting the conversion or production of energy from primary energy sources such as electricity produced using natural gas.

**Watt** A unit of electrical power, equal to one joule per second. A 1-gigawatt power plant can meet the electricity demand of more than 500,000 homes in the U.S. (Kilowatt (kW) = 1,000 watts; Gigawatt (GW) = 1,000,000,000 watts; Terawatt (TW) = $10^{12}$ watts). 300 terawatt hours is equivalent to about 1 quadrillion BTUs (Quad).

MTD App. 082

| Energy demand (quadrillion BTUs) Regions | 1990 | 2000 | 2010 | 2025 | 2040 | Average annual change 2010-2025 | Average annual change 2025-2040 | Average annual change 2010-2040 | % change 2010-2025 | % change 2025-2040 | % change 2010-2040 | Share of total 2010 | Share of total 2025 | Share of total 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| World | 360 | 418 | 526 | 662 | 717 | 1.6% | 0.5% | 1.0% | 26% | 8% | 36% | 100% | 100% | 100% |
| OECD | 190 | 226 | 231 | 232 | 222 | 0.0% | -0.3% | -0.1% | 0% | -4% | -4% | 44% | 35% | 31% |
| Non-OECD | 170 | 193 | 294 | 431 | 495 | 2.6% | 0.9% | 1.7% | 46% | 15% | 68% | 56% | 65% | 69% |
| Africa | 17 | 22 | 29 | 43 | 59 | 2.5% | 2.2% | 2.4% | 46% | 38% | 101% | 6% | 6% | 8% |
| Asia Pacific | 90 | 128 | 202 | 294 | 324 | 2.5% | 0.6% | 1.6% | 46% | 10% | 61% | 38% | 44% | 45% |
| China | 34 | 47 | 97 | 153 | 154 | 3.1% | 0.1% | 1.5% | 57% | 1% | 59% | 18% | 23% | 21% |
| India | 13 | 19 | 29 | 50 | 66 | 3.6% | 1.9% | 2.8% | 71% | 33% | 128% | 6% | 8% | 9% |
| Europe | 74 | 78 | 82 | 77 | 72 | -0.4% | -0.4% | -0.4% | -6% | -6% | -12% | 16% | 12% | 10% |
| European Union | 68 | 72 | 74 | 67 | 62 | -0.6% | -0.6% | -0.6% | -9% | -8% | -16% | 14% | 10% | 9% |
| Latin America | 15 | 20 | 27 | 37 | 47 | 2.2% | 1.5% | 1.9% | 39% | 25% | 74% | 5% | 6% | 7% |
| Middle East | 11 | 18 | 30 | 45 | 53 | 2.8% | 1.2% | 2.0% | 51% | 20% | 81% | 6% | 7% | 7% |
| North America | 95 | 114 | 113 | 118 | 115 | 0.3% | -0.2% | 0.0% | 4% | -3% | 1% | 22% | 18% | 16% |
| United States | 81 | 96 | 94 | 94 | 90 | 0.0% | -0.3% | -0.2% | 0% | -5% | -5% | 18% | 14% | 13% |
| Russia/Caspian | 57 | 38 | 42 | 49 | 46 | 0.9% | -0.4% | 0.3% | 15% | -5% | 9% | 8% | 7% | 6% |
| **Energy by type - world** | | | | | | | | | | | | | | |
| Primary | 360 | 418 | 526 | 662 | 717 | 1.6% | 0.5% | 1.0% | 26% | 8% | 36% | 100% | 100% | 100% |
| Oil | 137 | 157 | 178 | 212 | 228 | 1.2% | 0.5% | 0.8% | 19% | 7% | 28% | 34% | 32% | 32% |
| Gas | 72 | 89 | 116 | 158 | 189 | 2.1% | 1.2% | 1.6% | 37% | 19% | 63% | 22% | 24% | 26% |
| Coal | 86 | 93 | 135 | 164 | 138 | 1.3% | -1.1% | 0.1% | 22% | -16% | 2% | 26% | 25% | 19% |
| Nuclear | 21 | 27 | 29 | 38 | 56 | 1.9% | 2.7% | 2.3% | 32% | 49% | 97% | 5% | 6% | 8% |
| Biomass/waste | 36 | 41 | 49 | 56 | 56 | 0.9% | 0.0% | 0.5% | 14% | 1% | 15% | 9% | 8% | 8% |
| Hydro | 7 | 9 | 12 | 16 | 20 | 2.3% | 1.3% | 1.8% | 40% | 21% | 70% | 2% | 2% | 3% |
| Other renewables | 1 | 3 | 7 | 18 | 29 | 6.3% | 3.4% | 4.8% | 149% | 65% | 311% | 1% | 3% | 4% |
| **End-use sectors - world** | | | | | | | | | | | | | | |
| **Residential/commercial** | | | | | | | | | | | | | | |
| Total | 87 | 98 | 115 | 135 | 147 | 1.1% | 0.5% | 0.8% | 17% | 9% | 27% | 100% | 100% | 100% |
| Oil | 13 | 16 | 15 | 16 | 16 | 0.4% | -0.1% | 0.2% | 6% | -1% | 5% | 13% | 12% | 11% |
| Gas | 17 | 21 | 25 | 29 | 31 | 1.1% | 0.5% | 0.8% | 18% | 7% | 26% | 21% | 21% | 21% |
| Biomass/waste | 26 | 29 | 33 | 34 | 31 | 0.2% | -0.6% | -0.2% | 2% | -9% | -7% | 29% | 25% | 21% |
| Electricity | 16 | 23 | 32 | 45 | 59 | 2.3% | 1.8% | 2.1% | 41% | 30% | 84% | 28% | 33% | 40% |
| Other | 15 | 10 | 11 | 11 | 10 | 0.3% | -0.6% | -0.1% | 5% | -8% | -4% | 9% | 8% | 7% |
| **Transportation** | | | | | | | | | | | | | | |
| Total | 65 | 81 | 100 | 122 | 140 | 1.3% | 0.9% | 1.1% | 22% | 15% | 40% | 100% | 100% | 100% |
| Oil | 64 | 79 | 96 | 113 | 124 | 1.1% | 0.6% | 0.9% | 18% | 10% | 30% | 95% | 92% | 88% |
| Biofuels | 0 | 0 | 3 | 5 | 7 | 3.8% | 3.0% | 3.4% | 75% | 56% | 174% | 3% | 4% | 5% |
| Gas | 0 | 0 | 1 | 4 | 7 | 9.7% | 4.8% | 7.2% | 303% | 102% | 716% | 1% | 3% | 5% |
| Other | 1 | 1 | 1 | 1 | 2 | 2.1% | 2.1% | 2.1% | 37% | 36% | 87% | 1% | 1% | 1% |
| **Industrial** | | | | | | | | | | | | | | |
| Total | 139 | 151 | 193 | 254 | 269 | 1.8% | 0.4% | 1.1% | 31% | 6% | 39% | 100% | 100% | 100% |
| Oil | 45 | 50 | 58 | 73 | 80 | 1.6% | 0.6% | 1.1% | 27% | 9% | 38% | 30% | 29% | 30% |
| Gas | 31 | 37 | 45 | 60 | 70 | 2.0% | 1.0% | 1.5% | 34% | 16% | 56% | 23% | 24% | 26% |
| Coal | 29 | 27 | 43 | 52 | 40 | 1.3% | -1.7% | -0.2% | 22% | -23% | -6% | 22% | 21% | 15% |
| Electricity | 18 | 22 | 31 | 47 | 58 | 3.0% | 1.4% | 2.2% | 55% | 23% | 90% | 16% | 19% | 22% |
| Other | 16 | 14 | 17 | 21 | 21 | 1.3% | 0.1% | 0.7% | 21% | 2% | 23% | 9% | 8% | 8% |
| **Power generation - world** | | | | | | | | | | | | | | |
| Primary | 118 | 144 | 192 | 258 | 291 | 2.0% | 0.8% | 1.4% | 34% | 13% | 51% | 100% | 100% | 100% |
| Oil | 14 | 12 | 10 | 10 | 8 | 0.1% | -1.2% | -0.5% | 2% | -16% | -15% | 5% | 4% | 3% |
| Gas | 24 | 31 | 46 | 65 | 81 | 2.4% | 1.4% | 1.9% | 44% | 23% | 77% | 24% | 25% | 28% |
| Coal | 48 | 62 | 88 | 108 | 95 | 1.4% | -0.8% | 0.3% | 23% | -12% | 9% | 46% | 42% | 33% |
| Nuclear | 21 | 27 | 29 | 38 | 56 | 1.9% | 2.7% | 2.3% | 32% | 49% | 97% | 15% | 15% | 19% |
| Hydro | 7 | 9 | 12 | 16 | 20 | 2.3% | 1.3% | 1.8% | 40% | 21% | 70% | 6% | 6% | 7% |
| Wind | 0 | 0 | 1 | 5 | 10 | 10.9% | 4.4% | 7.6% | 370% | 90% | 792% | 1% | 2% | 4% |
| Other renewables | 3 | 4 | 8 | 14 | 21 | 4.2% | 2.4% | 3.3% | 85% | 42% | 163% | 4% | 6% | 7% |
| **Electricity demand (terawatt hours)** | | | | | | | | | | | | | | |
| World | 10135 | 13202 | 18558 | 27425 | 34746 | 2.6% | 1.6% | 2.1% | 48% | 27% | 87% | 100% | 100% | 100% |
| OECD | 6656 | 8603 | 9703 | 10897 | 11883 | 0.8% | 0.6% | 0.7% | 12% | 9% | 22% | 52% | 40% | 34% |
| Non-OECD | 3478 | 4599 | 8856 | 16528 | 22863 | 4.2% | 2.2% | 3.2% | 87% | 38% | 158% | 48% | 60% | 66% |

**MTD App. 083**

| Energy demand (quadrillion BTUs)<br>OECD<br>Energy by type | 1990 | 2000 | 2010 | 2025 | 2040 | Average annual change<br>2010-2025 | 2025-2040 | 2010-2040 | % change<br>2010-2025 | 2025-2040 | 2010-2040 | Share of total<br>2010 | 2025 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary | 190 | 226 | 231 | 232 | 222 | 0.0% | -0.3% | -0.1% | 0% | -4% | -4% | 100% | 100% | 100% |
| Oil | 85 | 98 | 94 | 88 | 80 | -0.4% | -0.6% | -0.5% | -6% | -9% | -15% | 41% | 38% | 36% |
| Gas | 35 | 47 | 54 | 65 | 70 | 1.2% | 0.5% | 0.9% | 20% | 8% | 30% | 23% | 28% | 32% |
| Coal | 42 | 43 | 42 | 31 | 17 | -2.0% | -3.9% | -2.9% | -26% | -45% | -59% | 18% | 13% | 8% |
| Nuclear | 18 | 23 | 24 | 24 | 27 | 0.1% | 0.7% | 0.4% | 1% | 12% | 13% | 10% | 10% | 12% |
| Biomass/waste | 6 | 7 | 9 | 10 | 9 | 0.7% | -0.5% | 0.1% | 11% | -7% | 3% | 4% | 4% | 4% |
| Hydro | 4 | 5 | 5 | 5 | 5 | 0.5% | 0.3% | 0.4% | 8% | 4% | 12% | 2% | 2% | 2% |
| Other renewables | 1 | 2 | 4 | 9 | 14 | 5.0% | 2.9% | 3.9% | 107% | 53% | 216% | 2% | 4% | 6% |
| **End-use sectors** | | | | | | | | | | | | | | |
| **Residential/commercial** | | | | | | | | | | | | | | |
| Total | 39 | 46 | 50 | 50 | 49 | 0.0% | -0.1% | -0.1% | 0% | -2% | -2% | 100% | 100% | 100% |
| Oil | 9 | 9 | 7 | 6 | 4 | -1.8% | -1.9% | -1.9% | -24% | -25% | -43% | 14% | 11% | 8% |
| Gas | 12 | 16 | 17 | 17 | 17 | 0.2% | -0.3% | -0.1% | 2% | -4% | -2% | 34% | 34% | 34% |
| Biomass/waste | 2 | 2 | 3 | 2 | 2 | -0.5% | -1.4% | -1.0% | -7% | -19% | -25% | 5% | 5% | 4% |
| Electricity | 12 | 17 | 21 | 23 | 24 | 0.6% | 0.5% | 0.5% | 9% | 8% | 17% | 41% | 45% | 49% |
| Other | 4 | 2 | 3 | 2 | 2 | -0.5% | -0.2% | -0.4% | -8% | -3% | -11% | 5% | 5% | 5% |
| **Transportation** | | | | | | | | | | | | | | |
| Total | 45 | 55 | 58 | 56 | 54 | -0.3% | -0.2% | -0.3% | -4% | -3% | -8% | 100% | 100% | 100% |
| Oil | 44 | 55 | 56 | 52 | 48 | -0.5% | -0.5% | -0.5% | -7% | -8% | -14% | 96% | 93% | 89% |
| Biofuels | 0 | 0 | 2 | 3 | 3 | 2.2% | 1.8% | 2.0% | 38% | 31% | 81% | 3% | 5% | 6% |
| Gas | 0 | 0 | 0 | 1 | 2 | 13.9% | 6.2% | 10.0% | 602% | 146% | 1631% | 0% | 2% | 4% |
| Other | 0 | 0 | 0 | 0 | 1 | 0.9% | 2.5% | 1.7% | 14% | 45% | 65% | 1% | 1% | 1% |
| **Industrial** | | | | | | | | | | | | | | |
| Total | 64 | 72 | 69 | 74 | 74 | 0.5% | -0.1% | 0.2% | 8% | -1% | 7% | 100% | 100% | 100% |
| Oil | 26 | 29 | 28 | 28 | 27 | 0.2% | -0.3% | -0.1% | 3% | -5% | -2% | 40% | 38% | 37% |
| Gas | 15 | 18 | 18 | 22 | 23 | 1.5% | 0.3% | 0.9% | 25% | 5% | 31% | 26% | 30% | 31% |
| Coal | 10 | 8 | 7 | 5 | 3 | -2.6% | -2.7% | -2.6% | -32% | -33% | -55% | 10% | 6% | 4% |
| Electricity | 10 | 12 | 12 | 14 | 16 | 1.1% | 0.7% | 0.9% | 18% | 10% | 30% | 17% | 19% | 21% |
| Other | 3 | 4 | 4 | 5 | 5 | 0.8% | -0.2% | 0.3% | 13% | -3% | 10% | 6% | 7% | 6% |
| **Power generation** | | | | | | | | | | | | | | |
| Primary | 67 | 84 | 90 | 91 | 89 | 0.1% | -0.2% | -0.1% | 1% | -3% | -2% | 100% | 100% | 100% |
| Oil | 6 | 5 | 3 | 2 | 1 | -2.6% | -3.5% | -3.0% | -32% | -41% | -60% | 3% | 2% | 1% |
| Gas | 8 | 13 | 20 | 25 | 28 | 1.6% | 1.0% | 1.3% | 26% | 15% | 46% | 22% | 27% | 32% |
| Coal | 30 | 35 | 34 | 26 | 14 | -1.8% | -4.2% | -3.0% | -24% | -47% | -60% | 38% | 28% | 15% |
| Nuclear | 18 | 23 | 24 | 24 | 27 | 0.1% | 0.7% | 0.4% | 1% | 12% | 13% | 26% | 26% | 30% |
| Hydro | 4 | 5 | 5 | 5 | 5 | 0.5% | 0.3% | 0.4% | 8% | 4% | 12% | 5% | 5% | 6% |
| Wind | 0 | 0 | 1 | 3 | 6 | 8.5% | 4.1% | 6.3% | 242% | 82% | 521% | 1% | 3% | 6% |
| Other renewables | 2 | 3 | 5 | 7 | 8 | 2.5% | 1.0% | 1.8% | 46% | 16% | 70% | 5% | 7% | 9% |

