



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-3010

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MAR 6 2006  
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06026822

February 28, 2006

James Earl Parsons  
Counsel  
Exxon Mobil Corporation  
5959 Las Colinas Boulevard  
Irving, TX 75039-2298

Act: 1934  
Section: \_\_\_\_\_  
Rule: 14A.8  
Public  
Availability: 2/28/2006

Re: Exxon Mobil Corporation

Dear Mr. Parsons:

This is in regard to your letter dated February 22, 2006 concerning the shareholder proposal submitted by Kirk P. Miller for inclusion in ExxonMobil's proxy materials for its upcoming annual meeting of security holders. Your letter indicates that the proponent has withdrawn the proposal, and that ExxonMobil therefore withdraws its January 20, 2006 request for a no-action letter from the Division. Because the matter is now moot, we will have no further comment.

Sincerely,

Mark F. Vilardo  
Special Counsel

cc: Kirk P. Miller  
777 San Antonio Rd, #21  
Palo Alto, CA 94303-4833

**PROCESSED**

**MAR 15 2006**

**THOMSON  
FINANCIAL**

*34088*



January 20, 2006

RECEIVED  
2006 JAN 23 PM 2:47  
OFFICE OF CHIEF COUNSEL  
CORPORATION FINANCE

**VIA NETWORK COURIER**

U. S. Securities and Exchange Commission  
Division of Corporation Finance  
Office of Chief Counsel  
100 F Street, N.E.  
Washington, DC 20549

RE: Securities Exchange Act of 1934 -- Section 14(a); Rule 14a-8  
Omission of shareholder proposal regarding investment in  
renewable energy projects

Gentlemen and Ladies:

Enclosed as Exhibit 1 are copies of correspondence between Kirk Miller and Exxon Mobil Corporation regarding a shareholder proposal for ExxonMobil's upcoming annual meeting. We intend to omit the proposal from our proxy material for the meeting for the reasons explained below. To the extent this letter raises legal issues, it is my opinion as Counsel for ExxonMobil.

Proposal has been substantially implemented.

The proposal requests a report examining the business benefits and reduced risks resulting from including renewable energy and greenhouse gas reduction as a significant core strategy in ExxonMobil's worldwide business model; the business benefits from implementing a significant number of renewable energy projects; and whether implementing a significant amount of renewable energy projects is a "no-regrets" approach to financial and economic risks associated with global warming.

ExxonMobil agrees with the proponent that the company must regularly evaluate its overall business model and specific project investment alternatives, and we do so with industry-leading discipline and success. We also agree that shareholders and the public should be kept well-informed of the company's views and plans regarding significant issues relevant to our business, including renewable energy and greenhouse gas reduction. Over the past years, we

have communicated with shareholders on these topics through a number of venues, including our Corporate Citizenship Report, Summary Annual Report, proxy statement, executive speeches, Op-Eds, and presentations at the annual shareholders' meeting. ExxonMobil's policy with respect to this particular proposal is most specifically addressed in our Report on Energy Trends, Greenhouse Gas Emissions and Alternative Energy issued in February of 2004 (the "2004 Report"). A copy of the 2004 Report is enclosed as Exhibit 2.

As part of ExxonMobil's ongoing effort to keep shareholders and the public informed of our views and actions on these important issues, we are also in the process of finalizing a new report (the "2006 Report") that will provide comprehensive current information on a number of related issues, including ExxonMobil's long-term energy outlook; our approach to greenhouse gas reduction; our research and technology efforts; and how we are protecting shareholder interests in a changing business, regulatory and public opinion environment. Among other things, the 2006 Report will build on feedback we received from the 2004 Report and will include new material intended to respond to issues and questions raised in meetings with investors; in shareholder letters and email to the company and its directors; and in new and repeat shareholder proposals, including the current proposal regarding renewable energy investments.

The 2006 Report is expected to be available shortly. In order to meet the deadline for filing no-action letter requests under Rule 14a-8(j)(1), it is necessary for us to submit this letter prior to finalization of the 2006 Report. However, as we did in connection with the 2004 annual meeting when we faced similar timing constraints, we will provide copies of the new 2006 Report to the SEC staff and the proponent by overnight delivery service as soon as possible after final approval.<sup>1</sup>

The 2004 Report is available on ExxonMobil's website at [www.exxonmobil.com](http://www.exxonmobil.com) and a printed copy is available on request to any shareholder or other interested person free of charge. Once finalized, the 2006 Report will be made public in similar fashion.

Although we believe the 2006 Report will contain important new information regarding the subject matter of this shareholder proposal, we believe the 2004 Report already substantially implements the proposal within the meaning of Rule 14a-8(i)(10).

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<sup>1</sup> A similar process was followed in connection with ExxonMobil's 2004 annual meeting, for which the 14a-8(j)(1) deadline also preceded finalization of the original 2004 Report. The 2004 Report was finalized and provided to the staff and the proponent approximately two weeks after the initial no-action letter request. The staff concurred that two shareholder proposals submitted that year could be omitted under Rule 14a-8(i)(10) in reliance on the 2004 Report. See Exxon Mobil Corporation (available March 18, 2004) (allowing exclusion of proposal to report on company's response to rising pressures to reduce greenhouse gas emissions) and Exxon Mobil Corporation (available March 18, 2004) (allowing exclusion of proposal to report on renewable energy plans). We appreciate that the staff was able to accommodate our timing constraints in 2004 and respectfully request similar accommodation this year as we strive to respond to this year's shareholder proposals in as timely a manner as practicable.

The 2004 Report describes what we see as the business challenges and opportunities that are associated with likely energy trends, greenhouse gas emissions and alternative energy options. The Report also reviews the actions we are taking to safeguard shareholder interests and to provide for future business opportunities. Renewable energy is specifically addressed in sections of the 2004 Report entitled "Future Energy Trends and Developments" and "Renewable Energy Alternatives." The Report explains in detail the company's strategic plans regarding investment in renewable energy sources, which are focused on positioning the company for long-term technological breakthroughs through engagement in research rather than investment in current business opportunities, and explains the rationale underlying those decisions and plans.

In answer to the questions posed by the proponent in items 1 through 3 of the shareholder proposal with respect to the business benefits of implementing a significant number of renewable energy projects, the 2004 Report concludes that "*current* renewable technologies" are not the most profitable available investment alternative for ExxonMobil and that the better course for ExxonMobil with regard to renewables is to focus "on research to make promising options commercially viable." We believe sponsorship of such research will give ExxonMobil "early insight on new technologies for potential commercialization." See p. 16 of the Report.

Our conclusions and approach to investment in renewable energy projects are based on the detailed analysis of future energy trends and developments described on pages 2 through 5 of the 2004 Report; ExxonMobil's approach to business investments, including experience with renewable energy projects, described on pages 6 through 8 of the Report; and the detailed analysis of future renewable energy options set forth on pages 16 through 19 of the Report. The Board's strategy for implementing its decision that shareholder interests would be better served by investment in breakthrough technology research rather than current renewable energy projects is set forth on pages 14 through 15 of the Report.

The 2006 Report will update our long-term outlook for future energy demand and will include new information on the practical and economic issues involved in current renewable energy projects.

As ExxonMobil has consistently explained, we believe technological breakthroughs, not simply expanded scale of existing technologies, are the key to unlocking the potential of alternative low-carbon energy technologies. Consistent with this view, the 2006 Report will include discussion of our efforts with respect to breakthrough technologies. Specific areas of discussion will include carbon capture and storage; hydrogen; wind and solar; gasification; and advanced nuclear technologies, with a cost/benefit assessment of CO<sub>2</sub> abatement alternatives.

Item 1 of the proposal also requests a report on the business benefits and reduced risks of making greenhouse gas reduction a significant core strategy in ExxonMobil's business model. ExxonMobil has in fact for many years taken actions, consistent with our rigorous focus on efficiency, to reduce emissions through improving the efficiency of our own operations and through improving the efficiency with which our products are used. We are also working with the scientific and business communities to undertake research on many fronts to create economically competitive and affordable future options to reduce long-term global emissions. A

detailed discussion of our strategies in this area is set forth on pages 10 through 15 of the 2004 Report.

ExxonMobil welcomes comparison with our competitors, as suggested in the supporting statement for Mr. Miller's proposal. We are confident the fundamental soundness of our business model will continue to yield superior results for our shareholders. We include a chart on page 7 of the 2004 Report comparing return on capital employed (ROCE) of ExxonMobil vs. our key private sector competitors. We believe ROCE to be the most important measure of efficient use of shareholder capital in our particular industry. A chart on page 8 of the Report demonstrates ExxonMobil's significant lead over competition in technology investment. The 2006 Report will show that this leadership continues.

We have also been active in the development of greenhouse gas emission reporting methodologies to provide for consistency and comparability across companies and industries. See pp. 11 and 12 of the 2004 Report. New information on this effort will be provided in the 2006 Report.

The bottom line, as we believe the 2004 Report already makes clear and the 2006 Report will demonstrate further, is that ExxonMobil is already making significant investments with respect to renewable energy alternatives and has already made reduction of greenhouse gas emissions a core business strategy. We thus believe the proposal has already been substantially implemented within the meaning of Rule 14a-8(b)(10) and may be omitted from ExxonMobil's proxy material on that basis. See Exxon Mobil Corporation (available March 18, 2004), also cited in footnote 1 above. That letter related to a proposal very similar to the proponent's current proposal, requesting a report to shareholders with respect to promoting renewable energy sources and developing strategic plans to help bring renewable energy sources into ExxonMobil's energy mix. The staff concurred that the proposal could be excluded from ExxonMobil's proxy material under Rule 14a-8(i)(10) on the basis of the 2004 Report.

Proposal relates to ordinary business.

In addition to substantial implementation, we believe the proposal also relates to ExxonMobil's ordinary business operations and therefore may be excluded under Rule 14a-8(i)(7).

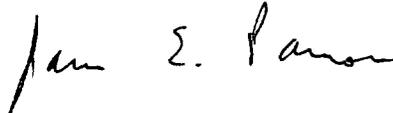
The proposal requests disclosure on "business benefits" and "reduced risks" to ExxonMobil of investing in specific kinds of projects. Cost-benefit analysis of particular investment alternatives and the making of project-by-project investment decisions is the responsibility of management under oversight of the Board of Directors, not the shareholders. See Exxon Mobil Corporation (available March 27, 2003), in which a similar "no-regrets" shareholder proposal submitted by the same proponent to ExxonMobil, requesting a report on implementation of "significant energy efficiency improvements" at all ExxonMobil facilities, was found to relate to ExxonMobil's ordinary business operations and thus to be excludable under Rule 14a-8(i)(7). Substitute the words "renewable energy projects" for "energy efficiency

improvements" in the proponent's 2004 proposal and the current proposal is essentially a repeat submission.

Exclusion of the proposal under Rule 14a-8(i)(7) is also supported by the recent guidance given in Staff Legal Bulletin 14C. In Item D.2. of SLAB 14C, the staff distinguishes excludable proposals such as this one that focus on an internal assessment of risks or liabilities faced by the company from includable proposals focusing generally on the risk that a company's operations may adversely affect the environment.

Please feel free to call me directly at 972-444-1478 if you have any questions or require additional information. In my absence, please contact Lisa K. Bork at 972-444-1473. A copy of this letter and enclosures is being sent to the proponent and co-proponent. Please file-stamp the enclosed copy of this letter and return it to me in the enclosed self-addressed postage-paid envelope. In accordance with SEC rules, I also enclose five additional copies of this letter and enclosures.

Sincerely,

A handwritten signature in black ink that reads "James E. Parsons". The signature is written in a cursive style with a large initial "J" and "P".

James E. Parsons

JEP:clh

Enclosures

Distribution List

Proponent:

Mr. Kirk P. Miller  
777 San Antonio Road, #21  
Palo Alto, CA 94303

Peter Townsend, Secretary  
ExxonMobil Corporation  
5959 Las Colinas Boulevard  
Irving, Texas 75039



12-12-05

Mr. Townsend,

I am an Exxon Mobil shareholder and plan to offer the attached shareholder proposal at Exxon Mobil's 2006 Annual Meeting.

I have also attached proof of ownership in the form of a statement from Smith Barney. I have held these shares for more than one year and will hold the share through the 2006 annual meeting.

Please review the attached proposal and contact me if there are any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Kirk Miller".

Kirk Miller

Submitted by:

Kirk P. Miller  
777 San Antonio Road #21  
Palo Alto, CA 94303  
(650) 858-1640

SHAREHOLDER PROPOSAL

DEC 13 2005

NO. OF SHARES \_\_\_\_\_  
DISTRIBUTION: HHH: FLR: REG:  
JEP: DGH: SMD

**Renewable Energy Implementation Analysis**  
**A 'No Regrets' Approach to the Risk of Global Warming**

Whereas:

- The European Union, members of the United States Government, and virtually all of the worldwide scientific community have accepted the growing evidence that global warming is caused in part by fossil fuel use
- The Kyoto Protocols (part of the UN Framework Convention on Climate Change) came into effect in February 2005, ratified by 156 countries. ExxonMobil's policy relating to global warming and inaction on renewable energy implementation, places shareholders in direct opposition to adopted policies of 156 countries and creates significant shareholder risk.
- Claros Consulting of London, England has concluded: "ExxonMobil's attitude toward climate change is fraught with unnecessary risk and missed opportunities that could put at risk more than \$100 Billion in long-term shareholder value in the company".
- ExxonMobil has funded academic research related to global warming, but has refused to significantly shift business practices or corporate policies to acknowledge market risks posed by global warming.
- Two of ExxonMobil's main international competitors, Royal Dutch Shell and BP, have significantly increased renewable energy implementation, including solar, wind and hydrogen.
- Exxon Mobil has lost ground to competitors in renewable energy, including BP Solar which has over 10% of the global solar market and expected revenues of \$1 billion in 2008.
- Including renewable energy as a significant part of ExxonMobil business model is a "no-regrets" approach to global warming:
  - If further studies convince ExxonMobil that global warming is caused by fossil fuel use, then ExxonMobil will have a better position in the renewable energy marketplace. No Regrets.
  - If further studies show that global warming is not caused by fossil fuel use, then ExxonMobil will still be primarily in the fossil fuel business and have a more diverse business model. No Regrets.