**MTD App. 084**

| Energy demand (quadrillion BTUs) Non-OECD Energy by type | 1990 | 2000 | 2010 | 2025 | 2040 | Average annual change 2010 2025 | 2025 2040 | 2010 2040 | % change 2010 2025 | 2025 2040 | 2010 2040 | Share of total 2010 | 2025 | 2040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary | 170 | 193 | 294 | 431 | 495 | 2.6% | 0.9% | 1.7% | 46% | 15% | 68% | 100% | 100% | 100% |
| Oil | 52 | 59 | 85 | 124 | 148 | 2.6% | 1.2% | 1.9% | 47% | 19% | 75% | 29% | 29% | 30% |
| Gas | 37 | 42 | 62 | 93 | 119 | 2.8% | 1.6% | 2.2% | 51% | 27% | 92% | 21% | 22% | 24% |
| Coal | 44 | 50 | 93 | 133 | 121 | 2.4% | -0.6% | 0.9% | 43% | -9% | 30% | 32% | 31% | 24% |
| Nuclear | 3 | 4 | 5 | 14 | 29 | 7.1% | 5.2% | 6.2% | 180% | 115% | 500% | 2% | 3% | 6% |
| Biomass/waste | 30 | 33 | 40 | 46 | 47 | 0.9% | 0.2% | 0.5% | 15% | 2% | 18% | 14% | 11% | 10% |
| Hydro | 3 | 4 | 7 | 11 | 15 | 3.2% | 1.7% | 2.5% | 61% | 29% | 107% | 2% | 3% | 3% |
| Other renewables | 0 | 1 | 3 | 9 | 15 | 8.0% | 3.9% | 5.9% | 216% | 78% | 462% | 1% | 2% | 3% |
| **End-use sectors** | | | | | | | | | | | | | | |
| **Residential/commercial** | | | | | | | | | | | | | | |
| Total | 48 | 52 | 65 | 85 | 97 | 1.8% | 0.9% | 1.3% | 30% | 15% | 49% | 100% | 100% | 100% |
| Oil | 4 | 6 | 8 | 11 | 12 | 2.0% | 0.7% | 1.3% | 34% | 11% | 49% | 12% | 13% | 12% |
| Gas | 4 | 5 | 8 | 12 | 14 | 2.8% | 1.4% | 2.1% | 52% | 23% | 87% | 12% | 14% | 15% |
| Biomass/waste | 24 | 27 | 30 | 31 | 29 | 0.2% | -0.6% | -0.2% | 3% | -8% | -5% | 46% | 37% | 30% |
| Electricity | 3 | 6 | 11 | 22 | 34 | 4.8% | 2.9% | 3.8% | 101% | 53% | 209% | 17% | 26% | 35% |
| Other | 12 | 8 | 8 | 9 | 8 | 0.6% | -0.7% | 0.0% | 9% | -10% | -1% | 12% | 10% | 8% |
| **Transportation** | | | | | | | | | | | | | | |
| Total | 21 | 26 | 42 | 67 | 87 | 3.2% | 1.7% | 2.5% | 59% | 30% | 107% | 100% | 100% | 100% |
| Oil | 20 | 25 | 40 | 61 | 76 | 2.9% | 1.5% | 2.2% | 54% | 25% | 92% | 95% | 91% | 88% |
| Biofuels | 0 | 0 | 1 | 2 | 4 | 6.5% | 4.3% | 5.4% | 157% | 88% | 382% | 2% | 3% | 5% |
| Gas | 0 | 0 | 1 | 3 | 5 | 8.9% | 4.3% | 6.6% | 258% | 89% | 577% | 2% | 4% | 6% |
| Other | 1 | 0 | 1 | 1 | 1 | 2.8% | 1.9% | 2.3% | 52% | 32% | 100% | 1% | 1% | 1% |
| **Industrial** | | | | | | | | | | | | | | |
| Total | 75 | 79 | 125 | 179 | 195 | 2.5% | 0.6% | 1.5% | 44% | 9% | 57% | 100% | 100% | 100% |
| Oil | 19 | 21 | 30 | 45 | 53 | 2.7% | 1.1% | 1.9% | 49% | 17% | 75% | 24% | 25% | 27% |
| Gas | 16 | 19 | 27 | 38 | 47 | 2.3% | 1.4% | 1.8% | 40% | 23% | 72% | 22% | 21% | 24% |
| Coal | 19 | 19 | 36 | 47 | 37 | 1.9% | -1.6% | 0.1% | 33% | -22% | 3% | 29% | 26% | 19% |
| Electricity | 8 | 9 | 19 | 33 | 42 | 3.9% | 1.7% | 2.8% | 78% | 28% | 128% | 15% | 18% | 22% |
| Other | 12 | 10 | 13 | 16 | 16 | 1.4% | 0.2% | 0.8% | 23% | 3% | 27% | 10% | 9% | 8% |
| **Power generation** | | | | | | | | | | | | | | |
| Primary | 51 | 60 | 102 | 166 | 203 | 3.3% | 1.3% | 2.3% | 63% | 22% | 98% | 100% | 100% | 100% |
| Oil | 9 | 7 | 7 | 8 | 7 | 1.0% | -0.7% | 0.2% | 16% | -10% | 5% | 7% | 5% | 4% |
| Gas | 17 | 17 | 26 | 41 | 52 | 3.0% | 1.7% | 2.3% | 56% | 28% | 101% | 25% | 24% | 26% |
| Coal | 18 | 27 | 54 | 82 | 82 | 2.9% | -0.1% | 1.4% | 53% | -1% | 52% | 53% | 50% | 40% |
| Nuclear | 3 | 4 | 5 | 14 | 29 | 7.1% | 5.2% | 6.2% | 180% | 115% | 500% | 5% | 8% | 15% |
| Hydro | 3 | 4 | 7 | 11 | 15 | 3.2% | 1.7% | 2.5% | 61% | 29% | 107% | 7% | 7% | 7% |
| Wind | 0 | 0 | 0 | 2 | 5 | 16.1% | 4.8% | 10.3% | 844% | 101% | 1797% | 0% | 1% | 2% |
| Other renewables | 1 | 1 | 3 | 8 | 13 | 6.0% | 3.3% | 4.7% | 141% | 64% | 295% | 3% | 5% | 6% |

MTD App. 085

| Energy demand (quadrillion BTUs) | | | | | | Average annual change | | | % change | | | Share of total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regions | 1990 | 2000 | 2010 | 2025 | 2040 | 2010 2025 | 2025 2040 | 2010 2040 | 2010 2025 | 2025 2040 | 2010 2040 | 2010 | 2025 | 2040 |
| **AFRICA** | | | | | | | | | | | | | | |
| Primary | 17 | 22 | 29 | 43 | 59 | 2.5% | 2.2% | 2.4% | 46% | 38% | 101% | 100% | 100% | 100% |
| Oil | 4 | 5 | 7 | 12 | 18 | 3.5% | 2.8% | 3.2% | 69% | 52% | 157% | 24% | 28% | 31% |
| Gas | 2 | 4 | 5 | 8 | 11 | 3.4% | 2.3% | 2.9% | 66% | 42% | 135% | 16% | 18% | 19% |
| Coal | 3 | 3 | 4 | 5 | 7 | 1.1% | 2.2% | 1.6% | 18% | 38% | 62% | 14% | 11% | 11% |
| Nuclear | 0 | 0 | 0 | 0 | 1 | 2.6% | 13.1% | 7.7% | 47% | 536% | 838% | 0% | 0% | 2% |
| Biomass/waste | 8 | 10 | 13 | 17 | 19 | 1.7% | 1.0% | 1.3% | 28% | 16% | 49% | 44% | 39% | 33% |
| Hydro | 0 | 0 | 0 | 1 | 2 | 7.3% | 3.4% | 5.4% | 188% | 66% | 378% | 1% | 2% | 3% |
| Other renewables | 0 | 0 | 0 | 0 | 1 | 12.1% | 5.9% | 8.9% | 452% | 136% | 1200% | 0% | 1% | 1% |
| **Demand by sector** | | | | | | | | | | | | | | |
| Total end-use (including electricity) | 16 | 20 | 26 | 37 | 50 | 2.5% | 2.0% | 2.3% | 45% | 34% | 95% | 100% | 100% | 100% |
| Residential/commercial | 7 | 9 | 12 | 18 | 23 | 2.3% | 1.6% | 2.0% | 42% | 28% | 81% | 48% | 47% | 45% |
| Transportation | 2 | 3 | 4 | 7 | 10 | 3.4% | 2.8% | 3.1% | 66% | 50% | 150% | 16% | 18% | 20% |
| Industrial | 7 | 8 | 9 | 13 | 17 | 2.3% | 2.0% | 2.2% | 40% | 35% | 89% | 36% | 34% | 35% |
| Memo: electricity demand | 1 | 1 | 2 | 4 | 7 | 4.8% | 4.2% | 4.5% | 102% | 85% | 272% | 8% | 10% | 14% |
| Power generation fuel[1] | 3 | 4 | 6 | 9 | 16 | 3.5% | 3.6% | 3.6% | 68% | 71% | 187% | 19% | 22% | 27% |
| **ASIA PACIFIC** | | | | | | | | | | | | | | |
| Primary | 90 | 128 | 202 | 294 | 324 | 2.5% | 0.6% | 1.6% | 46% | 10% | 61% | 100% | 100% | 100% |
| Oil | 29 | 43 | 57 | 76 | 86 | 2.0% | 0.8% | 1.4% | 34% | 12% | 50% | 28% | 26% | 26% |
| Gas | 6 | 11 | 21 | 40 | 56 | 4.5% | 2.2% | 3.3% | 93% | 39% | 168% | 10% | 14% | 17% |
| Coal | 32 | 45 | 89 | 126 | 113 | 2.3% | -0.7% | 0.8% | 42% | -10% | 27% | 44% | 43% | 35% |
| Nuclear | 3 | 5 | 6 | 13 | 26 | 5.5% | 4.6% | 5.0% | 122% | 97% | 336% | 3% | 5% | 8% |
| Biomass/waste | 19 | 20 | 23 | 25 | 23 | 0.5% | -0.6% | 0.0% | 8% | -8% | -1% | 11% | 8% | 7% |
| Hydro | 1 | 2 | 4 | 6 | 8 | 3.6% | 1.7% | 2.6% | 71% | 28% | 119% | 2% | 2% | 3% |
| Other renewables | 0 | 1 | 2 | 7 | 12 | 8.2% | 3.6% | 5.9% | 227% | 70% | 455% | 1% | 2% | 4% |
| **Demand by sector** | | | | | | | | | | | | | | |
| Total end-use (including electricity) | 75 | 100 | 152 | 214 | 234 | 2.3% | 0.6% | 1.4% | 41% | 9% | 54% | 100% | 100% | 100% |
| Residential/commercial | 28 | 33 | 42 | 52 | 58 | 1.5% | 0.7% | 1.1% | 25% | 10% | 38% | 27% | 24% | 25% |
| Transportation | 11 | 18 | 27 | 42 | 54 | 2.9% | 1.7% | 2.3% | 53% | 28% | 96% | 18% | 20% | 23% |
| Industrial | 36 | 50 | 83 | 120 | 122 | 2.5% | 0.1% | 1.3% | 45% | 2% | 47% | 55% | 56% | 52% |
| Memo: electricity demand | 7 | 12 | 24 | 44 | 58 | 4.0% | 1.8% | 2.9% | 81% | 31% | 138% | 16% | 20% | 25% |
| Power generation fuel | 22 | 41 | 77 | 128 | 152 | 3.4% | 1.2% | 2.3% | 66% | 19% | 97% | 38% | 43% | 47% |
| **EUROPE** | | | | | | | | | | | | | | |
| Primary | 74 | 78 | 82 | 77 | 72 | -0.4% | -0.4% | -0.4% | -6% | -6% | -12% | 100% | 100% | 100% |
| Oil | 30 | 32 | 31 | 26 | 24 | -1.1% | -0.6% | -0.8% | -15% | -8% | -22% | 38% | 34% | 33% |
| Gas | 13 | 17 | 20 | 20 | 20 | 0.0% | 0.2% | 0.1% | -1% | 3% | 2% | 24% | 26% | 28% |
| Coal | 19 | 14 | 13 | 10 | 6 | -1.4% | -3.9% | -2.7% | -19% | -45% | -55% | 15% | 13% | 8% |
| Nuclear | 8 | 10 | 10 | 9 | 10 | -0.3% | 0.4% | 0.0% | -5% | 6% | 0% | 12% | 12% | 14% |
| Biomass/waste | 2 | 3 | 5 | 6 | 5 | 0.7% | -0.6% | 0.1% | 12% | -8% | 3% | 6% | 7% | 7% |
| Hydro | 2 | 2 | 2 | 2 | 2 | 0.0% | 0.2% | 0.1% | 0% | 2% | 2% | 3% | 3% | 3% |
| Other renewables | 0 | 0 | 2 | 4 | 5 | 5.1% | 2.2% | 3.6% | 111% | 38% | 192% | 2% | 5% | 7% |
| **Demand by sector** | | | | | | | | | | | | | | |
| Total end-use (including electricity) | 57 | 61 | 64 | 61 | 59 | -0.3% | -0.2% | -0.3% | -5% | -3% | -8% | 100% | 100% | 100% |
| Residential/commercial | 17 | 18 | 21 | 21 | 20 | -0.1% | -0.3% | -0.2% | -2% | -4% | -6% | 33% | 34% | 34% |
| Transportation | 14 | 17 | 19 | 17 | 17 | -0.5% | -0.1% | -0.3% | -7% | -1% | -8% | 29% | 29% | 29% |
| Industrial | 26 | 25 | 24 | 23 | 22 | -0.4% | -0.3% | -0.3% | -6% | -4% | -10% | 38% | 37% | 37% |
| Memo: electricity demand | 9 | 10 | 12 | 13 | 13 | 0.5% | 0.3% | 0.4% | 8% | 5% | 14% | 18% | 21% | 23% |
| Power generation fuel | 27 | 29 | 32 | 31 | 29 | -0.2% | -0.5% | -0.3% | -3% | -7% | -10% | 39% | 40% | 40% |

1. Share based on total primary energy

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| Energy demand (quadrillion BTUs) unless otherwise indicated | | | | | | Average annual change | | | % change | | | Share of total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regions | 1990 | 2000 | 2010 | 2025 | 2040 | 2010 2025 | 2025 2040 | 2010 2040 | 2010 2025 | 2025 2040 | 2010 2040 | 2010 | 2025 | 2040 |
| **LATIN AMERICA** | | | | | | | | | | | | | | |
| Primary | 15 | 20 | 27 | 37 | 47 | 2.2% | 1.5% | 1.9% | 39% | 25% | 74% | 100% | 100% | 100% |
| Oil | 8 | 10 | 13 | 17 | 19 | 2.0% | 0.9% | 1.4% | 35% | 14% | 54% | 47% | 45% | 41% |
| Gas | 3 | 4 | 6 | 9 | 13 | 2.7% | 2.6% | 2.6% | 48% | 46% | 117% | 22% | 23% | 27% |
| Coal | 1 | 1 | 1 | 1 | 2 | 3.2% | 0.5% | 1.8% | 59% | 7% | 71% | 4% | 4% | 3% |
| Nuclear | 0 | 0 | 0 | 0 | 0 | 3.5% | 1.6% | 2.5% | 68% | 26% | 112% | 1% | 1% | 1% |
| Biomass/waste | 3 | 3 | 4 | 5 | 5 | 0.9% | 0.4% | 0.7% | 15% | 7% | 23% | 15% | 13% | 11% |
| Hydro | 1 | 2 | 2 | 3 | 4 | 2.3% | 1.3% | 1.8% | 41% | 22% | 71% | 9% | 9% | 9% |
| Other renewables | 0 | 0 | 1 | 2 | 3 | 5.8% | 4.2% | 5.0% | 133% | 86% | 333% | 3% | 5% | 7% |
| **Demand by sector** | | | | | | | | | | | | | | |
| Total end-use (including electricity) | 14 | 18 | 24 | 33 | 41 | 2.3% | 1.5% | 1.9% | 40% | 24% | 74% | 100% | 100% | 100% |
| Residential/commercial | 3 | 4 | 4 | 6 | 7 | 1.8% | 1.1% | 1.5% | 31% | 19% | 55% | 18% | 17% | 16% |
| Transportation | 4 | 5 | 7 | 11 | 13 | 2.7% | 1.2% | 1.9% | 48% | 19% | 77% | 31% | 33% | 31% |
| Industrial | 7 | 9 | 12 | 17 | 22 | 2.2% | 1.7% | 2.0% | 38% | 29% | 79% | 51% | 51% | 53% |
| Memo: electricity demand | 1 | 2 | 3 | 5 | 7 | 3.3% | 2.4% | 2.9% | 63% | 43% | 134% | 13% | 16% | 18% |
| Power generation fuel | 3 | 4 | 6 | 9 | 13 | 2.7% | 2.1% | 2.4% | 48% | 37% | 104% | 23% | 25% | 27% |
| **MIDDLE EAST** | | | | | | | | | | | | | | |
| Primary | 11 | 18 | 30 | 45 | 53 | 2.8% | 1.2% | 2.0% | 51% | 20% | 81% | 100% | 100% | 100% |
| Oil | 7 | 11 | 15 | 23 | 26 | 2.8% | 0.8% | 1.8% | 51% | 13% | 71% | 52% | 52% | 49% |
| Gas | 4 | 7 | 14 | 20 | 25 | 2.6% | 1.4% | 2.0% | 47% | 22% | 80% | 46% | 45% | 46% |
| Coal | 0 | 0 | 0 | 0 | 0 | -2.2% | -6.1% | -4.2% | -29% | -61% | -72% | 1% | 1% | 0% |
| Nuclear | 0 | 0 | 0 | 0 | 1 | - | 7.6% | - | - | 202% | - | 0% | 1% | 3% |
| Biomass/waste | 0 | 0 | 0 | 0 | 0 | 7.2% | 6.6% | 6.9% | 183% | 163% | 643% | 0% | 0% | 0% |
| Hydro | 0 | 0 | 0 | 0 | 0 | 4.8% | 2.5% | 3.6% | 101% | 46% | 192% | 0% | 0% | 0% |
| Other renewables | 0 | 0 | 0 | 0 | 1 | 11.5% | 6.2% | 8.8% | 409% | 145% | 1148% | 0% | 1% | 1% |
| **Demand by sector** | | | | | | | | | | | | | | |
| Total end-use (including electricity) | 9 | 14 | 23 | 35 | 43 | 2.8% | 1.4% | 2.1% | 51% | 22% | 85% | 100% | 100% | 100% |
| Residential/commercial | 1 | 3 | 4 | 6 | 8 | 2.5% | 1.6% | 2.1% | 45% | 27% | 85% | 19% | 18% | 19% |
| Transportation | 3 | 4 | 6 | 9 | 11 | 2.3% | 1.3% | 1.8% | 40% | 21% | 70% | 27% | 25% | 25% |
| Industrial | 5 | 8 | 13 | 20 | 24 | 3.1% | 1.3% | 2.2% | 59% | 21% | 93% | 54% | 57% | 57% |
| Memo: electricity demand | 1 | 1 | 2 | 5 | 7 | 4.3% | 2.6% | 3.4% | 88% | 46% | 175% | 11% | 13% | 16% |
| Power generation fuel | 3 | 5 | 9 | 14 | 17 | 3.2% | 1.4% | 2.3% | 59% | 24% | 97% | 29% | 31% | 32% |
| **NORTH AMERICA** | | | | | | | | | | | | | | |
| Primary | 95 | 114 | 113 | 118 | 115 | 0.3% | -0.2% | 0.0% | 4% | -3% | 1% | 100% | 100% | 100% |
| Oil | 42 | 49 | 47 | 47 | 44 | 0.1% | -0.5% | -0.2% | 1% | -7% | -6% | 41% | 40% | 38% |
| Gas | 21 | 26 | 28 | 36 | 40 | 1.7% | 0.6% | 1.2% | 29% | 10% | 42% | 25% | 31% | 34% |
| Coal | 20 | 23 | 21 | 14 | 6 | -2.6% | -5.3% | -3.9% | -32% | -56% | -70% | 19% | 12% | 5% |
| Nuclear | 7 | 9 | 10 | 10 | 13 | 0.3% | 1.4% | 0.9% | 5% | 23% | 30% | 9% | 9% | 11% |
| Biomass/waste | 3 | 4 | 3 | 3 | 3 | 0.1% | -0.7% | -0.3% | 2% | -10% | -8% | 3% | 3% | 3% |
| Hydro | 2 | 2 | 2 | 2 | 3 | 0.7% | 0.4% | 0.6% | 12% | 6% | 18% | 2% | 2% | 2% |
| Other renewables | 1 | 1 | 2 | 4 | 7 | 4.5% | 3.2% | 3.8% | 93% | 60% | 209% | 2% | 4% | 6% |
| **Demand by sector** | | | | | | | | | | | | | | |
| Total end-use (including electricity) | 73 | 86 | 87 | 93 | 92 | 0.4% | 0.0% | 0.2% | 7% | -1% | 6% | 100% | 100% | 100% |
| Residential/commercial | 18 | 22 | 23 | 23 | 23 | 0.2% | 0.0% | 0.1% | 2% | 0% | 3% | 26% | 25% | 25% |
| Transportation | 25 | 31 | 32 | 32 | 31 | -0.2% | -0.2% | -0.2% | -2% | -3% | -6% | 37% | 34% | 33% |
| Industrial | 30 | 34 | 32 | 38 | 38 | 1.2% | 0.1% | 0.6% | 19% | 1% | 21% | 36% | 41% | 41% |
| Memo: electricity demand | 11 | 15 | 16 | 18 | 20 | 0.9% | 0.8% | 0.8% | 14% | 13% | 29% | 18% | 20% | 22% |
| Power generation fuel | 33 | 42 | 43 | 44 | 44 | 0.1% | 0.0% | 0.1% | 2% | 0% | 2% | 38% | 37% | 38% |

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| Energy demand (quadrillion BTUs) unless otherwise indicated | | | | | | Average annual change | | | % change | | | Share of total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regions | 1990 | 2000 | 2010 | 2025 | 2040 | 2010 2025 | 2025 2040 | 2010 2040 | 2010 2025 | 2025 2040 | 2010 2040 | 2010 | 2025 | 2040 |
| **RUSSIA/CASPIAN** | | | | | | | | | | | | | | |
| Primary | 57 | 38 | 42 | 49 | 46 | 0.9% | -0.4% | 0.3% | 15% | -5% | 9% | 100% | 100% | 100% |
| Oil | 18 | 8 | 8 | 10 | 10 | 1.6% | 0.0% | 0.8% | 26% | 0% | 26% | 19% | 21% | 22% |
| Gas | 23 | 20 | 23 | 26 | 25 | 0.7% | -0.3% | 0.2% | 11% | -4% | 6% | 55% | 53% | 53% |
| Coal | 13 | 7 | 7 | 7 | 5 | 0.3% | -2.3% | -1.0% | 5% | -30% | -26% | 17% | 15% | 11% |
| Nuclear | 2 | 2 | 3 | 4 | 4 | 2.2% | 1.2% | 1.7% | 38% | 19% | 64% | 6% | 8% | 10% |
| Biomass/waste | 1 | 0 | 0 | 1 | 1 | 1.7% | 0.2% | 0.9% | 29% | 2% | 32% | 1% | 1% | 1% |
| Hydro | 1 | 1 | 1 | 1 | 1 | 0.3% | 0.2% | 0.2% | 4% | 3% | 7% | 2% | 2% | 2% |
| Other renewables | 0 | 0 | 0 | 0 | 0 | 9.1% | 5.0% | 7.0% | 269% | 107% | 662% | 0% | 0% | 0% |
| **Demand by sector** | | | | | | | | | | | | | | |
| Total end-use (including electricity) | 46 | 29 | 33 | 38 | 37 | 0.9% | -0.2% | 0.4% | 15% | -3% | 12% | 100% | 100% | 100% |
| Residential/commercial | 12 | 9 | 9 | 10 | 9 | 0.4% | -0.5% | -0.1% | 6% | -8% | -2% | 27% | 25% | 24% |
| Transportation | 6 | 3 | 4 | 5 | 5 | 1.5% | 0.2% | 0.9% | 24% | 4% | 29% | 12% | 13% | 14% |
| Industrial | 28 | 17 | 20 | 24 | 23 | 1.1% | -0.1% | 0.5% | 17% | -2% | 15% | 61% | 62% | 63% |
| Memo: electricity demand | 5 | 3 | 4 | 5 | 6 | 1.7% | 0.6% | 1.1% | 29% | 9% | 40% | 12% | 14% | 16% |
| Power generation fuel | 27 | 19 | 20 | 22 | 21 | 0.9% | -0.5% | 0.2% | 14% | -8% | 5% | 47% | 46% | 45% |
| **GDP by region (2010$, trillions)** | | | | | | | | | | | | | | |
| World | 37 | 49 | 64 | 102 | 155 | 3.1% | 2.8% | 3.0% | 58% | 52% | 140% | 100% | 100% | 100% |
| OECD | 29 | 37 | 44 | 60 | 80 | 2.1% | 2.0% | 2.0% | 36% | 34% | 82% | 68% | 58% | 51% |
| Non-OECD | 8 | 11 | 21 | 42 | 75 | 4.9% | 3.9% | 4.4% | 105% | 77% | 264% | 32% | 42% | 49% |
| Africa | 1 | 1 | 2 | 3 | 6 | 4.3% | 4.0% | 4.1% | 88% | 79% | 236% | 3% | 3% | 4% |
| Asia Pacific | 8 | 12 | 19 | 36 | 61 | 4.4% | 3.6% | 4.0% | 92% | 70% | 227% | 29% | 35% | 39% |
| China | 1 | 2 | 6 | 16 | 30 | 6.7% | 4.4% | 5.5% | 165% | 90% | 402% | 9% | 15% | 19% |
| India | 0 | 1 | 2 | 4 | 8 | 5.7% | 5.0% | 5.3% | 129% | 108% | 375% | 3% | 4% | 5% |
| Europe | 13 | 16 | 18 | 23 | 30 | 1.7% | 1.7% | 1.7% | 28% | 29% | 66% | 28% | 23% | 19% |
| European Union | 11 | 14 | 16 | 20 | 26 | 1.5% | 1.6% | 1.6% | 25% | 27% | 60% | 25% | 20% | 17% |
| Latin America | 2 | 3 | 4 | 7 | 10 | 3.3% | 3.0% | 3.2% | 64% | 55% | 155% | 6% | 7% | 7% |
| Middle East | 1 | 1 | 2 | 4 | 6 | 3.7% | 3.3% | 3.5% | 74% | 62% | 181% | 3% | 4% | 4% |
| North America | 11 | 15 | 18 | 26 | 37 | 2.6% | 2.3% | 2.5% | 47% | 41% | 107% | 27% | 25% | 24% |
| United States | 9 | 13 | 15 | 22 | 31 | 2.6% | 2.3% | 2.4% | 46% | 41% | 106% | 23% | 22% | 20% |
| Russia/Caspian | 2 | 1 | 2 | 3 | 5 | 3.4% | 2.9% | 3.1% | 66% | 53% | 153% | 3% | 3% | 3% |
| **Energy intensity (thousand BTU per $ GDP)** | | | | | | | | | | | | | | |
| World | 9.7 | 8.6 | 8.2 | 6.5 | 4.6 | -1.5% | -2.2% | -1.9% | -20% | -29% | -43% | | | |
| OECD | 6.6 | 6.0 | 5.3 | 3.9 | 2.8 | -2.0% | -2.2% | -2.1% | -27% | -28% | -47% | | | |
| Non-OECD | 20.1 | 17.1 | 14.3 | 10.2 | 6.6 | -2.2% | -2.9% | -2.5% | -29% | -35% | -54% | | | |
| Africa | 20.7 | 20.6 | 16.5 | 12.8 | 9.9 | -1.7% | -1.7% | -1.7% | -22% | -23% | -40% | | | |
| Asia Pacific | 11.1 | 10.9 | 10.9 | 8.3 | 5.3 | -1.8% | -2.9% | -2.3% | -24% | -35% | -51% | | | |
| China | 41.5 | 21.7 | 16.4 | 9.7 | 5.2 | -3.4% | -4.1% | -3.8% | -41% | -47% | -68% | | | |
| India | 26.8 | 22.9 | 17.0 | 12.8 | 8.2 | -1.9% | -2.9% | -2.4% | -25% | -36% | -52% | | | |
| Europe | 5.8 | 5.0 | 4.5 | 3.3 | 2.4 | -2.0% | -2.1% | -2.1% | -27% | -27% | -47% | | | |
| European Union | 6.0 | 5.1 | 4.5 | 3.3 | 2.4 | -2.1% | -2.1% | -2.1% | -27% | -28% | -47% | | | |
| Latin America | 7.1 | 7.1 | 6.6 | 5.6 | 4.5 | -1.1% | -1.4% | -1.3% | -15% | -20% | -32% | | | |
| Middle East | 12.1 | 13.8 | 14.1 | 12.2 | 9.1 | -0.9% | -2.0% | -1.5% | -13% | -26% | -36% | | | |
| North America | 8.8 | 7.6 | 6.4 | 4.6 | 3.1 | -2.3% | -2.4% | -2.4% | -29% | -31% | -51% | | | |
| United States | 8.8 | 7.6 | 6.3 | 4.3 | 2.9 | -2.5% | -2.5% | -2.5% | -32% | -32% | -54% | | | |
| Russia/Caspian | 31.4 | 31.6 | 20.9 | 14.5 | 9.0 | -2.4% | -3.1% | -2.8% | -31% | -38% | -57% | | | |
| **Energy-related $CO_2$ emissions (B tons)** | | | | | | | | | | | | | | |
| World | 21.3 | 23.9 | 30.7 | 37.4 | 36.9 | 1.3% | -0.1% | 0.6% | 22% | -2% | 20% | 100% | 100% | 100% |
| OECD | 11.3 | 12.8 | 12.8 | 11.9 | 10.0 | -0.5% | -1.2% | -0.8% | -7% | -16% | -22% | 42% | 32% | 27% |
| Non-OECD | 10.0 | 11.0 | 17.9 | 25.5 | 26.9 | 2.4% | 0.3% | 1.4% | 43% | 5% | 50% | 58% | 68% | 73% |
| Africa | 0.7 | 0.9 | 1.2 | 1.7 | 2.5 | 2.7% | 2.5% | 2.6% | 49% | 44% | 115% | 4% | 5% | 7% |
| Asia Pacific | 5.3 | 7.7 | 13.2 | 18.9 | 18.9 | 2.4% | 0.0% | 1.2% | 43% | 0% | 42% | 43% | 50% | 51% |
| China | 2.3 | 3.4 | 7.4 | 10.8 | 9.2 | 2.5% | -1.0% | 0.7% | 45% | -15% | 24% | 24% | 29% | 25% |
| India | 0.6 | 1.0 | 1.7 | 3.2 | 4.2 | 4.1% | 1.8% | 3.0% | 83% | 31% | 140% | 6% | 8% | 11% |
| Europe | 4.5 | 4.3 | 4.3 | 3.7 | 3.1 | -0.9% | -1.3% | -1.1% | -13% | -18% | -28% | 14% | 10% | 8% |
| European Union | 4.2 | 4.0 | 3.9 | 3.2 | 2.6 | -1.2% | -1.5% | -1.3% | -17% | -20% | -33% | 13% | 9% | 7% |
| Latin America | 0.7 | 0.9 | 1.3 | 1.7 | 2.1 | 2.2% | 1.3% | 1.7% | 39% | 21% | 68% | 4% | 5% | 6% |
| Middle East | 0.7 | 1.1 | 1.8 | 2.4 | 2.6 | 2.1% | 0.7% | 1.4% | 36% | 11% | 50% | 6% | 6% | 7% |
| North America | 5.6 | 6.6 | 6.5 | 6.2 | 5.2 | -0.3% | -1.1% | -0.7% | -4% | -16% | -19% | 21% | 17% | 14% |
| United States | 4.9 | 5.7 | 5.5 | 5.0 | 4.0 | -0.7% | -1.4% | -1.0% | -10% | -19% | -26% | 18% | 13% | 11% |
| Russia/Caspian | 3.9 | 2.3 | 2.5 | 2.8 | 2.5 | 0.7% | -0.8% | 0.0% | 11% | -11% | -1% | 8% | 7% | 7% |

**Exxon Mobil Corporation**
Corporate Headquarters
5959 Las Colinas Blvd.
Irving, Texas 75039-2298
exxonmobil.com



SP-138

# Exhibit H

**2015**

**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**WASHINGTON, D.C. 20549**

# FORM 10-K

**☑ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2015

or

**☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number 1-2256

# EXXON MOBIL CORPORATION

(Exact name of registrant as specified in its charter)

| | |
|---|---|
| **NEW JERSEY** | **13-5409005** |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |

**5959 LAS COLINAS BOULEVARD, IRVING, TEXAS 75039-2298**

(Address of principal executive offices) (Zip Code)

**(972) 444-1000**

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

| Title of Each Class | Name of Each Exchange on Which Registered |
|---|---|
| **Common Stock, without par value (4,152,756,609 shares outstanding at January 31, 2016)** | **New York Stock Exchange** |

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☑ Accelerated filer ☐

Non-accelerated filer ☐ Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Act). Yes ☐ No ☑

The aggregate market value of the voting stock held by non-affiliates of the registrant on June 30, 2015, the last business day of the registrant's most recently completed second fiscal quarter, based on the closing price on that date of $83.20 on the New York Stock Exchange composite tape, was in excess of $346 billion.

**Documents Incorporated by Reference: Proxy Statement for the 2016 Annual Meeting of Shareholders (Part III)**

**EXXON MOBIL CORPORATION**
**FORM 10-K**
**FOR THE FISCAL YEAR ENDED DECEMBER 31, 2015**

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**PART IV**

# PART I

## ITEM 1. BUSINESS

Exxon Mobil Corporation was incorporated in the State of New Jersey in 1882. Divisions and affiliated companies of ExxonMobil operate or market products in the United States and most other countries of the world. Their principal business is energy, involving exploration for, and production of, crude oil and natural gas, manufacture of petroleum products and transportation and sale of crude oil, natural gas and petroleum products. ExxonMobil is a major manufacturer and marketer of commodity petrochemicals, including olefins, aromatics, polyethylene and polypropylene plastics and a wide variety of specialty products. Affiliates of ExxonMobil conduct extensive research programs in support of these businesses.

Exxon Mobil Corporation has several divisions and hundreds of affiliates, many with names that include *ExxonMobil*, *Exxon*, *Esso, Mobil* or *XTO*. For convenience and simplicity, in this report the terms *ExxonMobil, Exxon, Esso, Mobil* and *XTO*, as well as terms like *Corporation*, *Company*, *our*, *we* and *its*, are sometimes used as abbreviated references to specific affiliates or groups of affiliates. The precise meaning depends on the context in question.

Throughout ExxonMobil's businesses, new and ongoing measures are taken to prevent and minimize the impact of our operations on air, water and ground. These include a significant investment in refining infrastructure and technology to manufacture clean fuels, as well as projects to monitor and reduce nitrogen oxide, sulfur oxide and greenhouse gas emissions, and expenditures for asset retirement obligations. Using definitions and guidelines established by the American Petroleum Institute, ExxonMobil's 2015 worldwide environmental expenditures for all such preventative and remediation steps, including ExxonMobil's share of equity company expenditures, were $5.6 billion, of which $3.8 billion were included in expenses with the remainder in capital expenditures. The total cost for such activities is expected to decrease to approximately $5 billion in 2016 and 2017, mainly reflecting lower project activity in Canada. Capital expenditures are expected to account for approximately 30 percent of the total.

The energy and petrochemical industries are highly competitive. There is competition within the industries and also with other industries in supplying the energy, fuel and chemical needs of both industrial and individual consumers. The Corporation competes with other firms in the sale or purchase of needed goods and services in many national and international markets and employs all methods of competition which are lawful and appropriate for such purposes.

Operating data and industry segment information for the Corporation are contained in the Financial Section of this report under the following: "Quarterly Information", "Note 18: Disclosures about Segments and Related Information" and "Operating Summary". Information on oil and gas reserves is contained in the "Oil and Gas Reserves" part of the "Supplemental Information on Oil and Gas Exploration and Production Activities" portion of the Financial Section of this report.

ExxonMobil has a long-standing commitment to the development of proprietary technology. We have a wide array of research programs designed to meet the needs identified in each of our business segments. Information on Company-sponsored research and development spending is contained in "Note 3: Miscellaneous Financial Information" of the Financial Section of this report. ExxonMobil held approximately 11 thousand active patents worldwide at the end of 2015. For technology licensed to third parties, revenues totaled approximately $158 million in 2015. Although technology is an important contributor to the overall operations and results of our Company, the profitability of each business segment is not dependent on any individual patent, trade secret, trademark, license, franchise or concession.

The number of regular employees was 73.5 thousand, 75.3 thousand, and 75.0 thousand at years ended 2015, 2014 and 2013, respectively. Regular employees are defined as active executive, management, professional, technical and wage employees who work full time or part time for the Corporation and are covered by the Corporation's benefit plans and programs. Regular employees do not include employees of the company-operated retail sites (CORS). The number of CORS employees was 2.1 thousand, 8.4 thousand, and 9.8 thousand at years ended 2015, 2014 and 2013, respectively. The decrease in CORS employees reflects the multi-year transition of the company-operated retail network in portions of Europe to a more capital-efficient Branded Wholesaler model.

Information concerning the source and availability of raw materials used in the Corporation's business, the extent of seasonality in the business, the possibility of renegotiation of profits or termination of contracts at the election of governments and risks attendant to foreign operations may be found in "Item 1A. Risk Factors" and "Item 2. Properties" in this report.

ExxonMobil maintains a website at exxonmobil.com. Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934 are made available through our website as soon as reasonably practical after we electronically file or furnish the reports to the Securities and Exchange Commission. Also available on the Corporation's website are the Company's Corporate Governance Guidelines and Code of Ethics and Business Conduct, as well as the charters of the audit, compensation and nominating committees of the Board of Directors. Information on our website is not incorporated into this report.

| FUNCTIONAL EARNINGS | 2015 | 2014 | 2013 |
|---|---|---|---|
| | (millions of dollars, except per share amounts) | | |
| **Earnings (U.S. GAAP)** | | | |
| Upstream | | | |
| United States | (1,079) | 5,197 | 4,191 |
| Non-U.S. | 8,180 | 22,351 | 22,650 |
| Downstream | | | |
| United States | 1,901 | 1,618 | 2,199 |
| Non-U.S. | 4,656 | 1,427 | 1,250 |
| Chemical | | | |
| United States | 2,386 | 2,804 | 2,755 |
| Non-U.S. | 2,032 | 1,511 | 1,073 |
| Corporate and financing | (1,926) | (2,388) | (1,538) |
| Net income attributable to ExxonMobil (U.S. GAAP) | 16,150 | 32,520 | 32,580 |
| | | | |
| Earnings per common share | 3.85 | 7.60 | 7.37 |
| Earnings per common share - assuming dilution | 3.85 | 7.60 | 7.37 |

*References in this discussion to total corporate earnings mean net income attributable to ExxonMobil (U.S. GAAP) from the consolidated income statement. Unless otherwise indicated, references to earnings, Upstream, Downstream, Chemical and Corporate and Financing segment earnings, and earnings per share are ExxonMobil's share after excluding amounts attributable to noncontrolling interests.*

### FORWARD-LOOKING STATEMENTS

Statements in this discussion regarding expectations, plans and future events or conditions are forward-looking statements. Actual future financial and operating results, including demand growth and energy source mix; capacity increases; production growth and mix; rates of field decline; financing sources; the resolution of contingencies and uncertain tax positions; environmental and capital expenditures; could differ materially depending on a number of factors, such as changes in the supply of and demand for crude oil, natural gas, and petroleum and petrochemical products and resulting price impacts; the outcome of commercial negotiations; the impact of fiscal and commercial terms; political or regulatory events, and other factors discussed herein and in Item 1A. Risk Factors.