Resolved:

Shareholders request the Board to prepare a report (at reasonable cost and omitting proprietary information) by September 30, 2006 examining the following three questions

(now that the Kyoto protocols were implemented in February 2005):

- 1) The business benefits and reduced risks resulting from including renewable energy and greenhouse gas reduction as a significant core strategy in ExxonMobil's worldwide business model.
- 2) The business benefits from implementing a significant number of renewable energy projects.
- 3) Examine whether implementing a significant amount of renewable energy projects is in fact a "no-regrets" approach to the financial and economic risks associated with global warming.

ExxonMobil can determine the level of investment that is "significant" for each of the questions. One possible comparison benchmark could be the present and projected level of renewable energy investment being made by British Petroleum.

ExxonMobil may elect to examine the reduced political risk and reduced risk of consumer boycotts possible from implementation of a renewable energy effort.

#### **Supporting Statement**

Supporting this resolution will indicate shareholder desire to emphasize greater diversification of energy products through the development of additional non-polluting energy sources.

**Client Statement**  
October 1 - October 31, 2005

156J0500300126000007194 305304AA01 WESTFD01A  
KIRK MILLER AND  
SACHIKO ITAGAKI JTWROS  
777 SAN ANTONIO ROAD #21  
PALO ALTO CA 94303-4833

Account number

Your Broker/Dealer Is  
**CITIGROUP GLOBAL MKTS INC.**  
Your Financial Consultant  
ROCKI / DEFINO  
1144 HOOPER AVE  
CN2005  
TOMS RIVER NJ 08754  
732-914-2300  
Email: victor.j.rocki@smithbarney.com  
www.smithbarney.com

Branch: 800-624-0292



Client Statement  
October 1 - October 31, 2005

Ref: 00007194 00047393

Quantity	Description	Symbol	Date acquired	Cost	Share cost	Current price	Current value	Unrealized gain/(loss)	Average % yield	Anticipated income (annualized)
250	EXXON MOBIL CORP Rating: Citigroup : 1L Argus : 1 Morningstar : 2 S&P : 1	XOM	11/22/93	\$ 5,343.75	\$ 21.375	\$ 56.14	\$ 14,035.00	\$ 8,691.25* LT	2.066%	\$ 290.00

3  
3  
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# ExxonMobil

December 16, 2005

## VIA UPS - OVERNIGHT DELIVERY

Mr. Kirk P. Miller  
777 San Antonio Road, #21  
Palo Alto, CA 94303

Dear Mr. Miller:

This will acknowledge receipt of the proposal concerning a renewable energy report, which you have submitted in connection with ExxonMobil's 2006 annual meeting of shareholders.

Rule 14a-8(b)(1) (copy enclosed) requires that, in order to be eligible to submit a proposal, you must have continuously held at least \$2,000 in market value of the company's securities entitled to vote at the meeting for at least one year by the date you submit a proposal. Your proposal was dated on December 12. The statement you enclosed from SmithBarney is dated October 31 and therefore fails to demonstrate that you owned the required number of shares on December 12, 2005, the date of submission of your proposal, which is required by Rule 14a-8(b)(2)(i). See paragraph (b)(2) of Rule 14a-8 (Question 2) for more information on ways to prove eligibility.

Your response adequately correcting this problem must be postmarked, or transmitted electronically, to us no later than 14 days from the date you receive this notification.

You should note that, if your proposal is not withdrawn or excluded, you or your representative, who is qualified under New Jersey law to present the proposal on your behalf, must attend the annual meeting in person to present the proposal.

If you intend for a representative to present your proposal, you must provide documentation signed by you that specifically identifies your intended representative by name and specifically authorizes the representative to present the shareholder proposal on your behalf at the annual meeting. A copy of this authorization meeting state law requirements should be sent to my attention in advance of the meeting. Your authorized representative should also bring an original signed copy of the authorization to the meeting and present it at the admissions desk, together with photo identification if requested, so that our counsel may verify the representative's authority to act on your behalf prior to the start of the meeting.

In the event that there are co-filers of this proposal and in light of the recent SEC staff legal bulletin 14C dealing with co-filers of shareholder proposals, we will be requesting each co-filer to provide us with clear documentation confirming your designation to act as lead filer and granting you authority to agree to modifications and/or withdrawal of the proposal on the co-filer's behalf. Obtaining this documentation will be in both your interest and ours. Without clear documentation from all co-filers confirming and delineating your authority as representative of the filing group, and considering the recent SEC staff guidance, it will be difficult for us to engage in productive dialogue concerning this proposal.

We are interested in discussing this proposal with you and will contact you in the near future.

Sincerely,

A handwritten signature in cursive script, appearing to read "Henry A. Miller". The signature is written in black ink and is positioned to the right of the word "Sincerely,".

Enclosure



December 20, 2005

**VIA UPS OVERNIGHT DELIVERY**

Mr. Kirk P. Miller  
777 San Antonio Road, #21  
Palo Alto, CA 94303

Dear Mr. Miller:

This will acknowledge receipt of the brokerage papers which you have submitted in connection with ExxonMobil's 2006 annual meeting of shareholders. However, these documents were not adequate.

Rule 14a-8(b)(2)(i), which we enclosed with our December 16, 2005 letter to you, states that you must provide a written statement from your broker "verifying that, at the time you submitted your proposal, you **continuously held** the securities for at least one year."

Thus you still need to prove ownership on December 12, 2005, the date of the submission of your proposal; and you still need to provide a statement from SmithBarney that your ownership of the required amount of securities has been continuous for at least a one-year period prior to December 12, 2005. Note that regular account statements by themselves do not establish continuous ownership, only ownership at the particular points in time of the statements.

Your response adequately correcting this problem must be postmarked, or transmitted electronically, to us no later than 14 days from the date you receive this notification.

Should you have any questions about the requirements of the Securities and Exchange Commission rules governing shareholder proposals, please give me a call at 972.444.1154.

Sincerely,

A handwritten signature in cursive script that reads "Sally M. Derkacz".

Sally M. Derkacz  
Coordinator, Shareholder Relations

Fax

(972) 444 1505

To: Sally Derkacz

From Kirk Miller

12-22-05

2 paper



OK

Kirk Miller  
777 San Antonio Road #21  
Palo Alto, CA 94303-4833

Kirk,

This letter is to confirm that for your account # 156-00126-17-003, on Dec. 12th, 2005 you had a balance of 250 shares Exxon Mobil common stock, which have been held in this account for at least one year prior to that date. If you need any further assistance please let me know.

This information is being provided at your request and does not replace or supersede your monthly Smith Barney customer statement.

Regards,



Ronald Goldstein  
Registered Sales Associate  
The Roccki Group

Citigroup Global Markets Inc. 1144 Hooper Avenue, Suite 301 Toms River, NJ 08753-8361 Tel 732-914-2300 Fax 732-505-9693 Toll Free 800-624-0292

THE INFORMATION SET FORTH WAS OBTAINED FROM SOURCES WHICH WE BELIEVE RELIABLE BUT WE DO NOT GUARANTEE ITS ACCURACY OR COMPLETENESS. NEITHER THE INFORMATION NOR ANY OPINION EXPRESSED CONSTITUTES A SOLICITATION BY US OF THE PURCHASE OR SALE OF ANY SECURITIES.



December 30, 2005

Mr. Kirk P. Miller  
777 San Antonio Road, #21  
Palo Alto, CA 94303

Dear Mr. Miller:

Per your request, this letter confirms that the proof of ownership provided by SmithBarney by facsimile on December 22 is sufficient.

In addition, I have enclosed a copy of our 2005 Energy Outlook.

Sincerely,

A handwritten signature in cursive script that reads "Dave Henry".

Enclosure

# ExxonMobil



## A Report on Energy Trends, Greenhouse Gas Emissions and Alternative Energy

February 2004

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Projections, targets, expectations, estimates and business plans in this report are forward-looking statements. Actual future results, including energy demand growth and mix; economic development patterns; efficiency gains; resource recoveries; capital expenditures; technological developments; emission reductions; and project plans and schedules could differ materially due to a number of factors. These include changes in market conditions affecting the energy industry; changes in law or government regulation; unexpected technological developments; and other factors discussed in this report and under the heading “Factors Affecting Future Results” in Item 1 of ExxonMobil’s latest Form10-K and on our Web site at [www.exxonmobil.com](http://www.exxonmobil.com). References to resources in this report include quantities of oil and gas that are not yet classified as proved reserves but that, in the case of ExxonMobil figures, we believe will ultimately be produced. Additional information on terms used in this report, including our calculation of Return on Capital Employed, is available through our Web site under the heading “Frequently Used Terms.”

Governments, our customers and shareholders, and the public at large are deeply interested in the issues related to the supply and cost of energy and the effects of energy use on the environment.

Interest in these subjects is understandable and appropriate because access to reliable, environmentally safe and affordable energy is vital to the economic prosperity and quality of life of people around the world. Our company role is to help provide this energy, and in doing this job well we make a significant contribution to human progress.

In this report we describe what we see as the business challenges and opportunities that are associated with likely energy trends, greenhouse gas emissions and alternative energy options. We also review the actions we are taking now to safeguard shareholder interests and to provide for future business opportunities.

ExxonMobil's approach to investments provides significant assurances to shareholders. Some of the key business considerations that underlie our approach include the use of proven science, a focus on cost/benefit analysis, emphasis on energy conservation and efficiency, strong investment discipline and consistency with our core competencies.

The issues relating to greenhouse gas emissions and alternative energy are complex, and varying points of view exist on how to address these subjects. Complex business issues are not new to our company, and we have gained considerable experience in successfully managing them.

The first section of this report describes the central importance of energy to economic growth and improved standards of living. We present our view of future energy needs and trends. You will read that most experts predict that the world will require about 40 percent more energy in 2020 than today and consumption levels will reach almost 300 million oil-equivalent barrels every day. This is equivalent to the energy required to drive a mid-sized American car 378 billion miles, a distance equivalent to 2,000 round trips between the earth and the sun. Developing reliable, affordable supplies to meet this

energy demand will be an enormous challenge. Meeting future demand while taking actions to reduce greenhouse gas emissions will make this challenge even greater.

In the subsequent sections we will describe the specific actions ExxonMobil is taking in response to these challenges, with an emphasis on our plans for reducing greenhouse gas emissions.

In the nearer term, we support energy efficiency and conservation as important strategies that will prolong the availability of current energy resources. For example, we are deeply involved in improving the energy efficiency of our own operations as well as in developments that will help consumers use our products more efficiently.

For the longer term, our research emphasis is on breakthrough ideas applicable to our core business. We are supplementing our internal research through cooperative efforts with universities and research centers and through partnerships with other corporations. We believe that by working closely with leading academics, energy experts and other technologically advanced companies, we will contribute to the development of better answers to meeting the world's future energy needs.

The final section of the report discusses alternative energy options and our views on some of the issues currently existing with large-scale deployment of each of the alternatives. The central message in this section is that we believe investments in *current* renewable energy technology are not economical. As a result, our primary focus with regard to renewables is on research to accelerate the development of future options.

We are publishing this report because we believe it is important to be straightforward and open about our views on issues — such as climate and renewables — that can affect both our business and society. We believe that only by relying on careful business analysis and by speaking with candor can we ensure, over the long run, a positive reputation for the company.

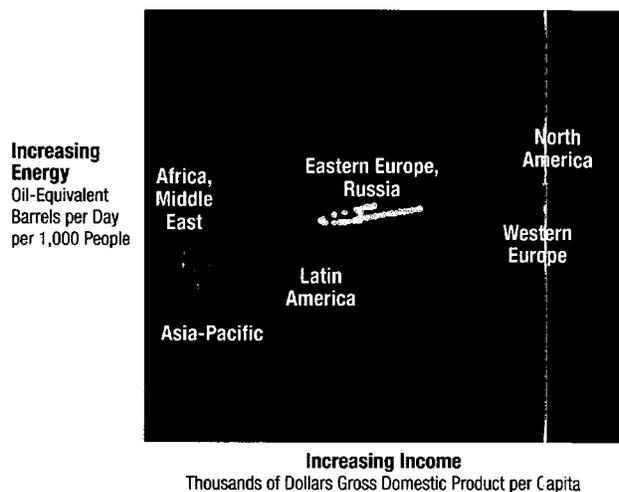
Understanding and projecting energy supply and demand trends are important elements of ExxonMobil's strategic planning process. In fact, recognizing their importance, we have for the past several decades annually produced a comprehensive energy outlook that typically covers the next 20 or more years.

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**The world's demand for energy is very large and growing. Meeting this demand will present significant challenges.**

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**GDP Growth and Energy Closely Linked**  
1970-2020



Note: GDP and energy use are shown in logarithmic scale.

**Key conclusions from our assessment** of the energy outlook include the following:

- Energy use and economic growth are closely linked, as shown in the chart above.<sup>1</sup> The relationship shown is consistent across all regions and countries and represents the trajectory that developing countries will likely follow as they progress toward industrialization. Modern uses of energy are so closely linked to growth because, among many other advantages, they provide the basis for all modern forms of transportation, are needed for both the materials and the processes used in con-

struction, and underpin the mechanization and improved efficiency of agriculture.

- Eighty percent of the energy growth from 2000 through 2020 will be devoted to improving living standards in many parts of the developing world, where about 85 percent of the world's population will live in 20 years.
- By 2020, we expect that the world will require about 40 percent more energy than today. By then the world's consumption is likely to approach 300 million barrels of oil-equivalent energy every single day. We expect that 60 percent of this 2020 demand will continue to come from oil and gas as these primary sources of energy are available in sufficient quantity to meet the world's growth and are, at the same time, the most economical.