The term "project" as used in this report can refer to a variety of different activities and does not necessarily have the same meaning as in any government payment transparency reports.

### OVERVIEW

The following discussion and analysis of ExxonMobil's financial results, as well as the accompanying financial statements and related notes to consolidated financial statements to which they refer, are the responsibility of the management of Exxon Mobil Corporation. The Corporation's accounting and financial reporting fairly reflect its straightforward business model involving the extracting, manufacturing and marketing of hydrocarbons and hydrocarbon-based products. The Corporation's business model involves the production (or purchase), manufacture and sale of physical products, and all commercial activities are directly in support of the underlying physical movement of goods.

ExxonMobil, with its resource base, financial strength, disciplined investment approach and technology portfolio, is well-positioned to participate in substantial investments to develop new energy supplies. The company's integrated business model, with significant investments in Upstream, Downstream and Chemical segments, reduces the Corporation's risk from changes in commodity prices. While commodity prices are volatile on a short-term basis and depend on supply and demand, ExxonMobil's investment decisions are based on our long-term business outlook, using a disciplined approach in selecting and pursuing the most attractive investment opportunities. The corporate plan is a fundamental annual management process that is the basis for setting near-term operating and capital objectives in addition to providing the longer-term economic assumptions used for investment evaluation purposes. Volumes are based on individual field production profiles, which are also updated annually. Price ranges for crude oil, natural gas, refined products, and chemical products are based on corporate plan assumptions developed annually by major region and are utilized for investment evaluation purposes. Potential investment opportunities are evaluated over a wide range of economic scenarios to establish the resiliency of each opportunity. Once investments are made, a reappraisal process is completed to ensure relevant lessons are learned and improvements are incorporated into future projects.

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

## BUSINESS ENVIRONMENT AND RISK ASSESSMENT

### Long-Term Business Outlook

By 2040, the world's population is projected to grow to approximately 9 billion people, or about 1.8 billion more than in 2014. Coincident with this population increase, the Corporation expects worldwide economic growth to average close to 3 percent per year. As economies and populations grow, and as living standards improve for billions of people, the need for energy will continue to rise. Even with significant efficiency gains, global energy demand is projected to rise by about 25 percent from 2014 to 2040. This demand increase is expected to be concentrated in developing countries (i.e., those that are not member nations of the Organisation for Economic Co-operation and Development).

As expanding prosperity drives global energy demand higher, increasing use of energy-efficient and lower-emission fuels, technologies and practices will continue to help significantly reduce energy consumption and emissions per unit of economic output over time. Substantial efficiency gains are likely in all key aspects of the world's economy through 2040, affecting energy requirements for transportation, power generation, industrial applications, and residential and commercial needs.

Energy for transportation - including cars, trucks, ships, trains and airplanes - is expected to increase by about 30 percent from 2014 to 2040. The growth in transportation energy demand is likely to account for approximately 60 percent of the growth in liquid fuels demand worldwide over this period. Nearly all the world's transportation fleets will continue to run on liquid fuels, which are abundant, widely available, easy to transport, and provide a large quantity of energy in small volumes.

Demand for electricity around the world is likely to increase approximately 65 percent from 2014 to 2040, led by growth in developing countries. Consistent with this projection, power generation is expected to remain the largest and fastest-growing major segment of global energy demand. Meeting the expected growth in power demand will require a diverse set of energy sources. Today, coal-fired generation provides about 40 percent of the world's electricity, but by 2040 its share is likely to decline to about 30 percent, in part as a result of policies to improve air quality and reduce greenhouse gas emissions and the risks of climate change. From 2014 to 2040, the amount of electricity generated using natural gas, nuclear power, and renewables are all likely to double. By 2040, coal, natural gas and renewables are projected to be generating approximately the same share of electricity worldwide, although significant differences will exist across regions reflecting a wide range of factors including the cost and availability of energy types.

Liquid fuels provide the largest share of global energy supplies today due to their broad-based availability, affordability and ease of transportation, distribution and storage to meet consumer needs. By 2040, global demand for liquid fuels is projected to grow to approximately 112 million barrels of oil-equivalent per day, an increase of about 20 percent from 2014. Globally, crude production from traditional conventional sources will likely decrease slightly through 2040, with significant development activity mostly offsetting natural declines from these fields. However, this decrease is expected to be more than offset by rising production from a variety of emerging supply sources - including tight oil, deepwater, oil sands, natural gas liquids and biofuels. The world's resource base is sufficient to meet projected demand through 2040 as technology advances continue to expand the availability of economic supply options. However, access to resources and timely investments will remain critical to meeting global needs with reliable, affordable supplies.

Natural gas is a versatile fuel, suitable for a wide variety of applications, and it is expected to be the fastest-growing major fuel source from 2014 to 2040, meeting about 40 percent of global energy demand growth. Global natural gas demand is expected to rise about 50 percent from 2014 to 2040, with about 45 percent of that increase in the Asia Pacific region. Helping meet these needs will be significant growth in supplies of unconventional gas - the natural gas found in shale and other rock formations that was once considered uneconomic to produce. In total, about 60 percent of the growth in natural gas supplies is expected to be from unconventional sources. However, we expect conventionally-produced natural gas to remain the cornerstone of supply, meeting about two-thirds of global demand in 2040. The worldwide liquefied natural gas (LNG) market is expected to almost triple by 2040, with much of this supply expected to meet rising demand in Asia Pacific.

The world's energy mix is highly diverse and will remain so through 2040. Oil is expected to remain the largest source of energy with its share remaining close to one-third in 2040. Coal is currently the second largest source of energy, but it is likely to lose that position to natural gas in the 2025-2030 timeframe. The share of natural gas is expected to exceed 25 percent by 2040, while the share of coal falls to about 20 percent. Nuclear power is projected to grow significantly, as many nations are likely to expand nuclear capacity to address rising electricity needs as well as energy security and environmental issues. Total renewable energy is likely to reach about 15 percent of total energy by 2040, with biomass, hydro and geothermal contributing a combined share of more than 10 percent. Total energy supplied from wind, solar and biofuels is expected to increase rapidly, growing close to 250 percent from 2014 to 2040, when they will be approaching 4 percent of world energy.

The Corporation anticipates that the world's available oil and gas resource base will grow not only from new discoveries, but also from reserve increases in previously discovered fields. Technology will underpin these increases. The cost to develop and supply these resources will be significant. According to the International Energy Agency, the investment required to meet oil and natural gas supply requirements worldwide over the period 2015-2040 will be about $25 trillion (measured in 2014 dollars) or approximately $1 trillion per year on average.

International accords and underlying regional and national regulations covering greenhouse gas emissions continue to evolve with uncertain timing and outcome, making it difficult to predict their business impact. For many years, the Corporation has taken into account policies established to reduce energy-related greenhouse gas emissions in its long-term *Outlook for Energy*, which is used as a foundation for assessing the business environment and business strategies and investments. The climate accord reached at the recent Conference of the Parties (COP 21) in Paris set many new goals, and while many related policies are still emerging, the *Outlook for Energy* continues to anticipate that such policies will increase the cost of carbon dioxide emissions over time. For purposes of the *Outlook for Energy*, we continue to assume that governments will enact policies that impose rising costs on energy-related $CO_2$ emissions, which we assume will reach an implied cost in OECD nations of about $80 per tonne in 2040. China and other leading non-OECD nations are expected to trail OECD policy initiatives. Nevertheless, as people and nations look for ways to reduce risks of global climate change, they will continue to need practical solutions that do not jeopardize the affordability or reliability of the energy they need. Thus, all practical and economically viable energy sources, both conventional and unconventional, will be needed to continue meeting global energy needs - because of the scale of worldwide energy demand.

The information provided in the Long-Term Business Outlook 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.

**Upstream**

ExxonMobil continues to maintain a diverse portfolio of exploration and development opportunities, which enables the Corporation to be selective, maximizing shareholder value and mitigating political and technical risks. ExxonMobil's fundamental Upstream business strategies guide our global exploration, development, production, and gas and power marketing activities. These strategies include capturing material and accretive opportunities to continually high-grade the resource portfolio, exercising a disciplined approach to investing and cost management, developing and applying high-impact technologies, pursuing productivity and efficiency gains, growing profitable oil and gas production, and capitalizing on growing natural gas and power markets. These strategies are underpinned by a relentless focus on operational excellence, commitment to innovative technologies, development of our employees, and investment in the communities within which we operate.

As future development projects and drilling activities bring new production online, the Corporation expects a shift in the geographic mix and in the type of opportunities from which volumes are produced. Oil equivalent production from North America is expected to increase over the next several years based on current capital activity plans, contributing over a third of total production. Further, the proportion of our global production from resource types utilizing specialized technologies such as arctic, deepwater, and unconventional drilling and production systems, as well as LNG, is also expected to grow, becoming a slight majority of production in the next few years. We do not anticipate that the expected change in the geographic mix of production volumes, and in the types of opportunities from which volumes will be produced, will have a material impact on the nature and the extent of the risks disclosed in Item 1A. Risk Factors, or result in a material change in our level of unit operating expenses.

The Corporation anticipates several projects will come online over the next few years providing additional production capacity. However, actual volumes will vary from year to year due to the timing of individual project start-ups; operational outages; reservoir performance; performance of enhanced oil recovery projects; regulatory changes; the impact of fiscal and commercial terms; asset sales; weather events; price effects on production sharing contracts; changes in the amount and timing of capital investments that may vary depending on the oil and gas price environment; and other factors described in Item 1A. Risk Factors.

The upstream industry environment has been challenged throughout 2015 with abundant crude oil supply causing crude oil prices to decrease to levels not seen since 2004, while natural gas prices remained depressed. However, current market conditions are not necessarily indicative of future conditions. The markets for crude oil and natural gas have a history of significant price volatility. ExxonMobil believes prices over the long term will continue to be driven by market supply and demand, with the demand side largely being a function of global economic growth. On the supply side, prices may be significantly impacted by political events, the actions of OPEC and other large government resource owners, and other factors. To manage the risks associated with price, ExxonMobil evaluates annual plans and all investments across a wide range of price scenarios. The Corporation's assessment is that its operations will exhibit strong performance over the long term. This is the outcome of disciplined investment, cost management, asset enhancement programs, and application of advanced technologies.

**Downstream**

ExxonMobil's Downstream is a large, diversified business with refining, logistics, and marketing complexes around the world. The Corporation has a presence in mature markets in North America and Europe, as well as in the growing Asia Pacific region.

ExxonMobil's fundamental Downstream business strategies competitively position the company across a range of market conditions. These strategies include targeting best-in-class operations in all aspects of the business, maximizing value from advanced technologies, capitalizing on integration across ExxonMobil businesses, selectively investing for resilient, advantaged returns, operating efficiently and effectively, and providing quality, valued and differentiated products and services to customers.

ExxonMobil's operating results, as noted in Item 2. Properties, reflect 23 refineries, located in 14 countries, with distillation capacity of 5 million barrels per day and lubricant basestock manufacturing capacity of 136 thousand barrels per day. ExxonMobil's fuels and lubes marketing businesses have significant global reach, with multiple channels to market serving a diverse customer base. Our portfolio of world-renowned brands includes *Exxon*, *Mobil*, *Esso* and *Mobil 1*.

The downstream industry environment improved in 2015. Growth in global demand, stimulated by lower prices for crude oil and transportation fuels, resulted in higher refinery utilization and margins, particularly in Europe and Asia Pacific. Refineries in North America continue to benefit from lower raw material and energy costs due to the abundant supply of crude oil and natural gas. In the near term, we see variability in refining margins, with some regions seeing weaker margins as new capacity additions are expected to outpace growth in global demand for our products, which can also be affected by global economic conditions and regulatory changes.

Refining margins are largely driven by differences in commodity prices and are a function of the difference between what a refinery pays for its raw materials (primarily crude oil) and the market prices for the range of products produced (primarily gasoline, heating oil, diesel oil, jet fuel and fuel oil). Crude oil and many products are widely traded with published prices, including those quoted on multiple exchanges around the world (e.g., New York Mercantile Exchange and Intercontinental Exchange). Prices for these commodities are determined by the global marketplace and are influenced by many factors, including global and regional supply/demand balances, inventory levels, industry refinery operations, import/export balances, currency fluctuations, seasonal demand, weather and political climate.

ExxonMobil's long-term outlook is that industry refining margins will remain subject to intense competition as new capacity additions outpace the growth in global demand. ExxonMobil's integration across the value chain, from refining to marketing, enhances overall value in both fuels and lubricants businesses.

As described in more detail in Item 1A. Risk Factors, proposed carbon policy and other climate-related regulations in many countries, as well as the continued growth in biofuels mandates, could have negative impacts on the Downstream business

In the retail fuels marketing business, competition has caused inflation-adjusted margins to decline. In 2015, ExxonMobil expanded its branded retail site network and progressed the multi-year transition of the direct served (i.e., dealer, company-operated) retail network in portions of Europe to a more capital-efficient Branded Wholesaler model. The company's lubricants business continues to grow, leveraging world-class brands and integration with industry-leading basestock refining capability. ExxonMobil remains a market leader in the high-value synthetic lubricants sector, despite increasing competition.

The Downstream portfolio is continually evaluated during all parts of the business cycle, and numerous asset divestments have been made over the past decade. In 2015, the company divested its 50 percent share of Chalmette Refining, LLC, and reached an agreement for the sale of the refinery in Torrance, California, with change-in-control expected by mid-2016. When investing in the Downstream, ExxonMobil remains focused on selective and resilient projects. In 2015, construction continued on a new delayed coker unit at the refinery in Antwerp, Belgium, to upgrade low-value bunker fuel into higher value diesel products. Funding was approved for the construction of a proprietary hydrocracker at the refinery in Rotterdam, Netherlands, to produce higher value ultra-low sulfur diesel and Group II basestocks. The company completed an expansion of lubricant basestock capacity at the refinery in Baytown, Texas. Finished lubricant plant expansions in China and Finland were completed, and an expansion in Singapore is underway to support demand growth for finished lubricants and greases in key markets.

**Chemical**

Worldwide petrochemical demand continued to improve in 2015, led by growing demand from Asia Pacific manufacturers of industrial and consumer products. North America continued to benefit from abundant supplies of natural gas and gas liquids, providing both low-cost feedstock and energy. Specialty product margins improved in 2015, but continued to be impacted by new industry capacity.

ExxonMobil sustained its competitive advantage through continued operational excellence, investment and cost discipline, a balanced portfolio of products, integration with refining and upstream operations, all underpinned by proprietary technology.

In 2015, we neared completion of the specialty elastomers project at our joint venture facility in Al-Jubail, Saudi Arabia. Construction continued on a major expansion at our Texas facilities, including a new world-scale ethane cracker and polyethylene lines, to capitalize on low-cost feedstock and energy supplies in North America and to meet rapidly growing demand for premium polymers. Construction of new halobutyl rubber and hydrocarbon resin units also progressed in Singapore to further extend our specialty product capacity in Asia Pacific.

**REVIEW OF 2015 AND 2014 RESULTS**

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| | | *(millions of dollars)* | |
| **Earnings (U.S. GAAP)** | | | |
| Net income attributable to ExxonMobil (U.S. GAAP) | 16,150 | 32,520 | 32,580 |

**Upstream**

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| | | *(millions of dollars)* | |
| Upstream | | | |
| United States | (1,079) | 5,197 | 4,191 |
| Non-U.S. | 8,180 | 22,351 | 22,650 |
| Total | 7,101 | 27,548 | 26,841 |

**2015**

Upstream earnings were $7,101 million, down $20,447 million from 2014. Lower realizations decreased earnings by $18.8 billion. Favorable volume and mix effects increased earnings by $810 million, including contributions from new developments. All other items decreased earnings by $2.4 billion, primarily due to lower asset management gains and approximately $500 million of lower favorable one-time tax effects, partly offset by lower expenses of about $230 million. On an oil-equivalent basis, production of 4.1 million barrels per day was up 3.2 percent compared to 2014. Liquids production of 2.3 million barrels per day increased 234,000 barrels per day, with project ramp-up and entitlement effects partly offset by field decline. Natural gas production of 10.5 billion cubic feet per day decreased 630 million cubic feet per day from 2014 as regulatory restrictions in the Netherlands and field decline were partly offset by project ramp-up, work programs and entitlement effects. U.S. Upstream earnings declined $6,276 million from 2014 to a loss of $1,079 million in 2015. Earnings outside the U.S. were $8,180 million, down $14,171 million from the prior year.

**2014**

Upstream earnings were $27,548 million, up $707 million from 2013. Lower prices decreased earnings by $2 billion. Favorable volume effects increased earnings by $510 million. All other items, primarily asset sales and favorable U.S. deferred income tax items, increased earnings by $2.2 billion. On an oil-equivalent basis, production of 4 million barrels per day was down 4.9 percent compared to 2013. Excluding the impact of the expiry of the Abu Dhabi onshore concession, production decreased 1.7 percent. Liquids production of 2.1 million barrels per day decreased 91,000 barrels per day compared to 2013. The Abu Dhabi onshore concession expiry reduced volumes by 135,000 barrels per day. Excluding this impact, liquids production was up 2 percent, driven by project ramp-up and work programs. Natural gas production of 11.1 billion cubic feet per day decreased 691 million cubic feet per day from 2013, as expected U.S. field decline and lower European demand were partially offset by project ramp-up and work programs. Earnings from U.S. Upstream operations were $5,197 million, up $1,006 million from 2013. Earnings outside the U.S. were $22,351 million, down $299 million from the prior year.

**Upstream Additional Information**

| | 2015 | 2014 |
|---|---|---|
| | *(thousands of barrels daily)* | |
| **Volumes Reconciliation** (Oil-equivalent production)*(1)* | | |
| Prior year | 3,969 | 4,175 |
| Entitlements - Net Interest | (14) | (4) |
| Entitlements - Price / Spend / Other | 168 | (43) |
| Quotas | - | - |
| Divestments | (25) | (31) |
| United Arab Emirates Onshore Concession Expiry | (6) | (135) |
| Growth / Other | 5 | 7 |
| Current Year | 4,097 | 3,969 |

*(1) Gas converted to oil-equivalent at 6 million cubic feet = 1 thousand barrels.*

Listed below are descriptions of ExxonMobil's volumes reconciliation factors which are provided to facilitate understanding of the terms.

*Entitlements - Net Interest* are changes to ExxonMobil's share of production volumes caused by non-operational changes to volume-determining factors. These factors consist of net interest changes specified in Production Sharing Contracts (PSCs) which typically occur when cumulative investment returns or production volumes achieve defined thresholds, changes in equity upon achieving pay-out in partner investment carry situations, equity redeterminations as specified in venture agreements, or as a result of the termination or expiry of a concession. Once a net interest change has occurred, it typically will not be reversed by subsequent events, such as lower crude oil prices.

*Entitlements - Price, Spend and Other* are changes to ExxonMobil's share of production volumes resulting from temporary changes to non-operational volume-determining factors. These factors include changes in oil and gas prices or spending levels from one period to another. According to the terms of contractual arrangements or government royalty regimes, price or spending variability can increase or decrease royalty burdens and/or volumes attributable to ExxonMobil. For example, at higher prices, fewer barrels are required for ExxonMobil to recover its costs. These effects generally vary from period to period with field spending patterns or market prices for oil and natural gas. Such factors can also include other temporary changes in net interest as dictated by specific provisions in production agreements.

*Quotas* are changes in ExxonMobil's allowable production arising from production constraints imposed by countries which are members of the Organization of the Petroleum Exporting Countries (OPEC). Volumes reported in this category would have been readily producible in the absence of the quota.

*Divestments* are reductions in ExxonMobil's production arising from commercial arrangements to fully or partially reduce equity in a field or asset in exchange for financial or other economic consideration.

*Growth and Other* factors comprise all other operational and non-operational factors not covered by the above definitions that may affect volumes attributable to ExxonMobil. Such factors include, but are not limited to, production enhancements from project and work program activities, acquisitions including additions from asset exchanges, downtime, market demand, natural field decline, and any fiscal or commercial terms that do not affect entitlements.

**Downstream**

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| | | *(millions of dollars)* | |
| Downstream | | | |
| United States | 1,901 | 1,618 | 2,199 |
| Non-U.S. | 4,656 | 1,427 | 1,250 |
| Total | 6,557 | 3,045 | 3,449 |

**2015**

Downstream earnings of $6,557 million increased $3,512 million from 2014. Stronger margins increased earnings by $4.1 billion, while volume and mix effects decreased earnings by $200 million. All other items decreased earnings by $420 million, reflecting nearly $560 million in higher maintenance expense and about $280 million in unfavorable inventory impacts, partly offset by favorable foreign exchange effects. Petroleum product sales of 5.8 million barrels per day were 121,000 barrels per day lower than 2014. U.S. Downstream earnings were $1,901 million, an increase of $283 million from 2014. Non-U.S. Downstream earnings were $4,656 million, up $3,229 million from the prior year.

**2014**

Downstream earnings of $3,045 million decreased $404 million from 2013. Lower margins decreased earnings by $230 million. Volume and mix effects increased earnings by $480 million. All other items, primarily unfavorable foreign exchange and tax impacts, partially offset by lower expenses, decreased earnings by $650 million. Petroleum product sales of 5.9 million barrels per day were in line with 2013. U.S. Downstream earnings were $1,618 million, a decrease of $581 million from 2013. Non-U.S. Downstream earnings were $1,427 million, up $177 million from the prior year.

**Chemical**

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| | | *(millions of dollars)* | |
| Chemical | | | |
| United States | 2,386 | 2,804 | 2,755 |
| Non-U.S. | 2,032 | 1,511 | 1,073 |
| Total | 4,418 | 4,315 | 3,828 |

**2015**

Chemical earnings of $4,418 million increased $103 million from 2014. Stronger margins increased earnings by $590 million. Favorable volume and mix effects increased earnings by $220 million. All other items decreased earnings by $710 million, reflecting about $680 million in unfavorable foreign exchange effects and $220 million in negative tax and inventory impacts, partly offset by asset management gains. Prime product sales of 24.7 million metric tons were up 478,000 metric tons from 2014. U.S. Chemical earnings were $2,386 million, down $418 million from 2014. Non-U.S. Chemical earnings were $2,032 million, $521 million higher than the prior year.

**2014**

Chemical earnings of $4,315 million increased $487 million from 2013. Higher commodity-driven margins increased earnings by $520 million, while volume and mix effects increased earnings by $100 million. All other items, primarily higher planned expenses, decreased earnings by $130 million. Prime product sales of 24.2 million metric tons were up 172,000 metric tons from 2013, driven by increased Singapore production. U.S. Chemical earnings were $2,804 million, up $49 million from 2013. Non-U.S. Chemical earnings were $1,511 million, $438 million higher than the prior year.

**Corporate and Financing**

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| | | *(millions of dollars)* | |
| Corporate and financing | (1,926) | (2,388) | (1,538) |

**2015**

Corporate and financing expenses were $1,926 million in 2015 compared to $2,388 million in 2014, with the decrease due mainly to net favorable tax-related items.

**2014**

Corporate and financing expenses were $2,388 million in 2014, up $850 million from 2013 due primarily to tax-related items.

## LIQUIDITY AND CAPITAL RESOURCES

### Sources and Uses of Cash

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| | | *(millions of dollars)* | |
| Net cash provided by/(used in) | | | |
| Operating activities | 30,344 | 45,116 | 44,914 |
| Investing activities | (23,824) | (26,975) | (34,201) |
| Financing activities | (7,037) | (17,888) | (15,476) |
| Effect of exchange rate changes | (394) | (281) | (175) |
| Increase/(decrease) in cash and cash equivalents | (911) | (28) | (4,938) |
| | | **(December 31)** | |
| Cash and cash equivalents | 3,705 | 4,616 | 4,644 |
| Cash and cash equivalents - restricted | - | 42 | 269 |
| Total cash and cash equivalents | 3,705 | 4,658 | 4,913 |

Total cash and cash equivalents were $3.7 billion at the end of 2015, $1.0 billion lower than the prior year. The major sources of funds in 2015 were net income including noncontrolling interests of $16.6 billion, the adjustment for the noncash provision of $18.0 billion for depreciation and depletion, and a net debt increase of $9.3 billion. The major uses of funds included spending for additions to property, plant and equipment of $26.5 billion, the purchase of shares of ExxonMobil stock of $4.0 billion, dividends to shareholders of $12.1 billion and a change in working capital, excluding cash and debt, of $3.1 billion.

Total cash and cash equivalents were $4.7 billion at the end of 2014, $0.3 billion lower than the prior year. The major sources of funds in 2014 were net income including noncontrolling interests of $33.6 billion, the adjustment for the noncash provision of $17.3 billion for depreciation and depletion, a net debt increase of $7.0 billion and collection of advances of $3.3 billion. The major uses of funds included spending for additions to property, plant and equipment of $33.0 billion, the purchase of shares of ExxonMobil stock of $13.2 billion, dividends to shareholders of $11.6 billion and a change in working capital, excluding cash and debt, of $4.9 billion. Included in total cash and cash equivalents at year-end 2014 was $42 million of restricted cash. For additional details, see the Consolidated Statement of Cash Flows.

The Corporation has access to significant capacity of long-term and short-term liquidity. Internally generated funds are expected to cover the majority of financial requirements, supplemented by long-term and short-term debt. On December 31, 2015, the Corporation had unused committed short-term lines of credit of $6.0 billion and unused committed long-term lines of credit of $0.4 billion. Cash that may be temporarily available as surplus to the Corporation's immediate needs is carefully managed through counterparty quality and investment guidelines to ensure it is secure and readily available to meet the Corporation's cash requirements and to optimize returns.

To support cash flows in future periods the Corporation will need to continually find and develop new fields, and continue to develop and apply new technologies and recovery processes to existing fields, in order to maintain or increase production. After a period of production at plateau rates, it is the nature of oil and gas fields eventually to produce at declining rates for the remainder of their economic life. Averaged over all the Corporation's existing oil and gas fields and without new projects, ExxonMobil's production is expected to decline at an average of approximately 3 percent per year over the next few years. Decline rates can vary widely by individual field due to a number of factors, including, but not limited to, the type of reservoir, fluid properties, recovery mechanisms, work activity, and age of the field. Furthermore, the Corporation's net interest in production for individual fields can vary with price and the impact of fiscal and commercial terms.

The Corporation has long been successful at offsetting the effects of natural field decline through disciplined investments in quality opportunities and project execution. On average over the last decade, this has resulted in net annual additions to proved reserves that have exceeded the amount produced. The Corporation anticipates several projects will come online over the next few years providing additional production capacity. However, actual volumes will vary from year to year due to the timing of individual project start-ups; operational outages; reservoir performance; performance of enhanced oil recovery projects; regulatory changes; the impact of fiscal and commercial terms; asset sales; weather events; price effects on production sharing contracts; and changes in the amount and timing of investments that may vary depending on the oil and gas price environment. The Corporation's cash flows are also highly dependent on crude oil and natural gas prices. Please refer to Item 1A. Risk Factors for a more complete discussion of risks.

The Corporation's financial strength enables it to make large, long-term capital expenditures. Capital and exploration expenditures in 2015 were $31.1 billion, reflecting the Corporation's continued active investment program. The Corporation anticipates an investment level of $23.2 billion in 2016. The Corporation is emerging from several years of high capital expenditure levels that supported major long-plateau production projects coming on line. Lower levels of capital spending over the next few years, partly due to cost savings and capital efficiencies, are not expected to delay major project schedules nor have a material effect on our volume capacity outlook.

Actual spending could vary depending on the progress of individual projects and property acquisitions. The Corporation has a large and diverse portfolio of development projects and exploration opportunities, which helps mitigate the overall political and technical risks of the Corporation's Upstream segment and associated cash flow. Further, due to its financial strength, debt capacity and diverse portfolio of opportunities, the risk associated with failure or delay of any single project would not have a significant impact on the Corporation's liquidity or ability to generate sufficient cash flows for operations and its fixed commitments.

### Cash Flow from Operating Activities

#### 2015

Cash provided by operating activities totaled $30.3 billion in 2015, $14.8 billion lower than 2014. The major source of funds was net income including noncontrolling interests of $16.6 billion, a decrease of $17.1 billion. The noncash provision for depreciation and depletion was $18.0 billion, up $0.8 billion from the prior year. The adjustment for net gains on asset sales was $0.2 billion compared to an adjustment of $3.2 billion in 2014. Changes in operational working capital, excluding cash and debt, decreased cash in 2015 by $3.1 billion.

#### 2014

Cash provided by operating activities totaled $45.1 billion in 2014, $0.2 billion higher than 2013. The major source of funds was net income including noncontrolling interests of $33.6 billion, an increase of $0.2 billion. The noncash provision for depreciation and depletion was $17.3 billion, up $0.1 billion from the prior year. The adjustment for net gains on asset sales was $3.2 billion compared to an adjustment of $1.8 billion in 2013. Changes in operational working capital, excluding cash and debt, decreased cash in 2014 by $4.9 billion.

### Cash Flow from Investing Activities

#### 2015

Cash used in investment activities netted to $23.8 billion in 2015, $3.2 billion lower than 2014. Spending for property, plant and equipment of $26.5 billion decreased $6.5 billion from 2014. Proceeds associated with sales of subsidiaries, property, plant and equipment, and sales and returns of investments of $2.4 billion compared to $4.0 billion in 2014. Additional investments and advances were $1.0 billion lower in 2015, while collection of advances was $2.5 billion lower in 2015.

#### 2014

Cash used in investment activities netted to $27.0 billion in 2014, $7.2 billion lower than 2013. Spending for property, plant and equipment of $33.0 billion decreased $0.7 billion from 2013. Proceeds associated with sales of subsidiaries, property, plant and equipment, and sales and returns of investments of $4.0 billion compared to $2.7 billion in 2013. Additional investments and advances were $2.8 billion lower in 2014, while collection of advances was $2.2 billion higher in 2014.

### Cash Flow from Financing Activities

#### 2015

Cash used in financing activities was $7.0 billion in 2015, $10.9 billion lower than 2014. Dividend payments on common shares increased to $2.88 per share from $2.70 per share and totaled $12.1 billion, a pay-out of 75 percent of net income. During the first quarter of 2015, the Corporation issued $8.0 billion of long-term debt. Total debt increased $9.6 billion to $38.7 billion at year-end.

ExxonMobil share of equity decreased $3.6 billion to $170.8 billion. The addition to equity for earnings was $16.2 billion. This was offset by reductions for distributions to ExxonMobil shareholders of $15.1 billion, composed of $12.1 billion in dividends and $3.0 billion of share purchases of ExxonMobil stock to reduce shares outstanding. Foreign exchange translation effects of $8.2 billion for the stronger U.S. currency reduced equity, while a $3.6 billion change in the funded status of the postretirement benefits reserves increased equity.

During 2015, Exxon Mobil Corporation purchased 48 million shares of its common stock for the treasury at a gross cost of $4.0 billion. These purchases were to reduce the number of shares outstanding and to offset shares issued in conjunction with company benefit plans and programs. Shares outstanding were reduced by 1.1 percent from 4,201 million to 4,156 million at the end of 2015. Purchases were made in both the open market and through negotiated transactions. Purchases may be increased, decreased or discontinued at any time without prior notice.

#### 2014

Cash used in financing activities was $17.9 billion in 2014, $2.4 billion higher than 2013. Dividend payments on common shares increased to $2.70 per share from $2.46 per share and totaled $11.6 billion, a pay-out of 36 percent of net income. During the first quarter of 2014, the Corporation issued $5.5 billion of long-term debt. Total debt increased $6.4 billion to $29.1 billion at year-end.

ExxonMobil share of equity increased $0.4 billion to $174.4 billion. The addition to equity for earnings was $32.5 billion. This was offset by reductions for distributions to ExxonMobil shareholders of $23.6 billion, composed of $11.6 billion in dividends and $12.0 billion of share purchases of ExxonMobil stock to reduce shares outstanding. Foreign exchange translation effects of $5.1 billion for the stronger U.S. currency and a $3.1 billion change in the funded status of the postretirement benefits reserves also reduced equity.

During 2014, Exxon Mobil Corporation purchased 136 million shares of its common stock for the treasury at a gross cost of $13.2 billion. These purchases were to reduce the number of shares outstanding and to offset shares issued in conjunction with company benefit plans and programs. Shares outstanding were reduced by 3.1 percent from 4,335 million to 4,201 million at the end of 2014. Purchases were made in both the open market and through negotiated transactions.

**Commitments**

Set forth below is information about the outstanding commitments of the Corporation's consolidated subsidiaries at December 31, 2015. The table combines data from the Consolidated Balance Sheet and from individual notes to the Consolidated Financial Statements.

| | Payments Due by Period | | | | |
|---|---|---|---|---|---|
| Commitments | Note Reference Number | 2016 | 2017-2020 | 2021 and Beyond | Total |
| | | | (millions of dollars) | | |
| Long-term debt *(1)* | 14 | - | 9,902 | 10,023 | 19,925 |
| - Due in one year *(2)* | 6 | 558 | - | - | 558 |
| Asset retirement obligations *(3)* | 9 | 871 | 3,760 | 9,073 | 13,704 |
| Pension and other postretirement obligations *(4)* | 17 | 3,495 | 4,104 | 15,567 | 23,166 |
| Operating leases *(5)* | 11 | 1,653 | 2,167 | 1,057 | 4,877 |
| Unconditional purchase obligations *(6)* | 16 | 133 | 493 | 310 | 936 |
| Take-or-pay obligations *(7)* | | 2,997 | 9,463 | 12,410 | 24,870 |
| Firm capital commitments *(8)* | | 10,320 | 4,438 | 441 | 15,199 |

This table excludes commodity purchase obligations (volumetric commitments but no fixed or minimum price) which are resold shortly after purchase, either in an active, highly liquid market or under long-term, unconditional sales contracts with similar pricing terms. Examples include long-term, noncancelable LNG and natural gas purchase commitments and commitments to purchase refinery products at market prices. Inclusion of such commitments would not be meaningful in assessing liquidity and cash flow, because these purchases will be offset in the same periods by cash received from the related sales transactions. The table also excludes unrecognized tax benefits totaling $9.4 billion as of December 31, 2015, because the Corporation is unable to make reasonably reliable estimates of the timing of cash settlements with the respective taxing authorities. Further details on the unrecognized tax benefits can be found in "Note 19: Income, Sales-Based and Other Taxes."

Notes:

*(1) Includes capitalized lease obligations of $1,238 million.*

*(2) The amount due in one year is included in notes and loans payable of $18,762 million.*

*(3) The fair value of asset retirement obligations, primarily upstream asset removal costs at the completion of field life.*

*(4) The amount by which the benefit obligations exceeded the fair value of fund assets for certain U.S. and non-U.S. pension and other postretirement plans at year end. The payments by period include expected contributions to funded pension plans in 2016 and estimated benefit payments for unfunded plans in all years.*

*(5) Minimum commitments for operating leases, shown on an undiscounted basis, cover drilling equipment, tankers, service stations and other properties. Total includes $1,621 million related to drilling rigs and related equipment.*

*(6) Unconditional purchase obligations (UPOs) are those long-term commitments that are noncancelable or cancelable only under certain conditions, and that third parties have used to secure financing for the facilities that will provide the contracted goods or services. The undiscounted obligations of $936 million mainly pertain to pipeline throughput agreements and include $411 million of obligations to equity companies.*

*(7) Take-or-pay obligations are noncancelable, long-term commitments for goods and services other than UPOs. The undiscounted obligations of $24,870 million mainly pertain to pipeline, manufacturing supply and terminal agreements.*

*(8) Firm commitments related to capital projects, shown on an undiscounted basis, totaled approximately $15.2 billion. These commitments were primarily associated with Upstream projects outside the U.S., of which $8.0 billion was associated with projects in Africa, United Arab Emirates, Canada, Malaysia, Kazakhstan and Australia. The Corporation expects to fund the majority of these projects with internally generated funds, supplemented by long-term and short-term debt.*

### Guarantees

The Corporation and certain of its consolidated subsidiaries were contingently liable at December 31, 2015, for guarantees relating to notes, loans and performance under contracts (Note 16). Where guarantees for environmental remediation and other similar matters do not include a stated cap, the amounts reflect management's estimate of the maximum potential exposure. These guarantees are not reasonably likely to have a material effect on the Corporation's financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

### Financial Strength

On December 31, 2015, the Corporation's unused short-term committed lines of credit totaled approximately $6.0 billion (Note 6) and unused long-term committed lines of credit totaled approximately $0.4 billion (Note 14). The table below shows the Corporation's fixed-charge coverage and consolidated debt-to-capital ratios. The data demonstrate the Corporation's creditworthiness.