Sizable increases in energy demand are projected despite likely continued improvements in energy efficiency. In total, we expect these efficiencies to be about 1 percent per year, because of improved vehicles, power plants, construction standards and other actions. If gains were achieved at only half this rate, the world would consume about 30 million *additional* barrels of oil-equivalent energy per day, close to the amount used by western Europe today.

Meeting higher energy demands will require a portfolio of energy options including oil, gas, coal, nuclear, hydro, biomass, solar and wind.<sup>2</sup> The contribution of each is shown in the three-panel chart at the top of pages 4 and 5.

- The expected contribution of non-petroleum-based energy to meeting world demand is detailed in the chart at top right, page 4. Hydropower will grow, though it is site-limited. Nuclear power is projected to grow at only about 0.4 percent per year, reflecting announcements in several industrial countries, including Germany<sup>3</sup> and the United Kingdom,<sup>4</sup> of expectations regarding the gradual phase-out of nuclear power. The majority of the biomass category is developing countries' use of traditional fuels (wood, dung) and developed countries' use of wood waste and garbage.

## How We Develop Our Energy Outlook

To help develop a sound basis for corporate strategies and plans, we employ a team of energy planners dedicated to developing and refining our own long-term outlook. These employees have diverse backgrounds in engineering, marketing, economics, oil and gas exploration, refining and chemicals operations, research and development, and public policy.

In developing our outlook, we utilize a comprehensive database to analyze past economic and energy trends, and to guide future forecasts. The database includes a vast amount of economic and energy data and enables us to assess energy demand, efficiency and conservation, fuel-buying patterns, demographics, and much more. We also develop and use detailed forecasting models and assessment tools to estimate energy demands for major fuels and consuming sectors at a country level.

In forecasting an energy outlook to 2020, some assumptions may be specific to individual countries, whereas others reflect expectations or trends that are independent of political borders. We also consider the

relative competitiveness of alternative fuels, and the significant but yet-to-be-achieved advances and deployment of new technologies.

In addition, we incorporate the input of a wide variety of third-party economic and energy experts and work with other companies, including those in the automotive and power-generation sectors.<sup>5</sup> From these services and companies, our energy-planning group builds its knowledge base and — as appropriate — incorporates third-party perspectives into our projections.

By seeking the views of others and consulting with public and private groups interested in energy issues, we find that our energy outlook is fundamentally consistent with those of most knowledgeable experts. This group includes, among others, the International Energy Agency (IEA),<sup>6</sup> U.S. Department of Energy — Energy Information Administration,<sup>7</sup> European Commission's World Energy, Technology and Climate Policy Outlook — Reference Scenario,<sup>8</sup> and the recent National Petroleum Council's North America natural gas study.<sup>9</sup>

- The outlook for wind and solar energy is for double-digit growth, based on both continued public subsidies and technological advances. However, because they start from a very small base, their combined contribution to total energy supplies is likely to still be less than 0.5 percent in 2020.

Because 80 percent of the world's growth in energy demand through 2020 will be in developing countries, 80 percent of the growth in carbon emissions will also be in the developing world. As a result, actions to reduce carbon emissions must include consideration of the world as a whole.

It remains critical to the understanding of energy supply that a majority of energy will continue to be based on conventional oil and gas and that energy

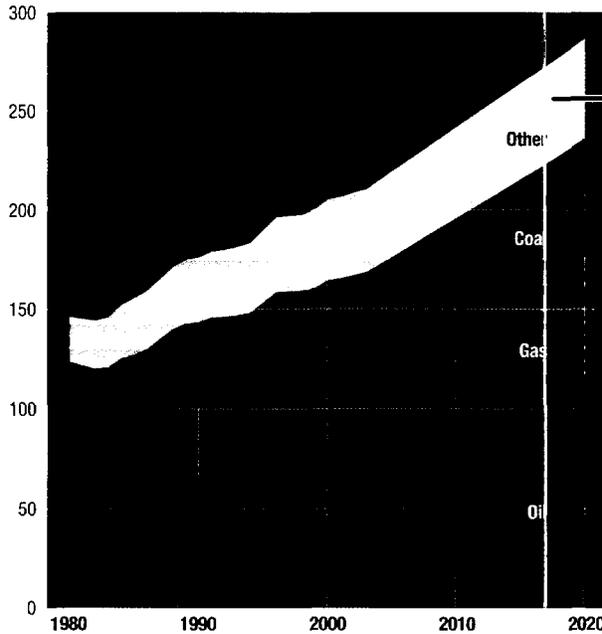
demand will be growing overall. Supplying the expected increase in oil and gas energy demand will be a major challenge. Nevertheless, abundant oil and gas resources exist:

- Estimates of the total oil and gas resource base have increased as a result of access to new areas and technology.<sup>10</sup>
- The conventional resource base is very large and is likely to continue to be the primary source of energy through at least the middle of the century. In the U.S. Geological Survey's *World Petroleum Assessment 2000*, the conventional recoverable liquids resource base is estimated to be about 3 trillion barrels of oil.<sup>11</sup>

## Oil and Gas Remain as Predominant Energy Sources

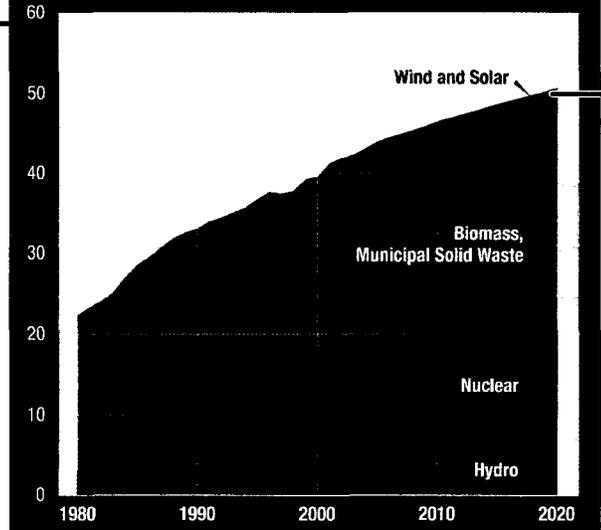
### Total Energy

Millions of Barrels per Day of Oil Equivalent (MBDOE)



### Other Energy

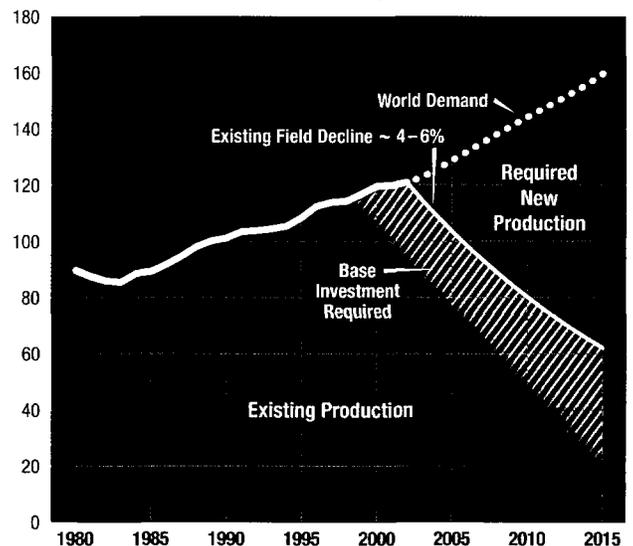
MBDOE

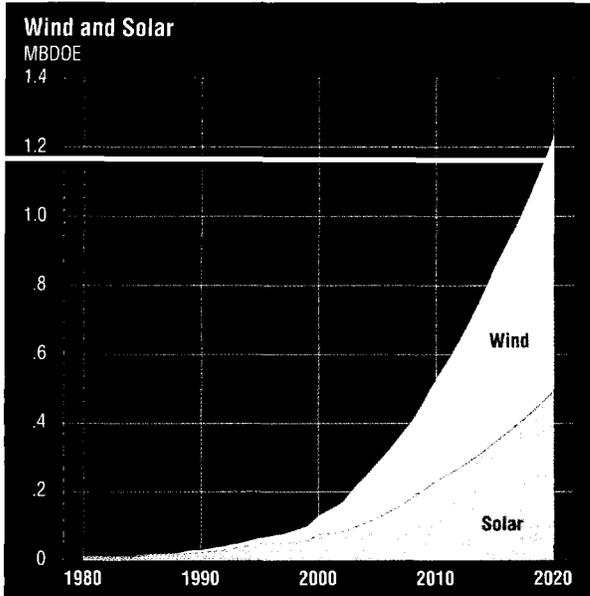


- In addition to conventional resources, there are significant unconventional resources. Unconventional oil includes extra-heavy oil, oil sands and other resources that cannot be produced using traditional methods. The International Energy Agency has compiled estimates that indicate there are more than 4.3 trillion barrels of unconventional oil resources in place. Recoverable estimates for Canada and Venezuela alone are estimated at 580 billion barrels.<sup>12</sup>
- To put this volume into perspective, less than 1 trillion barrels of petroleum has been produced since production started in the 1800s.<sup>13</sup>
- New technologies will likely continue to extend the recoverable resource base, making additional — but currently uneconomical — conventional and unconventional resources commercially attractive. In fact, according to the U.S. Geological Survey, total remaining recoverable oil resources are

## Supplying Oil and Gas Demand Will Require Major Investment

Millions of Barrels per Day of Oil Equivalent (MBDOE)





The costs of developing these resources are significant. In surveying the exploration and production expenditures for more than 300 oil and gas companies, Lehman Brothers estimated total 2003 exploration and production investment is \$133 billion.<sup>15</sup> However, some national oil companies and some small-to-medium petroleum companies were not included in the Lehman survey. Another estimate — shown in the chart below — is provided in the recently released International Energy Agency (IEA) *World Energy Investment Outlook 2003*<sup>16</sup> report, which calculates a total annual **energy** investment of about \$530 billion per year. Of that, the IEA believes that about 40 percent, or \$200 billion per year, will be required for oil and gas, primarily for exploration, development and production. To put this figure in perspective, \$200 billion is larger than the GDP of Norway, whereas \$530 billion is larger than the 2004 U.S. national defense budget.

more than 70 percent higher now than in 1980, despite production since then of more than about 400 billion barrels.<sup>14</sup>

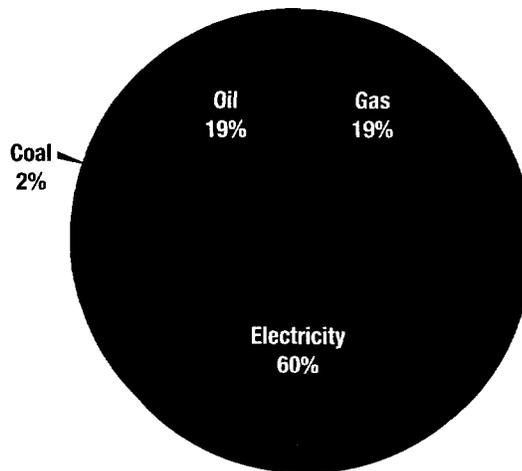
As noted earlier, we project that oil and gas will remain the major forms of primary energy over the outlook period. This predominance is due to their lower costs and ease of use in many applications. The ongoing task of the petroleum industry is to find, produce and deliver this energy in an economical and environmentally sound manner. We will need to develop energy supplies both to meet new demand and to replace supplies from maturing resources. As the chart at left illustrates, the industry will likely need to add some 100 million oil-equivalent barrels per day by 2015 to meet demand — an amount close to 80 percent of today's production levels.

Timely development requires access to discovered resources, economical development of unconventional resources, continued technology advances, adequate financing, and the cooperation of host governments.

#### Oil and Gas Investments Up to \$200 Billion per Year

World Energy Investment, 2001-2030

Total World Energy Investment: \$16 Trillion



Source: IEA

The large capital investments needed to meet world energy demand will require a disciplined, well-managed approach, a fundamental strength of ExxonMobil. Capital needs are also complemented by our track record in the development and application of industry-leading technologies. In 2003, we invested about \$15 billion in capital and exploration expenditures and about \$600 million in research. During the past five years, we have invested about \$66 billion in capital and exploration expenditures, and about \$3 billion in research.

As most projections predict that oil and gas will continue to meet 60 percent of energy needs in 2020, ExxonMobil continues to focus in this area, in which we have considerable expertise. Providing oil and gas for these future needs will pose a significant

challenge, which we are particularly well suited to address. The significant investment that will be needed to advance adequate oil and gas development will place a premium on investment discipline and sound judgment in choosing profitable energy projects.

The business approach we have adopted is first to assess market and technology options thoroughly, as well as business risks. Then — and with an understanding of our competitive strengths and capabilities — we invest where we see profitable opportunities. We continually test our market and technology assumptions, and we manage our performance against key investment and operational indicators, with the primary focus on return on capital employed.

**ExxonMobil Production Base**



ExxonMobil's size and geographic diversity, and the complementary nature of our Upstream, Downstream and Chemical businesses, moderate the corporation's sensitivity to fluctuations in individual business lines and markets. By taking advantage of synergies among these businesses, ExxonMobil is able to optimize total company performance.

In the Upstream, ExxonMobil participates in every major producing area in the world (see map opposite). Our Upstream portfolio spans more than 40 countries. We have a substantial production base in the United States, Canada, Europe and the Asia-Pacific region and are unique in having interests in the four major growth areas of West Africa, the Middle East, the Caspian and Russia. ExxonMobil has the

largest resource base of any nongovernment company in the world, with 72 billion oil-equivalent barrels.

In the Downstream, ExxonMobil is a leading fuels refiner and manufacturer of lube basestocks. We have refining operations in 26 countries, retail fuels locations in more than 100 countries, and a lubricants marketing presence in almost 200 countries and territories.

In Chemical, ExxonMobil is a leading producer and supplier of primary petrochemicals. Our Chemical business is competitively advantaged by our advanced technology, integration of more than 90 percent of our chemical assets with petroleum refineries and superior cost structure.

This disciplined approach points us toward investments that are:

- Technically sound.
- Economically sustainable without government subsidy, thus ensuring profitability under a range of market and government policy conditions.

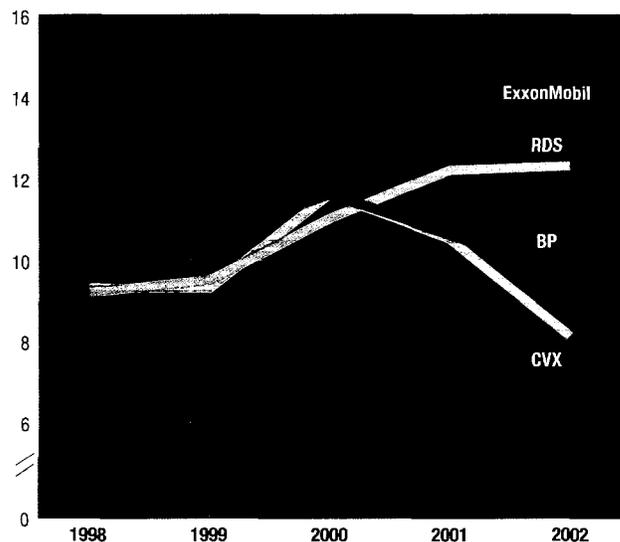
- Significant enough to be meaningful in the context of our size and the size of the overall energy market.
- Designed carefully to limit their impact on the public and the environment.
- Implemented to be profitable and affordable on an ongoing basis.

Using these criteria, we have demonstrated a successful track record of investment, a track record that has benefited our shareholders while at the same time being of value to energy consumers. For example:

- We have invested so as to position ExxonMobil in attractive business sectors while reducing our exposure to those sectors that fail to meet our investment criteria. Examples of under-performing industries in which we have disinvested include coal extraction and nuclear and solar energy.
- We have a well-balanced and diversified business, with strengths in both business scope (oil, gas, chemicals) and geography.

#### Return on Capital Employed

Percentage, 5-Year Rolling Average



Calculated based on public information on a consistent basis.

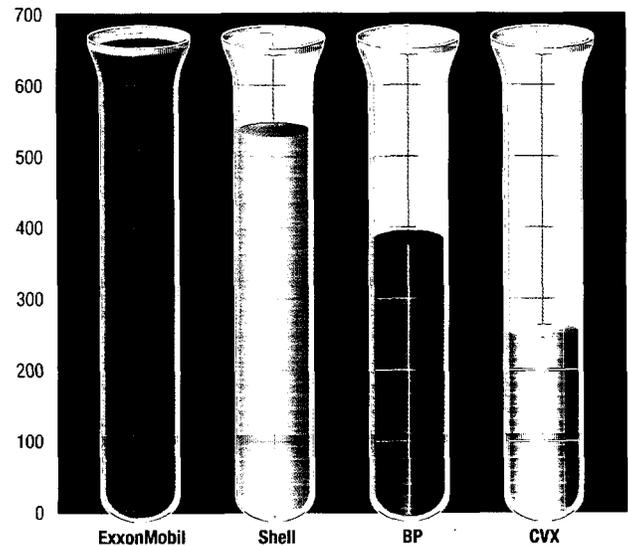
- We have made concerted efforts to pace our investments well. This has helped achieve industry-leading returns that have averaged nearly 14 percent over the past decade.
- Our rigorous investment criteria have permitted us to attain industry-leading returns and to avoid asset write-downs representing failed investments that have diverted organization attention and reduced shareholder value in other companies. The chart on page 7 compares ExxonMobil to our key competitors in return on capital employed, or ROCE.

At the same time that we work to ensure that our capital investments will be profitable over the long term, we also strongly believe in investing in research and development as a means to develop potential future profitable business opportunities. That is why we support research to increase energy discovery success, to improve the efficiency of energy use and to develop new energy solutions. Our overall investment in R&D has been and remains greater than that of our competitors (see chart at top right). We balance our technology investment between technology extensions -- which can be rapidly deployed to our existing operations -- and breakthrough research that could have a significant and lasting impact on the corporation and the industry. Some of the current research areas we are undertaking include:

- Proprietary technologies that have the potential to deliver breakthrough capabilities in direct hydrocarbon detection. This technology could significantly improve the chance of success in finding new resources prior to drilling.
- Liquefied natural gas (LNG) and other gas-commercialization technology to improve the efficiency of liquefaction, transportation and regasification to help satisfy the world's increasing gas needs at affordable economic levels.

## Technology Investment

Millions of Dollars, 1997-2002 Average



Based on public information.

- Research on hydrogen production for use in fuel cells with strategic partners for potential new power systems in automobiles.
- More-efficient, cleaner-burning internal combustion engines and engine systems.
- Advanced lubricant formulations to meet stringent emission standards.
- \$100 million in groundbreaking research at Stanford University's Global Climate and Energy Project (GCEP) to address future energy needs with approaches that lead to lower greenhouse gas emissions.

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**OIMS is the foundation of our management of safety, health and the environment.**

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The rigor and discipline that we use to pursue and manage research projects and that underpin our investment program are also used in our approach to the management of our performance in safety, health and the environment.

The key system that we have used for a number of years in the conduct of our operations and to assess and improve our safety, health and environmental performance is the Operations Integrity Management System, or OIMS. OIMS permits us to measure our progress in these areas, plan future improvements and implement management accountability for results.

For a number of years we have collected and reported data on atmospheric emissions such as nitrogen oxide, ozone and sulfur dioxide. Over the past several years OIMS has been expanded to include the collection and reporting of greenhouse gas emissions for all facilities.

**Lloyd's Register Quality Assurance View of OIMS:**

"Lloyd's Register Quality Assurance has reviewed ExxonMobil's Operations Integrity Management System and has evaluated it against the requirements of international standard for Environmental Management Systems, ISO 14001.... It is the opinion of Lloyd's Register Quality Assurance that the environmental management components of ExxonMobil's Operations Integrity Management System are consistent with and meet the requirements of the ISO 14001 Environmental Management Systems Standard. We further believe ExxonMobil to be among the industry leaders in the extent to which environmental management considerations have been integrated into its ongoing business processes."

July 1, 2001

ExxonMobil recognizes that although scientific evidence remains inconclusive, the potential impacts of greenhouse gas emissions on society and ecosystems may prove to be significant. To address these risks, we have for many years taken actions to improve efficiency and reduce emissions in our operations and in customer use of our products. We are also working with the scientific and business communities to undertake research to create economically competitive and affordable future options to reduce long-term global emissions.

We are fully aware of the broad public and official interest in this topic, of commitments made by many governments through the United Nations Framework Convention on Climate Change and the Kyoto Protocol to that Convention, and of national legislation to address greenhouse gas emissions.

We participate in voluntary programs that address greenhouse gas emissions, and we are working with governments and business groups to prepare for binding regulations where they are being developed.

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## **Actions now and research for the future underpin our approach to greenhouse gas emissions.**

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For our part, ExxonMobil has conducted and supported scientific, economic and technological research into greenhouse gas emissions for more than two decades. Overall, our research has been designed to improve scientific understanding, assess policy options and achieve technology breakthroughs that could dramatically reduce greenhouse gas emissions in both industrialized and developing countries.

In the context of the use of petroleum in the overall economy, we estimate that by far the majority of emissions arise from consumer use of fuels (87 percent), with the remainder from petroleum industry operations (13 percent). Therefore, we also under-

### **Climate: Infinitely More Complex than Weather**

The earth has experienced a warming trend in global surface air temperatures during the 20th century,<sup>17</sup> but the cause of this trend and whether it is abnormal remain in dispute. Although recent temperatures are elevated, they are not unprecedented in the geological record, which shows considerable variation as well as previous periods that were as warm as or warmer than today. The variety of factors that appear to have influenced climate when viewed from a geoscience perspective includes:

- Solar radiation
- Orbital changes of the earth
- Asteroid impacts
- Reflectance, circulation and gas composition of the atmosphere
- Current dynamics in the oceans
- Effects of the biosphere, including forest cover and greenhouse gas emissions
- Lithospheric events such as volcanism, continental drift and mountain building.<sup>18</sup>

ExxonMobil has substantial expertise in geoscience, as this is a central discipline in our business success. We support efforts to advance knowledge on many of the topics listed above, including climate modeling; new tools for mapping temperature and geologic uplift and subsidence; and research on such topics as ocean circulation, cloud formation and solar irradiance variability.

take research on petroleum manufacturing efficiency improvements, as well as on advanced vehicles and fuels with automobile manufacturers.

Currently, many governments have made commitments to reduce national greenhouse gas emissions under the provisions of the Kyoto Treaty. In several countries, regulations are in the process of being developed to meet these commitments, and ExxonMobil is fully prepared to comply with all laws and regulations in countries where we operate.

## Why Energy Efficiency?

ExxonMobil is committed to encouraging energy efficiency because:

- Greater efficiency will prolong the period during which conventional energy supplies will be available for consumer use.
- Efficient use of energy makes energy more affordable.
- Improved efficiency will reduce environmental emissions associated with providing and using energy.

As part of our preparatory work, we and others are working to resolve a number of practical issues related to accomplishing the reduction goals, including measurement of overall greenhouse gases and reductions achieved. We are engaged in discussions with industry groups and with governments to ensure broader understanding of compliance issues and potential carbon-control measures, including carbon trading.

It is our intention to comply in the most cost-effective manner with whatever regulations and mandates issue from these discussions. We will limit the risks that may be posed by new regulations by applying the same disciplined analysis and investment criteria we use for other business challenges and opportunities. We do not believe our operations will be competitively disadvantaged, though some additional costs are likely to result from compliance.

## Nearer Term Initiatives

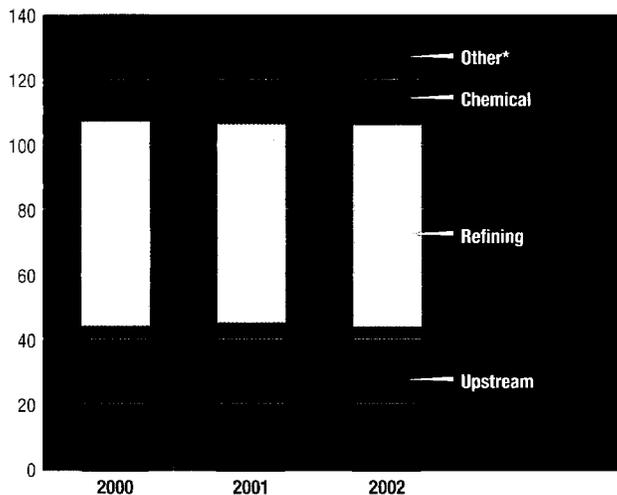
Related to our own operations, ExxonMobil is actively engaged in reducing our energy usage and our greenhouse gas emissions. Five important examples are:

- **Global Energy Management System (GEMS).** The comprehensive GEMS is focused on continually improving energy efficiency. In fact, over a 25-year period, our refineries and chemical plants have improved their energy efficiency by more than 35 percent. Opportunities have been identified to improve energy efficiency by an additional 15 percent. In North America alone, our refineries have been improving their energy efficiency at a rate that is three times better than the industry average.

## Greenhouse Gas Emissions (Absolute and Normalized)

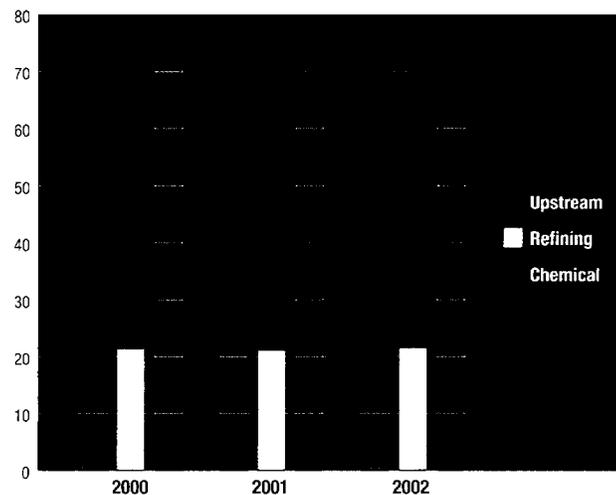
### Emissions

Millions of Metric Tons



### Emissions Per Unit of Throughput

Tons of Emissions Per 100 Tons of Throughput



Operated direct and indirect sources of CO<sub>2</sub> and methane on a CO<sub>2</sub>-equivalent basis.  
\*Fuels Marketing, Terminals, Pipelines, Lubes, Marine, Research.

- Cogeneration.** In its application at refineries and gas plants, *cogeneration* is a term used to describe the simultaneous production of electricity and steam using clean-burning natural gas. Cogeneration is nearly twice as efficient as traditional methods of producing steam and power separately. ExxonMobil has more than 80 cogeneration facilities at some 30 locations worldwide, which have reduced carbon dioxide emissions by almost 7 million tons a year from what they would otherwise have been. We are also in the process of expanding our cogeneration capacity by another 30 percent, representing an additional \$1 billion investment in new cogeneration facilities.

- Flare Reduction.** A third method of reducing emissions of greenhouse gases is flare reduction. In Nigeria, ExxonMobil recently announced a project to eliminate gas flaring while at the same time significantly increasing oil production and recovery. This project is expected to get under way in 2006, well ahead of targets set by the Nigerian government. It will reduce greenhouse gas emissions by more than 5 million tons per year at facilities we operate from what they would otherwise have been (or 2 million tons on an equity-share basis). In addition, ExxonMobil is part of the World Bank Gas Flaring Reduction Partnership, which supports national governments and the petroleum industry in their efforts to reduce the flaring and venting of gas, and which is also focused on developing economical alternate-use projects for flare gas.