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| Fixed-charge coverage ratio (times) | 17.6 | 46.9 | 55.7 |
| Debt to capital (percent) | 18.0 | 13.9 | 11.2 |
| Net debt to capital (percent) | 16.5 | 11.9 | 9.1 |

Management views the Corporation's financial strength, as evidenced by the above financial ratios and other similar measures, to be a competitive advantage of strategic importance. The Corporation's sound financial position gives it the opportunity to access the world's capital markets in the full range of market conditions, and enables the Corporation to take on large, long-term capital commitments in the pursuit of maximizing shareholder value.

### Litigation and Other Contingencies

As discussed in Note 16, a variety of claims have been made against ExxonMobil and certain of its consolidated subsidiaries in a number of pending lawsuits. Based on a consideration of all relevant facts and circumstances, the Corporation does not believe the ultimate outcome of any currently pending lawsuit against ExxonMobil will have a material adverse effect upon the Corporation's operations, financial condition, or financial statements taken as a whole. There are no events or uncertainties beyond those already included in reported financial information that would indicate a material change in future operating results or financial condition. Refer to Note 16 for additional information on legal proceedings and other contingencies.

**CAPITAL AND EXPLORATION EXPENDITURES**

| | 2015 | | | 2014 | | |
|---|---|---|---|---|---|---|
| | U.S. | Non-U.S. | Total | U.S. | Non-U.S. | Total |
| | | | *(millions of dollars)* | | | |
| Upstream *(1)* | 7,822 | 17,585 | 25,407 | 9,401 | 23,326 | 32,727 |
| Downstream | 1,039 | 1,574 | 2,613 | 1,310 | 1,724 | 3,034 |
| Chemical | 1,945 | 898 | 2,843 | 1,690 | 1,051 | 2,741 |
| Other | 188 | - | 188 | 35 | - | 35 |
| Total | 10,994 | 20,057 | 31,051 | 12,436 | 26,101 | 38,537 |

*(1) Exploration expenses included.*

Capital and exploration expenditures in 2015 were $31.1 billion, as the Corporation continued to pursue opportunities to find and produce new supplies of oil and natural gas to meet global demand for energy. The Corporation anticipates an investment level of $23.2 billion in 2016. Actual spending could vary depending on the progress of individual projects and property acquisitions.

Upstream spending of $25.4 billion in 2015 was down 22 percent from 2014, reflecting key project start-ups and capital efficiencies. Investments in 2015 included projects in the U.S. Gulf of Mexico and Alaska, U.S. onshore drilling and continued progress on world-class projects in Canada and Australia. The majority of expenditures are on development projects, which typically take two to four years from the time of recording proved undeveloped reserves to the start of production. The percentage of proved developed reserves was 73 percent of total proved reserves at year-end 2015, and has been over 60 percent for the last ten years.

Capital investments in the Downstream totaled $2.6 billion in 2015, a decrease of $0.4 billion from 2014, mainly reflecting lower refining project spending. The Chemical capital expenditures of $2.8 billion increased $0.1 billion from 2014 with higher investments in the U.S.

**TAXES**

| | 2015 | 2014 | 2013 |
|---|---|---|---|
| | | *(millions of dollars)* | |
| Income taxes | 5,415 | 18,015 | 24,263 |
| *Effective income tax rate* | *34%* | *41%* | *48%* |
| Sales-based taxes | 22,678 | 29,342 | 30,589 |
| All other taxes and duties | 29,790 | 35,515 | 36,396 |
| Total | 57,883 | 82,872 | 91,248 |

**2015**

Income, sales-based and all other taxes and duties totaled $57.9 billion in 2015, a decrease of $25.0 billion or 30 percent from 2014. Income tax expense, both current and deferred, was $5.4 billion, $12.6 billion lower than 2014, as a result of lower earnings and a lower effective tax rate. The effective tax rate was 34 percent compared to 41 percent in the prior year due primarily to a lower share of earnings in higher tax jurisdictions. Sales-based and all other taxes and duties of $52.5 billion in 2015 decreased $12.4 billion as a result of lower sales realizations.

**2014**

Income, sales-based and all other taxes and duties totaled $82.9 billion in 2014, a decrease of $8.4 billion or 9 percent from 2013. Income tax expense, both current and deferred, was $18.0 billion, $6.2 billion lower than 2013, as a result of a lower effective tax rate. The effective tax rate was 41 percent compared to 48 percent in the prior year due primarily to impacts related to the Corporation's asset management program and favorable U.S. deferred tax items. Sales-based and all other taxes and duties of $64.9 billion in 2014 decreased $2.1 billion.

## ENVIRONMENTAL MATTERS

### Environmental Expenditures

| | 2015 | 2014 |
|---|---|---|
| | *(millions of dollars)* | |
| Capital expenditures | 1,869 | 2,666 |
| Other expenditures | 3,777 | 3,522 |
| Total | 5,646 | 6,188 |

Throughout ExxonMobil's businesses, new and ongoing measures are taken to prevent and minimize the impact of our operations on air, water and ground. These include a significant investment in refining infrastructure and technology to manufacture clean fuels, as well as projects to monitor and reduce nitrogen oxide, sulfur oxide and greenhouse gas emissions, and expenditures for asset retirement obligations. Using definitions and guidelines established by the American Petroleum Institute, ExxonMobil's 2015 worldwide environmental expenditures for all such preventative and remediation steps, including ExxonMobil's share of equity company expenditures, were $5.6 billion, of which $3.8 billion were included in expenses with the remainder in capital expenditures. The total cost for such activities is expected to decrease to approximately $5 billion in 2016 and 2017, mainly reflecting lower project activity in Canada. Capital expenditures are expected to account for approximately 30 percent of the total.

### Environmental Liabilities

The Corporation accrues environmental liabilities when it is probable that obligations have been incurred and the amounts can be reasonably estimated. This policy applies to assets or businesses currently owned or previously disposed. ExxonMobil has accrued liabilities for probable environmental remediation obligations at various sites, including multiparty sites where the U.S. Environmental Protection Agency has identified ExxonMobil as one of the potentially responsible parties. The involvement of other financially responsible companies at these multiparty sites could mitigate ExxonMobil's actual joint and several liability exposure. At present, no individual site is expected to have losses material to ExxonMobil's operations or financial condition. Consolidated company provisions made in 2015 for environmental liabilities were $371 million ($780 million in 2014) and the balance sheet reflects accumulated liabilities of $837 million as of December 31, 2015, and $1,066 million as of December 31, 2014.

## MARKET RISKS, INFLATION AND OTHER UNCERTAINTIES

| **Worldwide Average Realizations** *(1)* | 2015 | 2014 | 2013 |
|---|---|---|---|
| Crude oil and NGL ($/barrel) | 44.77 | 87.42 | 97.48 |
| Natural gas ($/kcf) | 2.95 | 4.68 | 4.60 |

*(1) Consolidated subsidiaries.*

Crude oil, natural gas, petroleum product and chemical prices have fluctuated in response to changing market forces. The impacts of these price fluctuations on earnings from Upstream, Downstream and Chemical operations have varied. In the Upstream, a $1 per barrel change in the weighted-average realized price of oil would have approximately a $375 million annual after-tax effect on Upstream consolidated plus equity company earnings. Similarly, a $0.10 per kcf change in the worldwide average gas realization would have approximately a $150 million annual after-tax effect on Upstream consolidated plus equity company earnings. For any given period, the extent of actual benefit or detriment will be dependent on the price movements of individual types of crude oil, taxes and other government take impacts, price adjustment lags in long-term gas contracts, and crude and gas production volumes. Accordingly, changes in benchmark prices for crude oil and natural gas only provide broad indicators of changes in the earnings experienced in any particular period.

In the very competitive downstream and chemical environments, earnings are primarily determined by margin capture rather than absolute price levels of products sold. Refining margins are a function of the difference between what a refiner pays for its raw materials (primarily crude oil) and the market prices for the range of products produced. These prices in turn depend on global and regional supply/demand balances, inventory levels, refinery operations, import/export balances and weather.

The global energy markets can give rise to extended periods in which market conditions are adverse to one or more of the Corporation's businesses. Such conditions, along with the capital-intensive nature of the industry and very long lead times associated with many of our projects, underscore the importance of maintaining a strong financial position. Management views the Corporation's financial strength as a competitive advantage.

In general, segment results are not dependent on the ability to sell and/or purchase products to/from other segments. Instead, where such sales take place, they are the result of efficiencies and competitive advantages of integrated refinery/chemical complexes. Additionally, intersegment sales are at market-based prices. The products bought and sold between segments can also be acquired in worldwide markets that have substantial liquidity, capacity and transportation capabilities. About 35 percent of the Corporation's intersegment sales represent Upstream production sold to the Downstream. Other intersegment sales include those between refineries and chemical plants related to raw materials, feedstocks and finished products.

Although price levels of crude oil and natural gas may rise or fall significantly over the short to medium term due to global economic conditions, political events, decisions by OPEC and other major government resource owners and other factors, industry economics over the long term will continue to be driven by market supply and demand. Accordingly, the Corporation evaluates the viability of all of its investments over a broad range of prices. The Corporation's assessment is that its operations will continue to be successful over the long term in a variety of market conditions. This is the outcome of disciplined investment and asset management programs.

The Corporation has an active asset management program in which underperforming assets are either improved to acceptable levels or considered for divestment. The asset management program includes a disciplined, regular review to ensure that all assets are contributing to the Corporation's strategic objectives. The result is an efficient capital base, and the Corporation has seldom had to write down the carrying value of assets, even during periods of low commodity prices.

**Risk Management**

The Corporation's size, strong capital structure, geographic diversity and the complementary nature of the Upstream, Downstream and Chemical businesses reduce the Corporation's enterprise-wide risk from changes in interest rates, currency rates and commodity prices. As a result, the Corporation makes limited use of derivative instruments to mitigate the impact of such changes. With respect to derivatives activities, the Corporation believes that there are no material market or credit risks to the Corporation's financial position, results of operations or liquidity as a result of the derivatives described in Note 13. The Corporation does not engage in speculative derivative activities or derivative trading activities nor does it use derivatives with leveraged features. Credit risk associated with the Corporation's derivative position is mitigated by several factors, including the use of derivative clearing exchanges and the quality of and financial limits placed on derivative counterparties. The Corporation maintains a system of controls that includes the authorization, reporting and monitoring of derivative activity.

The Corporation is exposed to changes in interest rates, primarily on its short-term debt and the portion of long-term debt that carries floating interest rates. The impact of a 100-basis-point change in interest rates affecting the Corporation's debt would not be material to earnings, cash flow or fair value. The Corporation has access to significant capacity of long-term and short-term liquidity. Internally generated funds are expected to cover the majority of financial requirements, supplemented by long-term and short-term debt. Some joint-venture partners are dependent on the credit markets, and their funding ability may impact the development pace of joint-venture projects.

The Corporation conducts business in many foreign currencies and is subject to exchange rate risk on cash flows related to sales, expenses, financing and investment transactions. The impacts of fluctuations in exchange rates on ExxonMobil's geographically and functionally diverse operations are varied and often offsetting in amount. The Corporation makes limited use of currency exchange contracts to mitigate the impact of changes in currency values, and exposures related to the Corporation's limited use of the currency exchange contracts are not material.

**Inflation and Other Uncertainties**

The general rate of inflation in many major countries of operation has remained moderate over the past few years, and the associated impact on non-energy costs has generally been mitigated by cost reductions from efficiency and productivity improvements. Beginning several years ago, an extended period of increased demand for certain services and materials resulted in higher operating and capital costs. More recently, multiple market changes, including general commodity price decreases, lower oil prices and reduced upstream industry activity, have contributed to lower prices for oilfield services and materials. The Corporation works to minimize costs in all commodity price environments through its economies of scale in global procurement and its efficient project management practices.

## RECENTLY ISSUED ACCOUNTING STANDARDS

In May 2014, the Financial Accounting Standards Board issued a new standard, *Revenue from Contracts with Customers*. The standard establishes a single revenue recognition model for all contracts with customers, eliminates industry specific requirements, and expands disclosure requirements. The standard is required to be adopted beginning January 1, 2018.

"Sales and Other Operating Revenue" on the Consolidated Statement of Income includes sales, excise and value-added taxes on sales transactions. When the Corporation adopts the standard, revenue will exclude sales-based taxes collected on behalf of third parties. This change in reporting will not impact earnings.

The Corporation continues to evaluate other areas of the standard and its effect on the Corporation's financial statements.

## CRITICAL ACCOUNTING ESTIMATES

The Corporation's accounting and financial reporting fairly reflect its straightforward business model involving the extracting, refining and marketing of hydrocarbons and hydrocarbon-based products. The preparation of financial statements in conformity with U.S. Generally Accepted Accounting Principles (GAAP) requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. The Corporation's accounting policies are summarized in Note 1.

### Oil and Gas Reserves

Evaluations of oil and gas reserves are important to the effective management of upstream assets. They are an integral part of investment decisions about oil and gas properties such as whether development should proceed. Oil and gas reserve quantities are also used as the basis to calculate unit-of-production depreciation rates and to evaluate impairment.

Oil and gas reserves include both proved and unproved reserves. Proved oil and gas reserves are those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible. Unproved reserves are those with less than reasonable certainty of recoverability and include probable reserves. Probable reserves are reserves that, together with proved reserves, are as likely as not to be recovered.

The estimation of proved reserves is an ongoing process based on rigorous technical evaluations, commercial and market assessment, and detailed analysis of well information such as flow rates and reservoir pressure declines. The estimation of proved reserves is controlled by the Corporation through long-standing approval guidelines. Reserve changes are made within a well-established, disciplined process driven by senior level geoscience and engineering professionals, assisted by the Reserves Technical Oversight group which has significant technical experience, culminating in reviews with and approval by senior management. Notably, the Corporation does not use specific quantitative reserve targets to determine compensation. Key features of the reserve estimation process are covered in Disclosure of Reserves in Item 2.

Although the Corporation is reasonably certain that proved reserves will be produced, the timing and amount recovered can be affected by a number of factors including completion of development projects, reservoir performance, regulatory approvals and significant changes in long-term oil and gas price levels.

Proved reserves can be further subdivided into developed and undeveloped reserves. The percentage of proved developed reserves was 73 percent of total proved reserves at year-end 2015 (including both consolidated and equity company reserves), and has been over 60 percent for the last ten years.

Revisions can include upward or downward changes in previously estimated volumes of proved reserves for existing fields due to the evaluation or re-evaluation of (1) already available geologic, reservoir or production data, (2) new geologic, reservoir or production data or (3) changes in prices and year-end costs that are used in the estimation of reserves. Revisions can also result from significant changes in development strategy or production equipment/facility capacity.

When crude oil and natural gas prices are in the range seen in late 2015 and early 2016 for an extended period of time, under the SEC definition of proved reserves, certain quantities of oil and natural gas, such as oil sands operations in Canada and natural gas operations in North America could temporarily not qualify as proved reserves. Amounts that could be required to be de-booked as proved reserves on an SEC basis are subject to being re-booked as proved reserves at some point in the future when price levels recover, costs decline, or operating efficiencies occur. Under the terms of certain contractual arrangements or government royalty regimes, lower prices can also increase proved reserves attributable to ExxonMobil. We do not expect any temporary changes in reported proved reserves under SEC definitions to affect the operation of the underlying projects or to alter our outlook for future production volumes.

**Impact of Oil and Gas Reserves on Depreciation.** The calculation of unit-of-production depreciation is a critical accounting estimate that measures the depreciation of upstream assets. It is the ratio of actual volumes produced to total proved reserves or proved developed reserves (those proved reserves recoverable through existing wells with existing equipment and operating methods), applied to the asset cost. In the event that the unit-of-production method does not result in an equitable allocation of cost over the economic life of an upstream asset, an alternative such as the straight-line method is used. The volumes produced and asset cost are known and, while proved reserves have a high probability of recoverability they are based on estimates that are subject to some variability. While the revisions the Corporation has made in the past are an indicator of variability, they have had a very small impact on the unit-of-production rates because they have been small compared to the large reserves base.

**Impact of Oil and Gas Reserves, Prices and Margins on Testing for Impairment.** The Corporation performs impairment assessments whenever events or circumstances indicate that the carrying amounts of its long-lived assets (or group of assets) may not be recoverable through future operations or disposition. Assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of other groups of assets for this assessment.

Potential trigger events for impairment evaluation include:

- a significant decrease in the market price of a long-lived asset;
- a significant adverse change in the extent or manner in which an asset is being used or in its physical condition including a significant decrease in current and projected reserve volumes;
- a significant adverse change in legal factors or in the business climate that could affect the value, including an adverse action or assessment by a regulator;
- an accumulation of project costs significantly in excess of the amount originally expected;
- a current-period operating loss combined with a history and forecast of operating or cash flow losses; and
- a current expectation that, more likely than not, a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life.

The Corporation performs asset valuation analyses on an ongoing basis as a part of its asset management program. These analyses and other profitability reviews assist the Corporation in assessing whether the carrying amounts of any of its assets may not be recoverable.

In general, the Corporation does not view temporarily low prices or margins as a trigger event for conducting impairment tests. The markets for crude oil, natural gas and petroleum products have a history of significant price volatility. Although prices will occasionally drop significantly, industry prices over the long term will continue to be driven by market supply and demand. On the supply side, industry production from mature fields is declining, but this is being offset by production from new discoveries and field developments. OPEC production policies also have an impact on world oil supplies. The demand side is largely a function of global economic growth. The relative growth/decline in supply versus demand will determine industry prices over the long term, and these cannot be accurately predicted.

If there were a trigger event, the Corporation estimates the future undiscounted cash flows of the affected properties to judge the recoverability of carrying amounts. Cash flows used in impairment evaluations are developed using estimates for future crude oil and natural gas commodity prices, refining and chemical margins, and foreign currency exchange rates. Volumes are based on projected field and facility production profiles, throughput, or sales. These evaluations make use of the Corporation's price, margin, volume, and cost assumptions developed in the annual planning and budgeting process, and are consistent with the criteria management uses to evaluate investment opportunities. Where unproved reserves exist, an appropriately risk-adjusted amount of these reserves may be included in the evaluation.

An asset group would be impaired if its undiscounted cash flows were less than the asset's carrying value. Impairments are measured by the amount by which the carrying value exceeds fair value. Cash flow estimates for impairment testing exclude the effects of derivative instruments.

In light of continued weakness in the upstream industry environment in late 2015, the Corporation undertook an effort to assess its major long-lived assets most at risk for potential impairment. The results of this assessment confirm the absence of a trigger event and indicate that the future undiscounted cash flows associated with these assets substantially exceed the carrying value of the assets. The assessment reflects crude and natural gas prices that are generally consistent with the long-term price forecasts published by third-party industry experts. Critical to the long-term recoverability of certain assets is the assumption that either by supply and demand changes, or due to general inflation, prices will rise in the future. Should increases in long-term prices not materialize, certain of the Corporation's assets will be at risk for impairment. Due to the inherent difficulty in predicting future commodity prices, and the relationship between industry prices and costs, it is not practicable to reasonably estimate a range of potential future impairments related to the Corporation's long-lived assets.