- Reporting.** With regard to the reporting of greenhouse gas emissions, we are taking steps to accurately measure and report our own emissions. Our recent greenhouse gas emissions are shown in the chart on page 11. In the past few years we have increased the transparency of our greenhouse gas emissions by publishing them annually in our Corporate Citizenship Report and making them available on our Internet site.

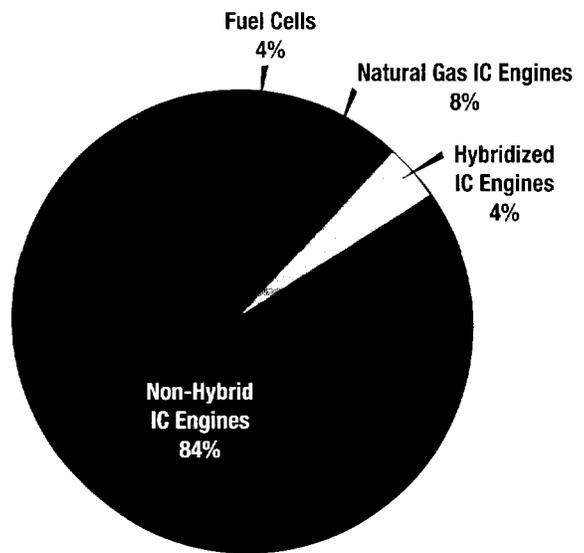
- Measurements and Guidelines.** We are working with industry, through the American Petroleum Institute and the International Petroleum Industry Environmental Conservation Association, to develop a consistent measurement methodology and transparent guidelines for reporting greenhouse gas emissions, in order that they may be compared on a consistent basis among companies and industries.<sup>19</sup>

### Medium Term Initiatives

Especially important are the efforts we have under way to increase the supply of cleaner-burning natural gas. Natural gas emits less carbon dioxide than oil when burned, so that more reliance on natural gas will limit carbon increases. Our efforts related to natural gas include:

- Natural Gas.** Access to a total gas resource base of nearly 185 trillion cubic feet of net discovered resources, including 56 trillion cubic feet of proved reserves. This resource base provides a solid foundation for profitable growth.

Internal Combustion (IC) Engines Remain Primary Technology in 2030



Source: EUCAR

- **Balanced Portfolio.** A balanced portfolio of proved reserves, with about 27 percent in North America, 44 percent in Europe, 14 percent in Asia-Pacific and 15 percent in other parts of the world. Over the medium term, major development projects are expected to start up in parts of the world, including Qatar, the Netherlands, Norway, Russia, Kazakhstan, Angola and Canada.

- **R & D.** New research and development, notably through advances in high-strength steel, which will permit less-expensive transportation of natural gas through pipelines.<sup>20</sup>

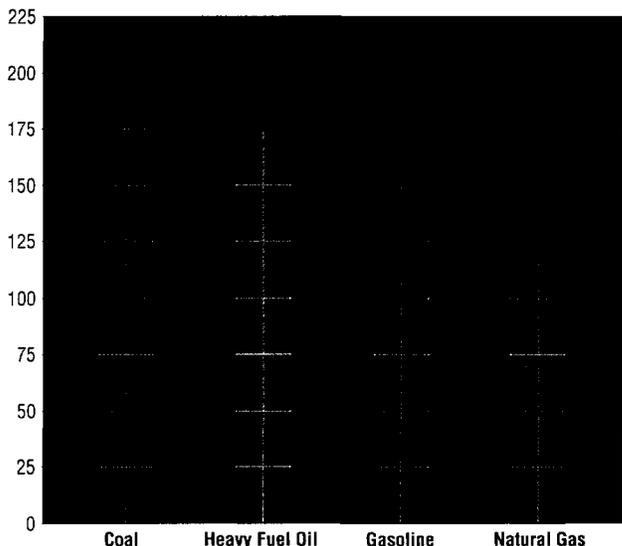
In the medium term, we are also undertaking work on advanced fuels, vehicles and materials. As the chart on page 12, bottom right, shows, automotive industry projections indicate that through 2030 internal combustion engines will continue to power more than 95 percent of all vehicles.<sup>21</sup> Technologies that improve the fuel efficiency and emissions performance of these systems can have a very substantial positive impact on the environment earlier than alternatives and for decades to come.

Many new approaches to traditional internal combustion engine technology have been under investigation by automobile companies and by ExxonMobil:

- One avenue involves research to better optimize fuel/engine systems for higher efficiency and lower emissions. Gasoline and diesel are blends of many types of molecules, and each type behaves slightly differently during combustion. Working with Toyota, we are investigating what happens when different types of molecules are burned in an internal combustion engine.<sup>22</sup> The knowledge gained is expected to lead to new fuel and vehicle systems that have higher efficiency and lower emissions than current engines.
- A second path involves new combustion technologies that have attributes of both gasoline-spark ignition and diesel-compression ignition. Called homogeneous charge compression ignition (HCCI), this technology combines the efficiency of a high-compression diesel engine with the lower emissions of a gasoline engine.<sup>23</sup> The payoff of this research could be substantial. For example, better understanding of fuel chemistry and combustion could lead to 30 percent better fuel efficiency than today's gasoline engines have, with a resulting reduction in smog-causing emissions and carbon dioxide.

### Natural Gas Preferred for Reducing Carbon Dioxide Emissions

Pounds of Carbon Dioxide per Million BTU Energy Content



- **Equity Positions.** Equity positions in many of the largest remote gas accumulations in the world that strongly position us to benefit from new LNG and other gas-commercialization technology. ExxonMobil recently announced a major expansion of its LNG investment plans to bring natural gas from Qatar to the U.S.

- **LNG Technology.** Technology advances in gas liquefaction, transportation and regasification. The development of larger LNG trains to liquefy the gas, as well as larger, more-efficient ship designs, has resulted in dramatic reductions in expected unit costs.

Other options can also improve automobile performance significantly.

- High on the list is hybrid-engine technology.<sup>24</sup> Hybrids use a gasoline engine for steady speeds and an electric motor for extra power during the more energy-demanding phases of start-up and acceleration. A battery, which is recharged while driving and braking, powers the electric motor. In cities, where this technology has major advantages, hybrid vehicles deliver a fuel-economy improvement of more than 50 percent.<sup>25</sup> A few models using this technology are on the road today with more planned. Broad deployment of this technology could have a significant impact on CO<sub>2</sub> emissions from personal vehicles.
- Another area in which we contribute is advanced materials for plastics. These offer lower weight and better fuel mileage, and they are recyclable and save energy when reused.<sup>26</sup>
- We have also invested in improved lubricants, including synthetics, which provide benefits of lower emissions and improve fuel economy. Our Mobil-1 and Low Sulfur-Ash-Phosphorus formulations are examples of our efforts in this area. In addition, we have developed long-drain interval lubricants that improve environmental performance by minimizing the amount of waste oil generated.

## Longer Term Initiatives

Our long-term efforts related to greenhouse gas emissions are focused on innovative and far-reaching research projects.

Central among these is the Global Climate and Energy Project (GCEP) at Stanford University. Its overarching goal is to undertake research to accelerate the development of commercially viable energy technologies that can substantially reduce greenhouse gas emissions.

GCEP was initiated in November 2002. Its four broad objectives are to:

1. Identify the most promising technologies for low-emissions, high-efficiency energy supplies.
2. Identify barriers to the application of these technologies on a global basis.
3. Conduct research into technologies that will help overcome barriers and accelerate the global application of these technologies.
4. Make research results widely available to the scientific and engineering community through workshops, presentations and journal publications.

GCEP is a 10-year project with total anticipated investments of \$225 million, of which ExxonMobil is committed to contributing \$100 million. Other project sponsors — General Electric, Toyota and Schlumberger — are prominent companies that represent a diverse mix of business sectors and that have both global reach and strong research and technology capabilities. By combining the world-class research of Stanford with the practical know-how and financial support of major corporations, it is intended that GCEP will be able to push the frontiers of energy technology.

GCEP aims to identify advanced technologies that can be adopted **globally**, not just in industrialized countries, which is important, as 80 percent of growth in carbon emissions through 2020 will occur in developing countries. It will look at the full spectrum of energy resources and end uses, including:

- Improved generation and transmission of electricity
- Advanced transportation options
- Expanded use of hydrogen
- Fuels derived from plants
- Next-generation coal
- Nuclear energy
- Renewable energy

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### Other Climate-Related Research

GCEP is not the only activity we sponsor to help better understand GHGs and alternative energy. For example, over the past 20 years we have sponsored scientific, technological and economic/policy research at the following institutions:

Institution	Scientific	Technological	Economic/Policy
Carnegie Mellon University			
Columbia/Lamont Doherty			
Hadley Centre for Climate (UK)			
IEA Greenhouse Gas R&D Program			
US National Laboratories			
Battelle Pacific Northwest Laboratory			
Australia Bureau of Agricultural Research and Economics (ABARE)			■
Charles River Associates			■
Massachusetts Institute of Technology			■
Stanford University			■

The infrastructure required to produce and deliver the various energy sources will be investigated, as will the needed advances in materials, combustion technology and energy-systems management.

The results of GCEP's research are expected to provide new information for ExxonMobil's own planning and business strategy and investment activities. This information will assist in ensuring that we have early insight into promising avenues for future business activities.

The seriousness with which we approach the issues of climate and greenhouse gases is evidenced by the array of scientific investment and operational approaches we have adopted in our own facilities as well as the range of research that we support — both in house and in partnership with others.

It is our expectation that from among the multiple efforts that we and others are undertaking, new technologies will eventually emerge that can be successfully applied around the world. Moreover, our active involvement in the development of these technologies will provide competitive advantages that will be available to ensure future commercial success. This proactive and multifaceted approach ensures that the interests of shareholders in mitigating risks are properly addressed.

The general appeal of renewable energy is associated with its potential for long-term sustainability and environmental benefits. We understand this appeal, and we are open to considering investments in renewable energy which meet our investment criteria and can compete favorably among other opportunities.

Our investment criteria emphasize investment in areas where we have both relevant and leading-edge technology. Renewables, such as solar and wind power, do not meet either of these criteria.

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**Renewable energy presents business and investment challenges, with limited promise of near-term profitable investment, even with government subsidies.**

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In our view, *current* renewable technologies do not offer near-term promise for profitable investment relative to attractive opportunities that we see in our core business. Therefore, we have chosen not to pursue investments in renewable energy options.

We believe that companies interested in current renewable technologies should invest if they believe profit opportunities exist. However, we would note that other major energy companies have in the past year announced asset write-downs — amounting to a total of \$172 million — for investments in solar energy.<sup>27</sup> This is a telling indicator of the merits of our approach.

Nevertheless, we are closely monitoring technology developments in renewables. This active monitoring, coupled with our considerable financial strength, will, we believe, permit us to become active in relevant technology developments and to invest in a timely manner in the future if developments in renewables provide profitable opportunities.

**Our primary focus with regard to renewables is on research** to make promising options commercially viable, as for example through the Global Climate

and Energy Project and other such initiatives discussed previously. Although the research results will be made broadly available, as a sponsor ExxonMobil will have early insight on new technologies for potential commercialization.

A more thorough explanation of our current assessment of specific alternative energy options follows.

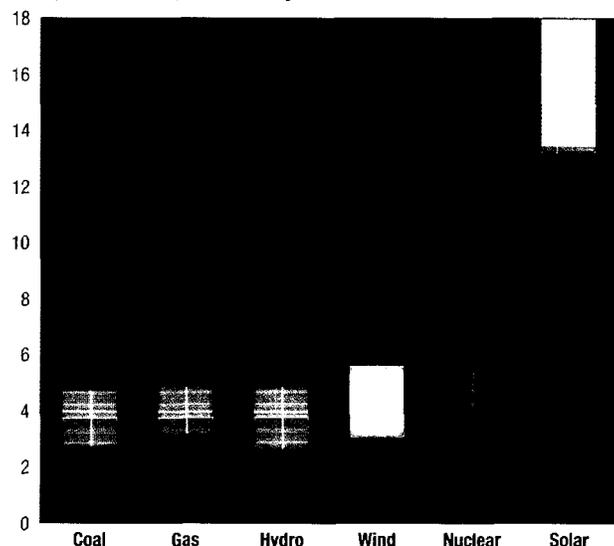
## Power Generation

Currently, renewable resources account for approximately 8 percent of electricity generated in the United States, with the majority coming from hydroelectric facilities. When the scope of renewables is narrowed to wind and solar the contribution to total electricity generated drops to 0.2 percent. These sources are expected to grow at more than 9 percent per year between now and 2020, yet their contribution to total electricity will rise to only about 1 percent of **total** electricity sales by that year.<sup>28</sup>

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### Costs Converging Though Wind, Nuclear, Solar Remain Higher Cost for Power Generation

Cents per Kilowatt Hour, Indicative Range



A number of factors discourage our investment in renewables for power generation:

- Despite cost reductions over the past decade, renewable technologies still require substantial government support to be competitive. The chart above illustrates the cost of generating electricity from both renewable and non-renewable sources.<sup>29</sup>

The British Wind Energy Association has noted the difficulties facing the wind energy industry, and in recent testimony before a committee of the House of Lords stated that "there is a high degree of uncertainty over the value of wind generated electricity after 2010 ... making it extremely difficult for projects planned ... to obtain the necessary financing."<sup>30</sup>

- Currently, the most competitive renewable source is wind power. In some applications, wind-generated electricity can be cost-competitive with that generated from natural gas, but it relies largely on government subsidies to be economical. As the duration of these subsidies is uncertain, investment in wind projects represents a higher risk than alternative investments. At the 2003 American Wind Association Conference, the CEO of a major wind-turbine manufacturer stated that "the political instability facing the wind industry in the United States effectively thwarts the ability of developers and utilities alike to engage in meaningful long-term planning."<sup>31</sup>
- Solar energy remains far more costly except in limited applications. Existing solar photovoltaic technology is very energy-intensive, requiring manufacturing energy equal to about two years of the output of the solar device. These factors, coupled with the large land areas required to produce energy on a power-plant scale, make current solar technologies about five times more costly than conventional electricity generation, and we believe they are unattractive investments for ExxonMobil.<sup>32</sup>
- The ability of wind and solar technologies to contribute to electric power supply is fundamentally limited by intermittence. Stable electric grids require traditional generating facilities or costly backup systems to ensure uninterrupted supply to consumers on cloudy days, at night, or at times the winds fail. These aspects limit the ability of wind and solar energy to contribute to electricity supplies, and they increase the overall costs of integrated power supply systems.
- Hydropower, geothermal power and municipal solid waste account for 94 percent of renewable electricity generation today, and their contribution

to electricity generation is expected to grow slowly over the next 20 years. Growth of these technologies will be limited by considerations related to land use, facility siting and resource availability. None offers a competitive advantage for ExxonMobil.

In summary, though each of the renewable power-generation options has a place, the limitations of current technologies preclude any of them being suitable for meeting a large-enough share of long-term energy supply needs to displace conventional energy sources.<sup>33</sup> Most renewable energy options require subsidies to be competitive,<sup>34</sup> and even when they are subsidized, acceptable returns are far from certain.

Between now and 2020, electricity generation from natural gas is expected to grow 5.5 percent a year. Although the growth rate is lower than that of wind and solar, the absolute growth in electricity generated from natural gas is projected to be more than 25 times that generated from renewables. This fact, coupled with ExxonMobil's strong technology and business base in natural gas, makes this a more attractive investment option.

#### **Automotive Fuels**

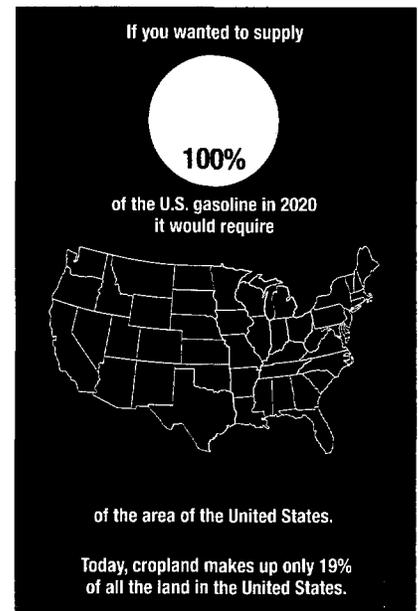
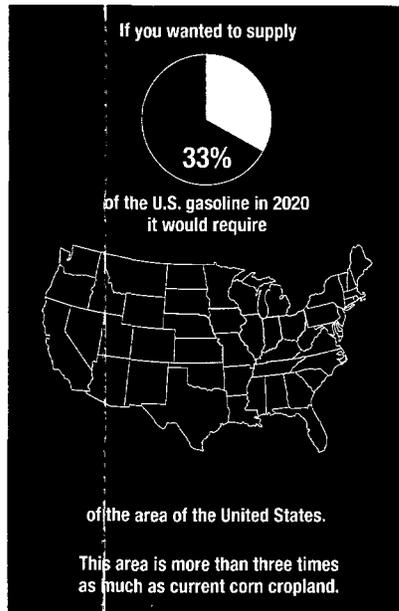
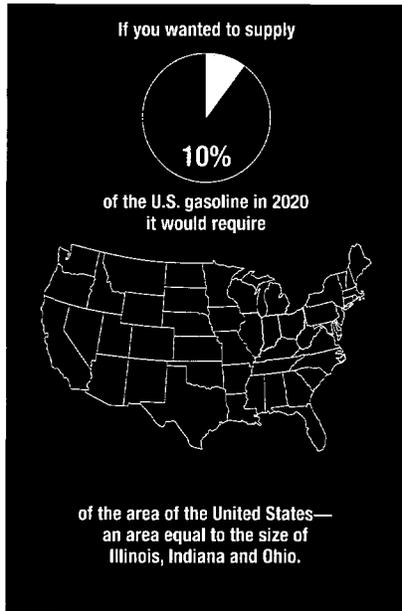
In addition to use in power generation, renewables also continue to have a role in automobile fuels.

In the *shorter term (through 2020)*, most approaches being pursued by the automobile industry and by ExxonMobil are focused on improving the efficiency of **conventional** fuels use, not on alternative fuels, as we have discussed in a previous section.

One potential option for alternative fuel is the production of ethanol from corn or other crops. Cultivation of crops for use as fuel requires substantial land that would otherwise be available for food,

## U.S. Biofuels Land Requirements Sizable

Percent of U.S. Land Needed to Supply Corn Ethanol



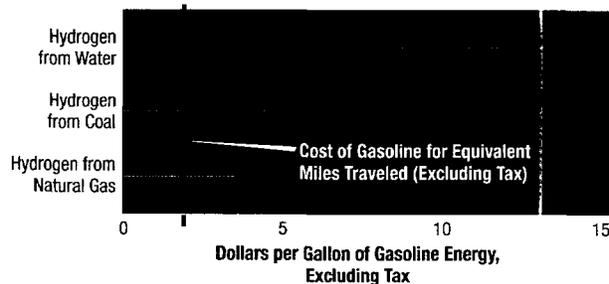
forests or other use.<sup>35</sup> With current technology, ethanol also costs consumers more than gasoline does, unless it is subsidized, and it requires substantial inputs of fossil fuels for both the production of the crops and the conversion into fuel.<sup>36</sup> Additionally, regulations governing ozone emissions can be met without the addition of ethanol to conventional gasoline.<sup>37</sup> Therefore, we have chosen not to pursue investments in ethanol. We are, however, complying with all government ethanol mandates by purchasing ethanol from third-party providers.

In the *longer term (past 2020)*, hydrogen is often cited as a potential option. In fact, there is significant research under way related to automotive fuel cell systems powered by hydrogen.<sup>38</sup> Hydrogen is appealing as it offers the potential for efficient, emissions-free vehicles, and can be produced from multiple primary energy sources.

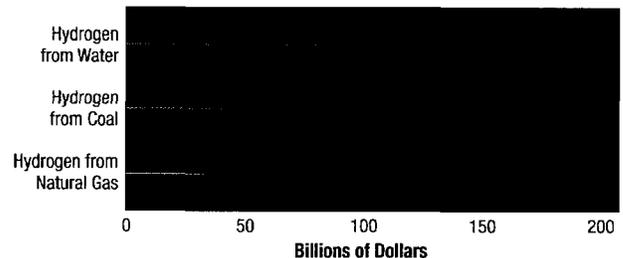
Hydrogen, while abundant, must first be produced from water or hydrocarbons. This step requires the use of energy generated from primary sources: oil, gas, coal, nuclear or renewables. It is important to

## Hydrogen Cost and Investment for 10 Percent of U.S. Fleet in 2020

Fuel Cost



Investment Required



understand the impact on the amount of additional primary energy that will be required and also the full supply-chain costs and greenhouse gas emissions associated with hydrogen production, distribution and consumption. A number of studies conducted by different sponsors in different regions have assessed the options. All have concluded that there is only a moderate (approximately 11 to 35 percent) reduction in full-cycle CO<sub>2</sub> emissions for hydrogen fuel cell vehicles compared with hybrid technology.<sup>39</sup>

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**“On the best-case scenario, fuel cells are expected to become viable only beyond 2020.”**

Banc of America Securities<sup>40</sup>

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A number of challenges must be met before hydrogen becomes a viable transportation fuel. Among these are safety and the high cost of production and distribution. While hydrogen has been used safely for decades by highly trained technicians in industrial settings, its characteristics pose unique challenges for use in consumer markets. The small size of hydrogen molecules makes them more likely to leak than any other fuel. This, coupled with flammability and explosive ranges that are respectively 10 to 20 times those of gasoline, and the ability to ignite hydrogen gas with only a static spark, create significant risks that will need to be managed if hydrogen is to be used safely. Hydrogen also delivers very little energy per unit of volume. As a result, very high pressures (~10,000 psi) will be required to achieve acceptable vehicle driving ranges if compressed hydrogen gas is used. Gases at these high pressures create risks independent of the type of fuel.

The high cost of producing and distributing hydrogen results in a fuel cost that is twice that of gasoline on a cents-per-mile-driven basis. As shown in the charts at the bottom of page 18, based on an analysis by SFA Pacific in the U.S., the costs and investments are highest when hydrogen is produced

from renewable energy sources (wind/solar/biomass) and lowest when it is produced from natural gas.<sup>41</sup> These investment levels present an affordability challenge to any economy and are driven in part by the fact that much of the existing natural gas infrastructure cannot be used for hydrogen distribution due to incompatibilities.

Interest in the use of renewable energy to make hydrogen is high, as this is the only option that would result in a “zero emissions” transportation fuel system on a total supply-chain basis. There are, however, a number of additional challenges associated with the manufacture of hydrogen from renewable energy. Currently, using average costs for renewables in the U.S., hydrogen is five times more expensive than gasoline when produced from wind and 17 times more expensive when produced from solar energy. Land requirements are also significant.<sup>42</sup>

Finally, one must consider whether hydrogen use for transportation fuel is the most appropriate use of renewable resources. A unit of wind or solar energy that is used to displace coal in power generation saves 2.5 times more carbon dioxide than using the same unit of wind or solar energy to replace gasoline with hydrogen.<sup>43</sup>

ExxonMobil is actively engaged, both internally and through industry groups, in a range of activities to address the many challenges associated with hydrogen. Some of these activities include the Department of Energy’s Freedom Car and Fuel Partnership, the California Fuel Cell Partnership, and the U.S. Department of Energy Hydrogen Safety Review Panel. The focus of these various efforts includes: research on the production and distribution of hydrogen; interactions with government, industry and safety authorities on codes and standards; and analysis of energy supply implications.

We and others believe that resolving the issues surrounding hydrogen will take many years, perhaps decades. Therefore, significant commercialization or broad marketplace deployment is not likely for some time. This general view is shared by DOE and Honda, among others.<sup>44</sup>

We have addressed, and continue to address, the challenges discussed in this report with a disciplined approach that delivers industry-leading returns. In doing so we are particularly mindful of our responsibility to our shareholders, customers, employees and the public at large. Therefore, we:

- Have a robust portfolio of diverse opportunities to develop reliable, safe and affordable energy resources, and we are able to do so in an economical and environmentally and socially responsible manner.
- Manage a well-balanced and diversified business, with strengths both in business scope and geography.
- Invest in projects and programs that are economically sound while improving our energy-use efficiency and reducing emissions in our own facilities.
- Conduct research in technology that will enable our customers to be more efficient in their use of energy for power and transportation.

- Maintain a leading effort in research and development on potential options that promise competitive advances and that can form the foundation for profitable, large-scale commercialization in the future. We do so through our own technology research, by keeping abreast of the advances of others, and by supporting leading research by third parties (both on basic science and on new energy approaches).

Our strategy includes expert analysis and consultation with others, investment discipline, broad diversity in our energy portfolio, and breadth of research on energy-related issues and opportunities. We believe our business strategy and execution are in the fundamental financial interests of our shareholders and have positive benefits for society and the environment.

## References

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- <sup>3</sup> Energy Consensus Agreement between the U.S. government and the nuclear power industry, July 2001.
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- <sup>7</sup> U.S. Department of Energy (DOE), Energy Information Administration (EIA): *Energy Outlook 2003* (EO 2003), *International Energy Outlook 2003* (IEO 2003).
- <sup>8</sup> European Commission: *World energy, technology and climate policy outlook*, 2003, EUR 20366.
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- <sup>21</sup> EUCAR projections.
- <sup>22</sup> ExxonMobil and Toyota SAE papers, 982494, 982495, 2001-01-0655, 2003-01-1914, 2003-01-31986.
- <sup>23</sup> "A Low Pollution Engine Solution," *Scientific American*, June 2001; *Homogeneous charge compression ignition (HCCI) engines: key research and development issues*, SAE publication PT-94.
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- <sup>25</sup> Toyota/Honda Web sites.
- <sup>26</sup> Association of Plastics Manufacturers in Europe: "Recovery Options for Plastic Parts from End-of-Life Vehicles — Eco-efficiency Assessment," 2003, Ref. No. 8041/GB/08/03.
- <sup>27</sup> In the third quarter of 2003, BP took a \$45 million charge for consolidation of manufacturing operations and staff reductions in its solar business, whereas Shell took a \$127 million impairment charge to Shell Solar.
- <sup>28</sup> EIA, EO 2003, *ibid.*
- <sup>29</sup> Cambridge Energy Research Associates (CERA): *Renewables: Challenging the Energy Mix*, 2003, a multi-client study. The use of this graphic was authorized by CERA. No other use or redistribution of this information is permitted without written permission by CERA. For more information, please visit [www.cera.com](http://www.cera.com).
- <sup>30</sup> British Wind Energy Association: Web site, press release, October 15, 2003.
- <sup>31</sup> Interview with NEG Micron CEO Torben Bjerre-Madsen, *New Energy Capital* newsletter, May 30, 2003.
- <sup>32</sup> CERA, *ibid.*
- <sup>33</sup> WEO 2002, *ibid.*; CERA, *ibid.*
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- <sup>35</sup> Khesghi, Prince and Marland, "The Potential for Biomass Fuels in the Context of Global Climate Change: Focus on Transportation Fuels," *Annual Review of Energy and the Environment 2000*, chart pages 231, 235-36.
- <sup>36</sup> General Motors/Argonne National Laboratory: *Well-to-Wheel Study*, June 2001.
- <sup>37</sup> American Petroleum Institute testimony to House Science Committee, Subcommittee on Energy and Environment, September 30, 1999.
- <sup>38</sup> DOE: Hydrogen, Fuel Cells and Infrastructure Technology Program, [www.eere.energy.gov/hydrogenandfuelcells/](http://www.eere.energy.gov/hydrogenandfuelcells/).
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- <sup>40</sup> Tadross, Nathan and Colonna, "Hybrid Electric Vehicles (HEVs)," *Equity Research Report*, September 22, 2003, Banc of America Securities, page 7.
- <sup>41</sup> SFA Pacific: *Hydrogen Supply: Cost Estimate for Hydrogen Pathways*, scoping analysis, July 2002.
- <sup>42</sup> CERA, *ibid.*; SFA Pacific, *ibid.*
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- <sup>44</sup> DOE: *National Hydrogen Energy Roadmap 2002*; *Hydrogen Supply (ibid.)*; Dow Jones interview with Honda, April 2002.