Significant unproved properties are assessed for impairment individually, and valuation allowances against the capitalized costs are recorded based on the estimated economic chance of success and the length of time that the Corporation expects to hold the properties. Properties that are not individually significant are aggregated by groups and amortized based on development risk and average holding period.

Supplemental information regarding oil and gas results of operations, capitalized costs and reserves is provided following the notes to consolidated financial statements. Future prices used for any impairment tests will vary from the ones used in the supplemental oil and gas disclosure and could be lower or higher for any given year.

**Inventories**

Crude oil, products and merchandise inventories are carried at the lower of current market value or cost (generally determined under the last-in, first-out method - LIFO). If crude oil, natural gas, petroleum product and chemical product prices continue in the range seen in early 2016, the Corporation could be subject to a lower of cost or market inventory valuation adjustment.

**Asset Retirement Obligations**

The Corporation incurs retirement obligations for certain assets. The fair values of these obligations are recorded as liabilities on a discounted basis, which is typically at the time the assets are installed. In the estimation of fair value, the Corporation uses assumptions and judgments regarding such factors as the existence of a legal obligation for an asset retirement obligation; technical assessments of the assets; estimated amounts and timing of settlements; discount rates; and inflation rates. Asset retirement obligations are disclosed in Note 9 to the financial statements.

**Suspended Exploratory Well Costs**

The Corporation continues capitalization of exploratory well costs when the well has found a sufficient quantity of reserves to justify its completion as a producing well and the Corporation is making sufficient progress assessing the reserves and the economic and operating viability of the project. Exploratory well costs not meeting these criteria are charged to expense. The facts and circumstances that support continued capitalization of suspended wells at year-end are disclosed in Note 10 to the financial statements.

**Consolidations**

The Consolidated Financial Statements include the accounts of those subsidiaries that the Corporation controls. They also include the Corporation's share of the undivided interest in certain upstream assets, liabilities, revenues and expenses. Amounts representing the Corporation's interest in the underlying net assets of other significant entities that it does not control, but over which it exercises significant influence, are accounted for using the equity method of accounting.

Investments in companies that are partially owned by the Corporation are integral to the Corporation's operations. In some cases they serve to balance worldwide risks, and in others they provide the only available means of entry into a particular market or area of interest. The other parties, who also have an equity interest in these companies, are either independent third parties or host governments that share in the business results according to their ownership. The Corporation does not invest in these companies in order to remove liabilities from its balance sheet. In fact, the Corporation has long been on record supporting an alternative accounting method that would require each investor to consolidate its share of all assets and liabilities in these partially-owned companies rather than only its interest in net equity. This method of accounting for investments in partially-owned companies is not permitted by U.S. GAAP except where the investments are in the direct ownership of a share of upstream assets and liabilities. However, for purposes of calculating return on average capital employed, which is not covered by U.S. GAAP standards, the Corporation includes its share of debt of these partially-owned companies in the determination of average capital employed.

**Pension Benefits**

The Corporation and its affiliates sponsor about 100 defined benefit (pension) plans in over 40 countries. The Pension and Other Postretirement Benefits footnote (Note 17) provides details on pension obligations, fund assets and pension expense.

Some of these plans (primarily non-U.S.) provide pension benefits that are paid directly by their sponsoring affiliates out of corporate cash flow rather than a separate pension fund because tax conventions and regulatory practices do not encourage advance funding. Book reserves are established for these plans. The portion of the pension cost attributable to employee service is expensed as services are rendered. The portion attributable to the increase in pension obligations due to the passage of time is expensed over the term of the obligations, which ends when all benefits are paid. The primary difference in pension expense for unfunded versus funded plans is that pension expense for funded plans also includes a credit for the expected long-term return on fund assets.

For funded plans, including those in the U.S., pension obligations are financed in advance through segregated assets or insurance arrangements. These plans are managed in compliance with the requirements of governmental authorities and meet or exceed required funding levels as measured by relevant actuarial and government standards at the mandated measurement dates. In determining liabilities and required contributions, these standards often require approaches and assumptions that differ from those used for accounting purposes.

The Corporation will continue to make contributions to these funded plans as necessary. All defined-benefit pension obligations, regardless of the funding status of the underlying plans, are fully supported by the financial strength of the Corporation or the respective sponsoring affiliate.

Pension accounting requires explicit assumptions regarding, among others, the long-term expected earnings rate on fund assets, the discount rate for the benefit obligations and the long-term rate for future salary increases. Pension assumptions are reviewed annually by outside actuaries and senior management. These assumptions are adjusted as appropriate to reflect changes in market rates and outlook. The long-term expected earnings rate on U.S. pension plan assets in 2015 was 7.00 percent. The 10-year and 20-year actual returns on U.S. pension plan assets were 5 percent and 8 percent, respectively. The Corporation establishes the long-term expected rate of return by developing a forward-looking, long-term return assumption for each pension fund asset class, taking into account factors such as the expected real return for the specific asset class and inflation. A single, long-term rate of return is then calculated as the weighted average of the target asset allocation percentages and the long-term return assumption for each asset class. A worldwide reduction of 0.5 percent in the long-term rate of return on assets would increase annual pension expense by approximately $150 million before tax.

Differences between actual returns on fund assets and the long-term expected return are not recognized in pension expense in the year that the difference occurs. Such differences are deferred, along with other actuarial gains and losses, and are amortized into pension expense over the expected remaining service life of employees.

**Litigation Contingencies**

A variety of claims have been made against the Corporation and certain of its consolidated subsidiaries in a number of pending lawsuits. Management has regular litigation reviews, including updates from corporate and outside counsel, to assess the need for accounting recognition or disclosure of these contingencies. The status of significant claims is summarized in Note 16.

The Corporation accrues an undiscounted liability for those contingencies where the incurrence of a loss is probable, and the amount can be reasonably estimated. These amounts are not reduced by amounts that may be recovered under insurance or claims against third parties, but undiscounted receivables from insurers or other third parties may be accrued separately. The Corporation revises such accruals in light of new information. For contingencies where an unfavorable outcome is reasonably possible and which are significant, the Corporation discloses the nature of the contingency and, where feasible, an estimate of the possible loss. For purposes of our litigation contingency disclosures, "significant" includes material matters as well as other items which management believes should be disclosed.

Management judgment is required related to contingent liabilities and the outcome of litigation because both are difficult to predict. However, the Corporation has been successful in defending litigation in the past. Payments have not had a material adverse effect on operations or financial condition. In the Corporation's experience, large claims often do not result in large awards. Large awards are often reversed or substantially reduced as a result of appeal or settlement.

**Tax Contingencies**

The Corporation is subject to income taxation in many jurisdictions around the world. Significant management judgment is required in the accounting for income tax contingencies and tax disputes because the outcomes are often difficult to predict.

The benefits of uncertain tax positions that the Corporation has taken or expects to take in its income tax returns are recognized in the financial statements if management concludes that it is more likely than not that the position will be sustained with the tax authorities. For a position that is likely to be sustained, the benefit recognized in the financial statements is measured at the largest amount that is greater than 50 percent likely of being realized. A reserve is established for the difference between a position taken or expected to be taken in an income tax return and the amount recognized in the financial statements. The Corporation's unrecognized tax benefits and a description of open tax years are summarized in Note 19.

**Foreign Currency Translation**

The method of translating the foreign currency financial statements of the Corporation's international subsidiaries into U.S. dollars is prescribed by GAAP. Under these principles, it is necessary to select the functional currency of these subsidiaries. The functional currency is the currency of the primary economic environment in which the subsidiary operates. Management selects the functional currency after evaluating this economic environment.

Factors considered by management when determining the functional currency for a subsidiary include the currency used for cash flows related to individual assets and liabilities; the responsiveness of sales prices to changes in exchange rates; the history of inflation in the country; whether sales are into local markets or exported; the currency used to acquire raw materials, labor, services and supplies; sources of financing; and significance of intercompany transactions.

**MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

Management, including the Corporation's Chief Executive Officer, Principal Financial Officer, and Principal Accounting Officer, is responsible for establishing and maintaining adequate internal control over the Corporation's financial reporting. Management conducted an evaluation of the effectiveness of internal control over financial reporting based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that Exxon Mobil Corporation's internal control over financial reporting was effective as of December 31, 2015.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, audited the effectiveness of the Corporation's internal control over financial reporting as of December 31, 2015, as stated in their report included in the Financial Section of this report.

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| Rex W. Tillerson<br>Chief Executive Officer | Andrew P. Swiger<br>Senior Vice President<br>(Principal Financial Officer) | David S. Rosenthal<br>Vice President and Controller<br>(Principal Accounting Officer) |

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

pwc

To the Shareholders of Exxon Mobil Corporation:

In our opinion, the accompanying Consolidated Balance Sheets and the related Consolidated Statements of Income, Comprehensive Income, Changes in Equity, and Cash Flows present fairly, in all material respects, the financial position of Exxon Mobil Corporation and its subsidiaries at December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Corporation's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on these financial statements and on the Corporation's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Dallas, Texas
February 24, 2016

# Exhibit I

**NO. 017-284890-16**

| | | |
|---|---|---|
| EXXON MOBIL CORPORATION<br><br>*Plaintiff*,<br><br>v.<br><br>CLAUDE EARL WALKER, Attorney General of the United States Virgin Islands, in his official capacity, COHEN MILSTEIN SELLERS & TOLL, PLLC, in its official capacity as designee, and LINDA SINGER, in her official capacity as designee,<br><br>*Defendants*. | §<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§<br>§ | IN THE DISTRICT COURT OF<br><br><br><br><br><br>TARRANT COUNTY, TEXAS<br><br><br><br><br><br>17TH JUDICIAL DISTRICT |

**PLEA IN INTERVENTION OF THE STATES OF TEXAS AND ALABAMA**

The States of Texas and Alabama intervene under Rule 60 of the Texas Rules of Civil Procedure to protect the due process rights of their residents.

## I. Background.

At a recent gathering on climate change in New York City, Claude Earl Walker, Attorney General of the United States Virgin Islands, announced an investigation by his office ("Investigation") into a company whose product he claims "is destroying this earth." Pl. Compl. Ex. B at 16. A week earlier, ExxonMobil Corporation, a New Jersey corporation with principal offices in Texas, was served with a subpoena seeking documents responsive to alleged violations of the penal code of the Virgin Islands. *Id.* at ¶ 20, Ex. A at 1. Though General Walker signed the subpoena, it arrived in an envelope postmarked in Washington, D.C, with a return address for Cohen Milstein, a law firm that describes itself as a "pioneer in plaintiff class action lawsuits" and "the most effective law firm in the United States for lawsuits with a strong social and political component." *Id.* at ¶¶ 4, 20. ExxonMobil now seeks to quash the subpoena in Texas state court, asserting, *inter alia*, that the Investigation violates the First Amendment and that the participation of Cohen Milstein, allegedly on a contingency fee basis, is an unconstitutional delegation of prosecutorial power. *See generally id.*

The intervenors are States whose sovereign power and investigative and prosecutorial authority are implicated by the issues and tactics raised herein. General Walker's Investigation appears to be driven by ideology, and not law, as demonstrated not only by his collusion with Cohen Milstein, but also by his request for almost four decades worth of material from a company with no business operations, employees, or assets in the Virgin Islands. *Id.* at ¶ 7. And it is disconcerting that the apparent pilot of the discovery expedition is a private law firm that could take home a percentage of penalties (if assessed) available only to government prosecutors. We agree with ExxonMobil that serious jurisdictional concerns exist, but to protect the fundamental right of impartiality in criminal and quasi-criminal investigations, we intervene.

## II. Standard for Intervention.

Rule of Civil Procedure 60 provides that "[a]ny party may intervene by filing a pleading, subject to being stricken out by the court for sufficient cause on the motion of any party." TEX. R. CIV. P. 60. "Rule 60 . . . provides . . . that any party may intervene" in litigation in which they have a sufficient interest. *Mendez v. Brewer*, 626 S.W.2d 498, 499 (Tex. 1982). "A party has a justiciable interest in a lawsuit, and thus a right to intervene, when his interests will be affected by the litigation." *Jabri v. Alsayyed*, 145 S.W.3d 660, 672 (Tex. App.—Houston [14th Dist.] 2004, no pet.) (citing *Law Offices of Windle Turley v. Ghiasinejad*, 109 S.W.3d 68, 71 (Tex. App.—Fort Worth 2003, no pet.)). And an intervenor is not required to secure a court's permission to intervene in a cause of action or prove that it has standing. *Guar. Fed. Sav. Bank v. Horseshoe Operating Co.*, 793 S.W.2d 652, 657 (Tex. 1990).

There is no pre-judgment deadline for intervention. *Tex. Mut. Ins. Co. v. Ledbetter*, 251 S.W.3d 31, 36 (Tex. 2008). Texas courts recognize an "expansive" intervention doctrine in which a plea in intervention is untimely only if it is "filed after judgment." *State v. Naylor*, 466 S.W.3d 783, 788 (Tex. 2015) (quoting *First Alief Bank v. White*, 682 S.W.2d 251, 252 (Tex. 1984)). There is no final judgment in this case, thus making the States' intervention timely.

## III. Intervenors Have an Interest in Ensuring Constitutional Safeguards for Prosecutions of its Residents.

The alleged use of contingency fees in this case raises serious due process considerations that the intervenors have an interest in protecting.

To begin, government attorneys have a constitutional duty to act impartially in the execution of their office. The Supreme Court has explained that attorneys who represent the public do not represent an ordinary party in litigation, but "a sovereignty whose obligation to govern impartially is as compelling as its obligation to govern at all." *Berger v. United States*, 295 U.S. 78, 88, (1935).

Contingency fee arrangements cut against the duty of impartiality by giving the attorney that represents the government a financial stake in the outcome. Thus, the use of contingency fees is highly suspect in criminal cases and, more generally, when fundamental rights are at stake. *State v. Lead Indus., Ass'n, Inc.*, 951 A.2d 428, 476 n. 48 (R.I. 2008) (doubting that contingent fees would ever be appropriate in a criminal case); *Int'l Paper Co. v. Harris Cty.*, 445 S.W.3d 379, 393 (Tex. App.—Houston [1st Dist.] 2013, no pet.) (contingency fees are impermissible in cases implicating fundamental rights).

Here, the Investigation appears to be a punitive enforcement action, as all of the statutes that ExxonMobil purportedly violated are found in the criminal code of the Virgin Islands. 14 V.I.C. §§ 551, 605, 834. In addition, ExxonMobil asserts a First Amendment interest to be free from viewpoint discrimination. Intervenors, in sum, have a strong interest in ensuring that contingency fee arrangements are not used in criminal and quasi criminal cases where a multitude of fundamental rights, including speech, lie in the balance.

## IV. Conclusion and Prayer for Relief.

The States identified herein, Texas and Alabama, by and through this intervention, request notice and appearance, and the opportunity to defend the rule of law before this Court.

Respectfully submitted,

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|---|---|
| LUTHER STRANGE<br>Attorney General of Alabama<br>501 Washington Ave.<br>Montgomery, Alabama 36104 | KEN PAXTON<br>Attorney General of Texas<br><br>JEFFREY C. MATEER<br>First Assistant Attorney General<br><br>BRANTLEY STARR<br>Deputy Attorney General for Legal Counsel<br><br>AUSTIN R. NIMOCKS<br>Associate Deputy Attorney General for Special Litigation<br><br><u>/s/ Austin R. Nimocks</u><br>AUSTIN R. NIMOCKS<br>Texas Bar No. 24002695<br><br>Special Litigation Division<br>P.O. Box 12548, Mail Code 001<br>Austin, Texas 78711-2548<br><br>*ATTORNEYS FOR INTERVENORS* |

**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing pleading has been served on the following counsel of record on this 16th day of May, 2016, in accordance with Rule 21a of the Texas Rules of Civil Procedure, electronically through the electronic filing manager:

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/s/ Austin R. Nimocks
Austin R. Nimocks
Associate Deputy Attorney General for
Special Litigation

# Exhibit J

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK

In the Matter of the Application of the

PEOPLE OF THE STATE OF NEW YORK, by
ERIC T. SCHNEIDERMAN,
Attorney General of the State of New York,

Petitioner,

For an order pursuant to C.P.L.R. § 2308(b) to compel compliance with a subpoena issued by the Attorney General

- against –

PRICEWATERHOUSECOOPERS LLP and
EXXON MOBIL CORPORATION,

Respondents.

Index No. 451962/2016

**ORAL ARGUMENT REQUESTED**

**MEMORANDUM OF LAW IN SUPPORT OF MOTION TO COMPEL COMPLIANCE WITH AN INVESTIGATIVE SUBPOENA ISSUED BY THE ATTORNEY GENERAL OF THE STATE OF NEW YORK**

**PRELIMINARY STATEMENT**

The Office of the Attorney General ("OAG") issued a subpoena to ExxonMobil Corporation ("Exxon") over one year ago seeking documents relating to Exxon's potential violations of New York anti-fraud laws.[1] Almost five months ago, OAG specifically requested that Exxon prioritize the production of documents concerning the company's valuation, accounting, and reporting of its assets and liabilities, and the impact of climate change on those processes. Exxon has failed to cooperate with this request, and thus, the OAG respectfully requests this Court to compel Exxon's compliance by November 23, 2016.

The Court's intervention is made more urgent by Exxon's tactics. In correspondence with OAG, Exxon ignored this specific request for two and a half months, and then more recently claimed that it intends to comply, while at the same time refusing to commit to specific production dates or to appropriately update its search protocols, and purporting to unilaterally restrict the scope of the request. In statements made to this Court, Exxon acknowledged that the subpoena is valid and (inaccurately) boasted of the company's compliance record. But at the very same time, in a federal district court in Texas, Exxon is effectively moving to quash the subpoena on constitutional grounds it has pointedly avoided raising in this Court. Exxon's transparent purpose is to delay the production of these key documents to OAG and forestall judicial intervention in this jurisdiction long enough for Exxon's forum-shopping exercise to culminate in a federal injunction barring New York courts from enforcing the OAG's subpoena to Exxon before the relevant issues can even be joined.

[1] A true and correct copy of the subpoena is annexed to the accompanying Affirmation of John Oleske, dated November 14, 2016 ("Oleske Aff."), as Exhibit A.

The appropriate place and time for Exxon to make arguments for evading compliance with the subpoena is here and now. This Court is fully capable of giving Exxon a full and fair opportunity to be heard on any such arguments.