# ExxonMobil

5959 Las Colinas Boulevard • Irving, Texas 75039-2298

Internet Web site: <http://www.exxonmobil.com>

February 2004

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February 3, 2006

**VIA NETWORK COURIER**

U. S. Securities and Exchange Commission  
Division of Corporation Finance  
Office of Chief Counsel  
100 F Street, N.E.  
Washington, DC 20549

RE: Securities Exchange Act of 1934 -- Section 14(a); Rule 14a-8  
Omission of shareholder proposal regarding investment in  
renewable energy projects

Gentlemen and Ladies:

I refer to ExxonMobil's letter dated January 20, 2006, requesting the staff's concurrence that the shareholder proposal referenced above can be excluded from the proxy material for the company's upcoming annual meeting under Rule 4a-8(i)(10) (the "Original Letter").

Enclosed is a copy of ExxonMobil's new report entitled "Tomorrow's Energy, A Perspective on Energy Trends, Greenhouse Gas Emissions and Future Energy Options," referred to in the Original Letter as the "2006 Report." The 2006 Report has now been finalized and approved by ExxonMobil's Public Issues Committee following its recent meeting in late January. The Committee consists solely of independent directors.

As discussed in the Original Letter, we believe the 2006 Report, together with the other materials we have already made available to the public and enclosed with the Original Letter, substantially implement the shareholder proposal.

While we believe the entire Report is relevant to the subject matter of the proposal, we call the staff's attention in particular to the discussion of renewable energy alternatives on pp. 15-17 of "Section 3: Technology Options for the Longer Term." This discussion, in the context of our long-range energy outlook (see Section 1 of the Report) and our approach to making investment decisions (see Section 4 of the Report), explains how and why our renewable energy

investments are focused on research and development of new technology. Discussion of our successful and ongoing efforts to reduce greenhouse gas emissions, both from our own operations and from the use of our products by customers, is primarily contained in Section 2 of the Report (see especially "ExxonMobil Action to Reduce GHG Emissions" on pp. 11-12).

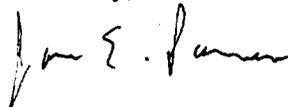
As noted in the Original Letter, we also continue to believe the proposal may be omitted under Rule 14a-8(i)(7).

The new Report will be posted on ExxonMobil's website in the near future, and printed copies will be available on request to any shareholder or other interested person free of charge.

Please file-stamp the enclosed copy of this letter and return it to me in the enclosed self-addressed postage-paid envelope. In accordance with SEC rules, I enclose five additional copies of this letter and enclosures. A copy of this letter and the newly-approved Report is also being sent to the proponent.

Please feel free to call me directly at 972-444-1478 if you have any questions or require additional information. In my absence, please call Lisa K. Bork at 972-444-1473.

Sincerely,

A handwritten signature in black ink, appearing to read "James E. Parsons". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

James E. Parsons

JEP:clh

Enclosures



## **Tomorrow's Energy**

A Perspective on Energy Trends,  
Greenhouse Gas Emissions  
and Future Energy Options

February 2006

**ExxonMobil**  
Taking on the world's toughest energy challenges.™

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Projections, targets, expectations, estimates and business plans in this report are forward-looking statements. Actual future results, including energy demand growth and mix; economic development patterns; efficiency gains; resource recoveries; capital expenditures; technological developments; emission reductions; and project plans and schedules could differ materially due to a number of factors. These include changes in market conditions affecting the energy industry; changes in law or government regulation; unexpected technological developments; and other factors discussed in this report and under the heading "Factors Affecting Future Results" in Item 1 of ExxonMobil's latest Form 10-K and on our Web site at [www.exxonmobil.com](http://www.exxonmobil.com). References to resources in this report include quantities of oil and gas that are not yet classified as proved reserves but that, in the case of ExxonMobil figures, we believe will ultimately be produced. Additional information on terms used in this report, including our calculation of Return on Capital Employed, is available through our Web site under the heading "Frequently Used Terms."

## Introduction: Energy for a Growing World

Energy is essential to our way of life, to economic progress and to raising and maintaining living standards. The pursuit of economic growth and a better quality of life in developing countries is driving global energy demand. New supplies of reliable, affordable energy are needed.

At the same time, concerns about future energy supply and climate change have heightened interest in energy supply options, energy prices and the effect of energy use on the environment.

We believe it is essential that industry plays an active role in the ongoing dialogue about the future of energy—one which is grounded in reality, focused on the long term and intent on finding viable solutions.

In this document, we explain our views on future energy trends, the risks of climate change, the prospects for promising new energy technologies and ExxonMobil's activities in these areas.

In particular, we highlight the important relationship between rising energy demand, economic progress and greenhouse gas emissions. As policymakers seek to ensure future energy supplies while addressing the risks associated with global climate change, it is critical that the economic and social consequences – in the developed and the developing world – are taken into account.

Equally critical is a recognition that huge investments will be needed to meet the world's growing energy needs. Energy is a massive business. Even as the largest non-government energy company, ExxonMobil produces just two percent of the energy the world consumes every day. Projects take years to develop, cost billions of dollars to bring on stream, and operate for decades.

To be justified in making these large investments, companies need stable, consistent government policies to help projects remain robust over the long term.

In a world featuring both geopolitical and regulatory uncertainty, we believe ExxonMobil will be served well by continuing to focus on operational and technical excellence, prudent risk management and responsible business behavior. ExxonMobil stands ready to meet the many challenges of delivering energy for a growing world.

# Section 1: The Next Quarter Century of Energy

**Energy is a long-term, capital-intensive business. As a major participant in the global energy industry, we must anticipate and adapt to trends and changes in our industry so that we can make sound business decisions and invest our shareholders' money wisely in projects that remain attractive over the long term.**

Every year, we prepare a long-range outlook of global energy trends. The 2005 outlook covers the period to the year 2030 and provides a strategic framework to aid evaluation of potential business opportunities.

### Economic growth and expanding populations drive global energy needs

Energy is critical to economic progress. The global economy is expected to double in size by 2030 – mainly driven by the developing nations that today account for just over 20% of the world's economic output. By 2030, this share will grow to 30%, led by rapidly expanding economies such as China, India, Indonesia and Malaysia.

World population is also expanding. Today, there are nearly 6.5 billion people, about 20% of whom live in developed countries (member nations of the Organization for Economic Cooperation and Development - OECD) and the remainder in developing (non-OECD) countries. By 2030, population is expected to reach 8 billion people, with close to 95% of this growth occurring in the developing world.<sup>1</sup>

Yet there are still about 1.6 billion people today without access to electricity and about 2.4 billion who rely on basic fuels such as wood and dung for heating and cooking.<sup>2</sup>

Economic growth in the developed and developing world over the next quarter century will have a dramatic impact on global energy demand and trade patterns.

### A vast and growing need for energy

Every day, the world consumes about 230 million barrels of energy (expressed in terms of "oil equivalent" or MBDOE) with demand split about equally between developed and developing nations.

By 2030, we expect the world's energy needs to be almost 50% greater than in 2005, with growth most pronounced in the rapidly expanding developing countries (See Fig. 1). Perhaps most significant, we anticipate energy demand in developing Asia/Pacific to grow at 3.2% annually, increasing to one-third of the world's total – an amount equivalent to the energy demand of North America and Europe combined.

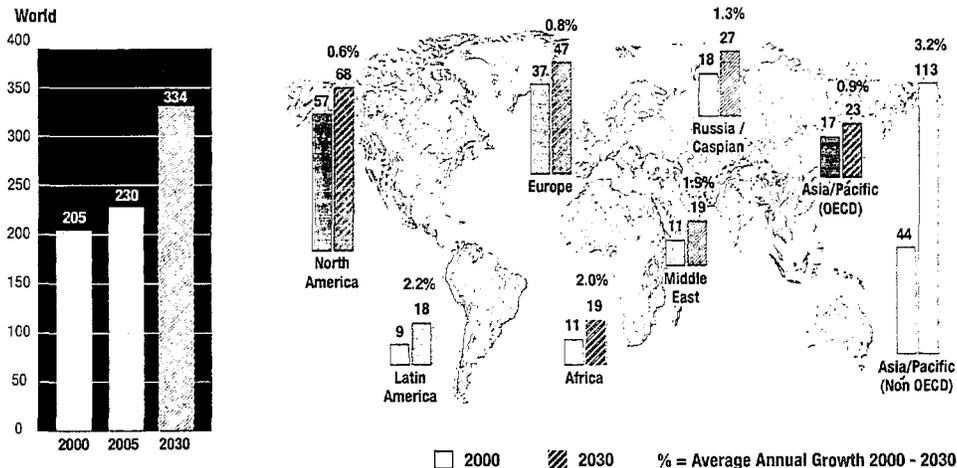
### Continuing progress in energy efficiency

Continued rapid improvement in energy efficiency, mainly driven by the development and use of new technology in the transportation and power generation sectors, is expected to temper the growth in global energy demand.

Fig. 1

### Growing World Energy Demand

Millions of Barrels per Day of Oil Equivalent (MBDOE)



**Note:** For the purposes of this report, the phrases "developing countries" and "non-OECD countries" are interchangeable. OECD countries are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Republic of Korea, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the UK, and the United States.

### Energy intensity improves globally

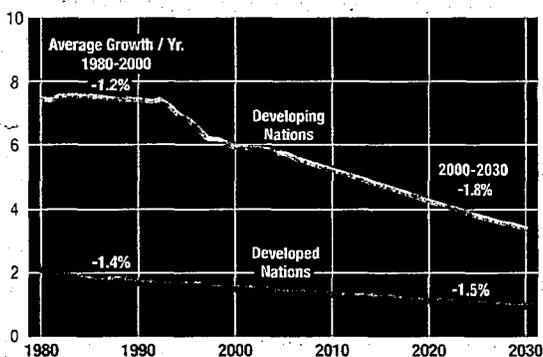
We expect the rate of "energy intensity" (the energy used per \$1,000 of GDP) to improve 1.8% annually in developing countries and 1.5% annually in developed countries from 2000 through 2030, compared with 1.2% and 1.4% per year respectively between 1980 and 2000.

The developing nations are particularly important given that the energy intensity of their economies is about 3-4 times greater than that of the developed countries. There was a steep drop in the energy intensity of the developing countries during the 1990s, reflecting the collapse of the former Soviet Union (FSU), but today a dramatic level of disparity remains (See Fig.2). There are significant opportunities for efficiency gains as these nations develop.

Fig. 2

#### Energy Intensity - Declining trend accelerates most notably in developing (non-OECD) countries

Barrels of oil equivalent per \$K GDP



### Fossil fuels remain the predominant energy sources

Over time, an increasingly diverse range of energy sources and technologies will be needed. But at least through 2030, fossil fuels will continue to satisfy the vast majority of global demand (See Fig. 3 on page 4). These are the only fuels with the scale and flexibility to meet the bulk of the world's vast energy needs over this period.

- Oil and gas combined will represent close to 60% of overall energy, a similar share to today.
- Oil use is expected to grow at 1.4% annually. Significant improvements in vehicle fuel economy will dampen demand growth.
- Gas is expected to grow at 1.8% annually, driven largely by strong growth in global electricity demand.
- Coal, like gas, is expected to grow at 1.8% annually, driven by expanding power generation. Despite higher CO<sub>2</sub> intensity, large indigenous supplies will give coal economic advantages in many nations, particularly in Asia.

### ExxonMobil's 2005

#### Energy Outlook: Highlights

- By 2030, global energy demand will increase approximately 50% from the 2005 level, driven by economic progress and population growth.
- About 80% of growing energy demand will occur in developing countries.
- Improvements in energy efficiency and intensity will accelerate, due to advancing technologies.

- Oil, gas and coal remain the predominant energy sources, maintaining about an 80% share of total energy demand through 2030.
- Global resources are sufficient to meet demand. Access to resources and timely investments are vital to developing adequate energy supplies.
- Natural gas will grow rapidly in importance, mainly due to its environmental benefits and efficiency in

electricity generation.