The Court should order Exxon to produce the specific documents at issue here by the extended return date of November 23, 2016. The Court should also assert jurisdiction over Exxon's continuing compliance with the subpoena, and order such other and further relief as may be just and proper in implementing a schedule for the prompt production of all other responsive documents.

## FACTUAL BACKGROUND

Exxon is the world's largest publicly traded oil and gas company and one of the world's largest refiners and marketers of petroleum products. (Oleske Aff. ¶ 4.) Many Exxon shareholders and customers reside in New York State (*id.*), and Exxon is therefore subject to New York Executive Law 63(12), General Business Law § 352 (the Martin Act), and General Business Law § 349(a).

OAG is investigating whether Exxon's representations to investors and the public about the impact of climate change on its business, including statements made in filings with the U.S. Securities and Exchange Commission ("SEC") and other public reports, were or are fraudulent or deceptive. (*Id.*, ¶ 5.)

One such subject of the investigation is a report Exxon issued in 2014 entitled *Energy and Carbon – Managing the Risks*. (*Id.*, ¶ 6, Ex. B.) In *Managing the Risks*, Exxon assured investors and others that in making business decisions, Exxon takes into account potential government action to limit greenhouse gas emissions "through the use of a proxy cost of carbon." (*Id.*, Ex. B, p. 17.) Exxon indicated that its use of proxy-cost analysis allowed it to predict that the valuation and recoverability of its reserves would not be affected by economic impacts of climate change. (*Id.*, Ex. B, p. 18.)

To obtain information relevant to these representations, among others, OAG propounded Subpoena Request Nos. 3 and 4. (*Id.*, Ex. A.) Request No. 3 calls for documents reflecting Exxon's general practices concerning the valuation, accounting, and reporting of its assets and liabilities, and its specific practices in integrating climate-change-related impacts in those processes as well as its business decisions more broadly. The documents OAG seeks through this request would explain Exxon's procedures for: (1) valuing its oil and gas reserves; (2) assessing the need for impairment charges or write-downs with respect to those valuations; and (3) calculating and implementing the "proxy" cost of carbon that Exxon claims it uses to evaluate the expected impact of greenhouse gas regulation on its business. Request No. 4 is addressed specifically to how the above processes were described or incorporated in various public statements by Exxon, including in *Managing the Risks*. The specific documents that are the subject of this motion are all responsive to one or both of these requests.

In a June 24, 2016 letter to Exxon's counsel, OAG specifically requested that Exxon produce documents related to OAG's "immediate investigative priorities," which were identified as:

> (i) Exxon's valuation, accounting, and reporting of its assets and liabilities, including reserves, operational assets, extraction costs, and any impairment charges; and (ii) the impact of climate change and related government action on such valuation, accounting, and reporting.

(Oleske Aff. Ex. C.) OAG indicated that many of those documents were likely to be held by custodians that OAG had identified in prior requests, but asked that Exxon identify additional custodians and search terms. (*Id.*) OAG provided a list of non-exclusive exemplar categories of responsive documents, including those relating to reserves valuation and Exxon's implementation of the proxy cost of carbon. (*Id*.)

For the next eleven weeks, Exxon failed to inform the OAG whether it would produce these categories of responsive documents. (*Id.* ¶ 9.) In July 2016, Exxon's counsel stated that Exxon was evaluating the June 24, 2016 request and would respond more fully at an unspecified time in the future. (*Id*., Ex. D.) OAG wrote Exxon later in July to request that Exxon immediately identify any additional custodians and search terms necessary to collect the documents described in the June 24 letter. (*Id*., Ex. E.) In early August 2016, Exxon's counsel stated that it was continuing to review OAG's June 24 request. (*Id*., Ex. F.) In a September 6 letter, OAG informed Exxon that OAG was increasingly concerned with the pace of Exxon's document production and its continued failure to address the issues raised in the June 24 letter. (*Id*., Ex. G.) OAG also raised its ongoing concern that, even though it had requested and prioritized documents from the authors and contributors to *Managing the Risks* starting in December 2015, Exxon had still not completed its production of these documents. (*Id*.) On September 8 and 13, Exxon stated that it had identified additional potential document custodians in response to OAG's June 24 request and that that it would begin producing documents from those custodians. (*Id*., Exs. H, I.)

In an October 14 letter, OAG requested that Exxon expand its list of search terms because —based on OAG's review of certain documents in Exxon's production—it appeared that Exxon employees had used words and phrases to reference proxy cost that might not be captured by the existing search terms. (*Id*., Ex. J.) OAG also identified additional custodians that were likely to have documents concerning proxy cost. (*Id*.).

In a November 1, 2016 letter to Exxon, OAG noted that Exxon had not yet completed its production of the general categories of documents prioritized in OAG's June 24 letter or responded to OAG's October 14 letter specifically regarding proxy cost documents. (*Id*., Ex. K.) OAG asked these documents be produced by November 23, 2016 and that Exxon's counsel confirm by November 4 that Exxon would do so.

Those documents are the documents that OAG now seeks to compel, consisting of:

> Documents concerning (i) Exxon's valuation, accounting, and reporting of its assets and liabilities, including reserves, operational assets, extraction costs, and any impairment charges; and (ii) the impact of climate change and related government action on such valuation, accounting, and reporting, including documents held by additional custodians and documents found using appropriately-targeted search terms, *including, but not limited to*, documents relating to the disclosure, calculation, use and application of the proxy cost of carbon/greenhouse gases (also known as the carbon price).

(*Id*., ¶ 17.) Exxon did not confirm by November 4, 2016 that it would produce those documents by November 23, 2016. (*Id.* ¶ 18.)

In a November 11, 2016 letter to OAG, Exxon stated that it would produce the requested documents, but refused to confirm that production would be completed by November 23, 2016, or any other date. (*Id.,* Ex. L.) Exxon also refused to expand its search terms to address obvious deficiencies in its prior methodology. (*Id.*) Finally, Exxon unilaterally declared that it would not produce documents revealing how it values, accounts for and reports its assets and liabilities generally, but only documents that specifically discuss how those processes are affected by climate change, which would leave OAG understanding only one half of the relevant equation. (*Id.*) Exxon's unilateral limitation would deprive the OAG of documents reflecting Exxon's procedures for assessing the impact, for example, of declining oil and gas prices on reserves, impairments, and capital expenditures.

Contemporaneous with this pattern of delay and resistance, and while feigning compliance in this forum, Exxon is improperly seeking to quash the OAG's subpoena outright in a different forum based on arguments it has not advanced here. Specifically, one business day after OAG moved in this Court to enforce its related third-party subpoena to Exxon's independent auditor, PricewaterhouseCoopers, Exxon sought to add OAG to its pending federal lawsuit in the Northern District of Texas against the Attorney General of Massachusetts. (*Id.*, Ex. M.) This was so Exxon could ask that court to enjoin enforcement of the subpoena to Exxon on constitutional grounds, without revealing this Court's role in supervising compliance with OAG's underlying investigation. (*Id.*) That motion was granted on November 10, 2016. (*Id.*, Ex. N.) The amended complaint in the Texas federal forum that Exxon is now permitted to serve on OAG seeks preliminary and permanent injunctive relief that, if granted, would effectively terminate OAG's investigation of Exxon in New York and with it, the Court's supervision of Exxon's compliance under a New York investigative subpoena. (*Id.*, Ex. O.)

## ARGUMENT

## THE COURT SHOULD GRANT THE ATTORNEY GENERAL'S MOTION TO COMPEL

C.P.L.R. 2308(b)(1) provides that a court "shall order compliance" with a non-judicial subpoena if it finds "the subpoena was authorized." To show that an investigatory subpoena issued by OAG is authorized, the Attorney General need only show "his [legal] authority, the relevance of the items sought, and some factual basis for his investigation." *Am. Dental Coop., Inc. v. Attorney General of N.Y.*, 127 A.D.2d 274, 280 (1st Dep't 1987).

Exxon has conceded in this Court that OAG has the authority to investigate it and it does not dispute that the Subpoena is valid or that OAG has acted in good faith. (ECF Docket No. 42 at pp. 33, 63-64.) Nor would there be any basis to dispute OAG's authority, basis for the

Subpoena, or good faith. As discussed below, OAG has legal authority under New York Executive Law § 63(12), General Business Law § 352 (the Martin Act), and General Business Law (G.B.L.) § 349 to investigate whether Exxon's disclosures to investors and the public are fraudulent, deceptive or misleading. As further discussed, OAG has a factual basis for exercising that authority based Exxon's public and investor-facing statements concerning the risks posed to its business by climate change. Moreover, the specific documents that OAG seeks to compel here are reasonably related to that investigation because Exxon's potentially misleading statements include representations regarding the valuation, accounting and reporting of its assets and liabilities, and the impact of climate change-driven risk on those processes.

### A. The Attorney General Had Legal Authority to Issue the Subpoena.

It is settled law in New York that the Attorney General has broad authority under Executive Law § 63(12), the Martin Act, and G.B.L. § 349 to issue and compel compliance with subpoenas. Courts have long recognized that these statutes grant the Attorney General "broad" investigative authority to issue subpoenas to "conduct investigations into possible violations of the law." *See, e.g., Am. Dental Coop.*, 127 A.D.2d at 279. And the Court of Appeals has declared that "[t]he Attorney General has been given broad investigatory responsibilities to carry out his vital role to protect the public safety and welfare." *LaRossa, Axenfeld & Mitchell v. Abrams*, 62 N.Y.2d 583, 589 (1984).

***Executive Law § 63(12).*** Executive Law § 63(12) empowers the Attorney General to investigate "repeated fraudulent or illegal acts or . . . persistent fraud or illegality in the carrying on, conducting or transaction of business." Exec. Law § 63(12). In support of this investigatory authority, the statute empowers the Attorney General to "take proof and make a determination of the relevant facts, and to issue subpoenas in accordance with the civil practice law and rules." *Id.* Fraudulent conduct covered by Executive Law § 63(12) is broadly defined to include any act that "has the capacity or tendency to deceive, or creates an atmosphere conducive to fraud." *State of N.Y. v. Gen. Elec. Co., Inc.*, 302 A.D.2d 314, 314 (1st Dep't 2003); *see also State of N.Y. v. Applied Card Sys., Inc.* 27 A.D.3d 104, 106 (3d Dep't 2005), *aff'd on other grounds*, 11 N.Y.3d 105 (2008).

It is well-settled that the Attorney General has expansive investigatory authority under Executive Law § 63(12). *See Am. Dental Coop.*, 127 A.D.2d at 279 (Attorney General has "broad" authority "to conduct investigations into possible violations of the law" under Executive Law § 63(12)); *see also Lennon v. Cuomo*, 92 A.D.3d 411, 412 (1st Dep't 2012) (same); *Matter of Hogan v. Cuomo*, 67 A.D.3d 1144, 1146 (3d Dep't 2009) (upholding "broad" subpoena by Attorney General under Executive Law § 63(12) for decades of records); *Matter of Schneiderman v. Rillen*, 33 Misc. 3d 788, 789 (Sup. Ct., Dutchess County 2011) ("The Attorney General is permitted broad authority to conduct investigations based on the complaints of others or on his own information, with respect to fraudulent or illegal business practices.").

***The Martin Act, G.B.L. § 352.*** The Martin Act empowers the Attorney General to investigate securities fraud, "either upon complaint or otherwise." G.B.L. § 352(1). Under the Martin Act, the Attorney General can conduct investigations by examining witnesses and "requir[ing] the production of any books or papers which he deems relevant or material to the inquiry." *Id.* § 352(2).

Courts have repeatedly recognized the broad investigatory authority of the Attorney General under the Martin Act. *Assured Guar. (UK) Ltd. v. J.P. Morgan Inv. Mgt. Inc.*, 18 N.Y.3d 341, 349-50 (2011) ("[T]he Attorney-General [has] broad regulatory and remedial powers to prevent fraudulent securities practices by investigating and intervening at the first indication of possible securities fraud on the public[.]"); *Greenthal v. Lefkowitz*, 342 N.Y.S.2d

415, 417 (1st Dep't 1973), *aff'd*, 32 N.Y.2d 457 (1973) (recognizing that the Martin Act grants the Attorney General "exceedingly broad" power and "wide discretion in determining when an inquiry is warranted"); *Gardner v. Lefkowitz*, 97 Misc. 2d 806, 811-12 (Sup. Ct., N.Y. County 1978) ("[T]he power of the Attorney-General under article 23-A of the General Business Law . . . is exceedingly broad and grants a wide discretion to the Attorney-General in determining whether an inquiry is warranted[.]").

***G.B.L. § 349.*** New York General Business Law § 349 empowers the Attorney General to investigate "[d]eceptive acts or practices in the conduct of any business, trade or commerce[.]" G.B.L. § 349(a). The Attorney General may issue subpoenas in connection with investigations under this statute. *Id.* § 349(f). The Attorney General's authority to issue subpoenas under G.B.L. § 349 is construed broadly. *See Lennon*, 92 A.D.3d at 412 (enforcing subpoena under Attorney General's "broad authority" pursuant to G.B.L. § 349 and Executive Law § 63(12)).

**B. <u>There Is A Factual Basis for OAG's Investigation.</u>**

To show the validity of a nonjudicial subpoena, it is sufficient that "the Attorney General has set forth the basis for his investigation in sufficient detail in an attorney affirmation." *Rillen*, 33 Misc. 3d at 790; *see also Matter of Roemer v. Cuomo*, 67 A.D.3d 1169, 1170 (3d Dep't 2009) (Attorney General need only show "some factual basis for his investigation"); *Abrams v. Thruway Food Mkt. & Shopping Ctr., Inc.*, 147 A.D.2d 143, 147 (2d Dep't 1989) (Attorney General "is not required to establish the existence of probable cause" to issue subpoena); *Am. Dental Coop.*, 127 A.D.2d at 280 (requiring "some factual basis for his investigation"); *Wiener v. Abrams*, 119 Misc. 2d 970, 973 (Sup. Ct., Kings County 1983) ("While persistent and repeated fraud or illegality is an essential predicate for the granting of an injunction under [Executive Law § 63(12)] . . . such a showing is not necessary at this investigatory stage for the issuance of subpoenae duces tecum . . . At this time, it is only required that the Attorney-General establish some relevancy and basis for its investigation[.]") (citations omitted). Further, courts apply a presumption is that the Attorney General is acting in good faith when commencing an investigation and issuing a subpoena. *See, e.g., Anheuser-Busch, Inc. v. Abrams,* 71 N.Y.2d 327, 332 (1988); *Roemer,* 67 A.D.3d at 1171; *Thruway Food Mkt. & Shopping Ctr.,* 147 A.D.2d at 147; *Am. Dental Coop.,* 127 A.D.2d at 280.

Thus, the Attorney General need not show that there "has actually been a repeated and persistent commission of fraudulent or illegal acts" to justify the issuance of a subpoena pursuant to Executive Law § 63(12). *Prestige Sewing Stores of Queens, Inc. v. Lefkowitz,* 54 Misc. 2d 188, 189 (Sup. Ct., N.Y. County 1967) (noting that subpoena power is intended to allow the Attorney General to determine whether or not prohibited acts have been committed). Nor does the Attorney General need to demonstrate probable cause that an illegal act was committed. *Thruway Food Mkt. & Shopping Ctr.,* 147 A.D.2d at 147.

### C. The Documents that OAG Seeks to Compel Are Reasonably Related to the Investigation.

An investigatory subpoena is valid if the material sought has "a reasonable relation to the subject matter under investigation and to the public purpose to be achieved." *Virag v. Hynes*, 54 N.Y.2d 437, 442 (1981) (citation omitted). A court will sustain a subpoena by the Attorney General unless it calls for information that is "utterly irrelevant to any proper inquiry," or the subpoena's "futility . . . to uncover anything legitimate is inevitable or obvious." *La Belle Creole Intl., S. A. v. Attorney General of N.Y.*, 10 N.Y.2d 192, 196-97 (1961) (citations omitted) (holding that, "[w]hatever the ultimate outcome" of the investigation, "there can be no doubt" that the records sought "were material and pertinent in an investigation whose purpose was to ascertain whether or not [a company] was carrying on its affairs in compliance" with State alcohol beverage control laws and Executive Law § 63(12)); *see also Anheuser-Busch*, 71

N.Y.2d at 331-32; *Roemer*, 67 A.D.3d at 1170; *Thruway Food Mkt. & Shopping Ctr.*, 147 A.D.2d at 147. "An investigation would be stymied at the outset if law enforcement officials had to pinpoint exactly what the subpoenaed materials were expected to reveal." *Am. Dental Coop.*, 127 A.D.2d at 283. Further, "[a] subpoena is not rendered invalid merely because it requires production of a substantial number of documents," as "relevancy, and not quantity, is the test of the validity of a subpoena." *Id.* at 282-83 (citation and internal brackets omitted).

Moreover, Exxon cannot use its recalcitrance to use updated search terms or a failure to agree on the same with OAG as a basis to cast doubt on the continuing, reasonable relationship between OAG's ongoing requests and its investigation. *Shaw Group Inc. v. Zurich Am. Ins. Co.*, No. 12-257-JJB-RLB, 2014 U.S. Dist. LEXIS 122516, at *14 (M.D. La. Sept. 3, 2014) ("Failure to reach an agreement on search terms does not relieve [party that received requests] of its obligation to respond to discovery requests."); *see also Tyler v. City of San Diego*, 2015 U.S. Dist. LEXIS 56309, at *5 (S.D. Cal. Apr. 29, 2015) (same).

As established above, the information that OAG seeks to compel bears a reasonable relationship to OAG's investigation of Exxon's public statements concerning the impact of climate change on its business and the company's potential violations of New York law in that regard. Indeed, Exxon has never contested the relationship between the requested categories of documents and OAG's admittedly proper investigative purpose.

## CONCLUSION

For the reasons stated above, the Attorney General respectfully requests this Court to issue the proposed Order: (1) compelling Exxon to produce, no later than November 23, 2016:

> Documents concerning (i) XOM's valuation, accounting, and reporting of its assets and liabilities, including reserves, operational assets, extraction costs, and any impairment charges; and (ii) the impact of climate change and related government action on such valuation, accounting, and reporting, including documents held by additional custodians and documents found using appropriately-targeted search terms, *including, but not limited to*, documents relating to the disclosure, calculation, use and application of the proxy cost of carbon/greenhouse gases (also known as the carbon price);

and (2) retaining continuing jurisdiction over Exxon's compliance with the subpoena, and mandating such other and further relief as the Court deems just and proper in implementing a schedule for the prompt production of all other responsive documents called for by the subpoena.

Dated: New York, New York
November 14, 2016

Respectfully submitted,

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