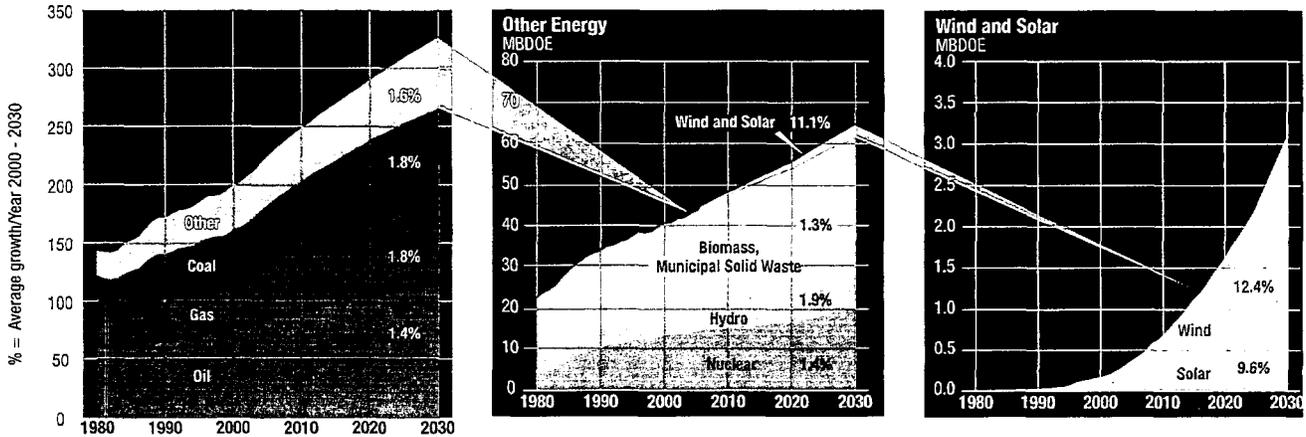
- Biofuels, wind and solar will grow rapidly as sources of energy, contributing about 2% of total energy supply by 2030.
- Increased use of fossil fuels will increase global carbon dioxide (CO<sub>2</sub>) emissions, with close to 85% of the increase in developing countries. (See section 2).
- Advances in technology are critical to successfully meeting future energy supply and demand challenges.

Fig. 3

**Energy Demand Grows: Fossil fuels remain predominant; renewables grow rapidly from small base**

**Total World Energy**

Millions of Barrels per Day of Oil Equivalent (MBDOE)



**Non-fossil energy supplies will expand:**

- Nuclear will grow on average at 1.4% per year, with the largest growth in Asia, although we expect North America and Europe to add new plants late in the outlook period.
- Hydro power is expected to grow at just under 2% per year, with increases likely in China, India and other developing countries.
- The use of biomass, including traditional fuels (wood, dung) used in developing countries, and solid waste will grow about 1.3% per year.
- Wind and solar energy combined will likely average about 11% growth per year, supported by subsidies and related mandates. Even with this rapid projected growth, wind and solar will contribute only 1% of total energy by 2030, illustrating the vast scale of the global energy sector.
- Biofuels, including ethanol and biodiesel, will grow from less than one million barrels per day (MBD) in 2005 to about 3 MBD in 2030.

The prospects for wind, solar, biofuels, nuclear and other longer-term energy technologies are discussed further in Section 3.

**Oil: Increased transportation demand and improved engine technology**

Growth in oil demand will be driven by increasing transportation needs, especially in developing countries. Widely available, most affordable and supported by a global infrastructure, oil is uniquely suited as a transport fuel. There is no large-scale alternative to oil as a transport fuel in the near term.

Critical to transportation demand will be the size and nature of the personal vehicle fleet. By 2030, we expect the size of the U.S. and European fleets to plateau, while the

number of vehicles in Asia will nearly quadruple (See Fig. 4). Working to offset demand growth from the larger vehicle fleet will be continuing improvements in fuel and engine system technology and efficiency.

Over the next 25 years, we expect the average fuel economy of new vehicles worldwide to improve by over 25% as a result of both the evolution of technology as well as shifts in the kinds of vehicles that people drive. While the rate of increase (about 1% annually) may seem small, it is more than double the rate of global improvement that we have seen in the past 10 years.

Hybrid vehicle technology, which couples the internal combustion engine with an electric motor, will play an increasingly important role as costs come down and it becomes available on a broader range of vehicles. In cities, where this technology has its greatest advantages, hybrid vehicles could deliver fuel economy improvements in excess of 50%.<sup>3</sup>

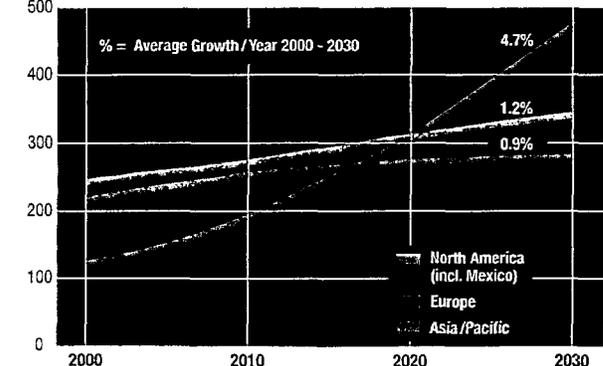
We also anticipate significant efficiency improvements to the basic internal combustion engine. One promising

Fig. 4

**Anticipated Growth in Transportation 2000 - 2030**

**Light Duty Vehicles**

Million



development which ExxonMobil is working on is known as Homogeneous Charge Compression Ignition, or HCCI. This technology combines aspects of gasoline and diesel engines. HCCI has the potential to improve vehicle fuel economy by 30% and be applicable to a broad range of vehicle types, including hybrids.

In addition to technology enhancements in vehicle power trains, we believe that technologies such as lighter-weight materials and improved lubricants will play an important role in delivering valuable efficiency improvements to the transportation sector.

**Natural Gas: Power generation, emissions benefits and LNG technology drive growth**

Natural gas demand continues to rise with growing electricity needs, aided by inherent advantages in efficiency and lower emissions. Growth will be most rapid in Asia/Pacific.

We anticipate that the efficiency of electricity production and distribution will continue to improve, through deployment of more advanced power generation technology and transmission infrastructure.

An important outcome of this growing gas demand is the increasing role of natural gas imports, particularly in the mature regions of North America and Europe where local production is expected to decline (See Fig. 5). To balance supply and demand, the distance between the major natural gas consuming nations and their sources of supply will grow. While pipelines will remain an efficient means to transport the majority of natural gas, the world will increasingly rely on liquefied natural gas (LNG), transported in large volumes across oceans via LNG tankers:

- In North America, LNG imports are expected to increase to about 25% of supply by 2030 (versus about 3% today), even with additional supplies via northern pipelines and tight gas developments.

- In Europe, natural gas imports are expected to increase from about 40% to about 85% of supply by 2030. In addition to LNG, pipeline imports will increase from Russia and the Caspian region.
- Natural gas demand in Asia/Pacific will triple over the next 25 years. Local production will meet a large part of this increased demand, but pipeline imports and increased volumes of LNG are expected in the future.

**LNG's dramatic growth**  
 By 2030, the LNG market will change dramatically, with a fivefold increase in volume to nearly 75 billion cubic feet per day (BCFD). That represents about 15% of the total gas market, up from about 5% in 2000. The center of global LNG supply will shift from Asia/Pacific to the Middle East and West Africa. Supplies from the Middle East are expected to be roughly double the supplies from either Africa or Asia/Pacific by 2030. Africa's supply contribution will grow, as LNG supplies there quadruple.

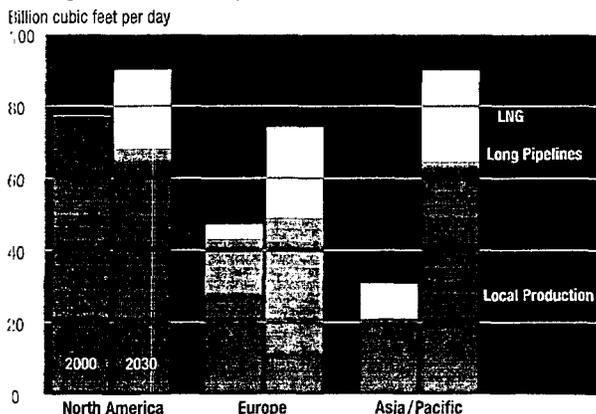
**Global oil resources are adequate to meet demand**

An important factor in predicting future supply trends is the scale of the worldwide oil resource base.

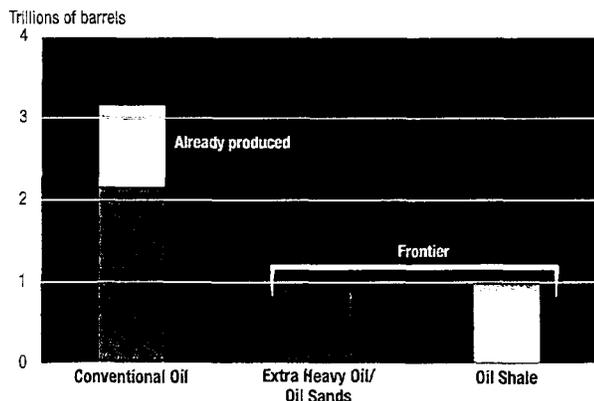
By today's estimates, the world was endowed with recoverable conventional oil resources of over three trillion barrels worldwide. Additional frontier resources (extra-heavy oil, oil sands, oil shale) bring this recoverable total to 4 – 5 trillion barrels. Of this amount, approximately 1 trillion barrels have been produced since oil was first discovered. (Fig. 6)

This global resource base will support production growth through the 2030 time horizon, with growing contributions from the Middle East, Africa and the Russia/Caspian region.

**Fig. 5**  
**Growing Reliance on Gas Imports**



**Fig. 6**  
**Recoverable Oil Resources**



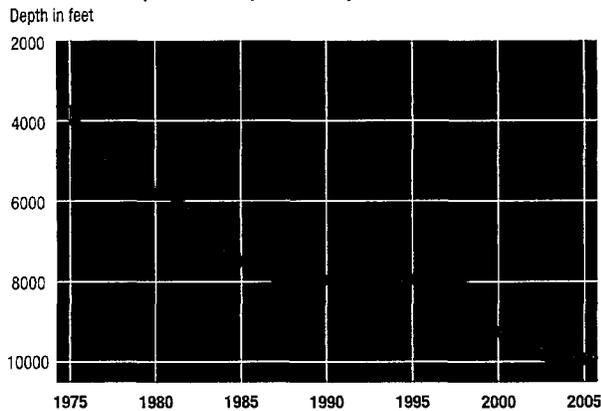
**Meeting Future Energy Needs: Technology, investment and supportive governments are critical**

To meet the anticipated 190 MBDOE of oil and gas demand in 2030, the industry will need to find new supplies as well as extend and expand existing production sources.

Continued technology advances will be needed to increase supplies, while protecting the environment. Technology has continually expanded the industry's ability to find, develop, produce and transport energy supplies while reducing environmental impact. These advances evolve over time and are expected to continue to assist in meeting growing global energy demand.

**Fig. 7**

**The Move to Deeper Water: Exploration depths**



Sophisticated reservoir imaging, facilitated by the growth in computing power, allows the identification of previously unknown oil and gas deposits. Deepwater exploration technology and extended-reach drilling allow the industry to pinpoint and access previously inaccessible resources (See Fig. 7). Continued success in challenging environments, from arctic locations to water depths approaching two miles deep, demonstrate the industry's capacity for technical innovation.

Technology not only expands the geological range of where we produce, but it also extends the types of supplies that contribute to meeting global demand. As we move toward 2030, we anticipate an increasing contribution from "frontier" hydrocarbon resources such as oil sands and extra-heavy oil. While the technology needed to produce these resources economically is available today, continued R&D will ensure that the required growth in production can be realized in an efficient, cost-effective and environmentally responsible manner.

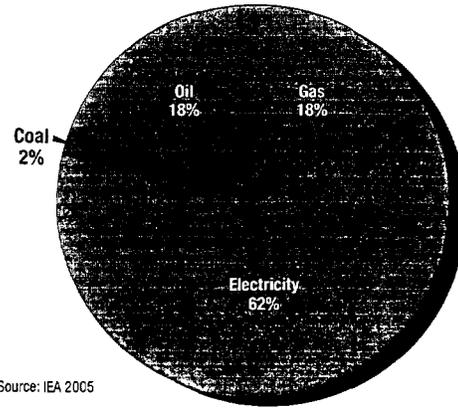
Increasing supplies to meet demand will require substantial investment. The International Energy Agency estimates that the investment required to meet global energy demand for 2004-2030 will be \$17 trillion, of which over \$10 trillion is required for electricity and \$6 trillion (over \$200 billion annually) for oil and gas (See Fig. 8)<sup>4</sup>. Financing will be a critical challenge, with funding dependent on attractive, competitive investment conditions.

**Fig. 8**

**Total World Energy Investment Requirement: \$17 Trillion**

World Energy Investment, 2004-2030

Over \$200 billion per year required in Oil and Gas



Source: IEA 2005

But more than investment dollars and technology advances will be needed. Governments have a vital role to play in providing access to acreage, opening markets, reducing barriers to trade and avoiding harmful policies, such as subsidies and regulations that can weaken or distort energy markets. Given the enormous investments involved, potential investors need to be confident of the sanctity of contracts, the recognition of intellectual property and support for the rule of law.

## ExxonMobil's Technology Advantage

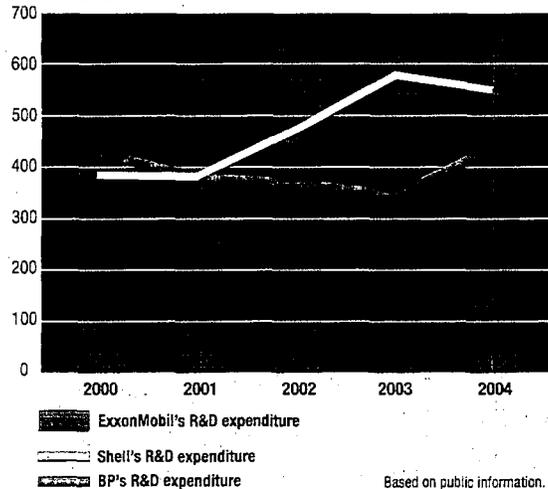
ExxonMobil has long been the industry leader in research and technology, with a history of invention, including 3-D seismic, digital reservoir simulation and industry 'firsts' in such areas as deepwater drilling, refining technology, chemicals and synthetic lubricants.

Today we invest over \$600 million per year in research and development, balancing our investment between technology extensions, which can be rapidly deployed to our existing operations, and breakthrough research in areas that can have a lasting impact on the company and the industry.

Fig. 9

### ExxonMobil R&D Investment 2000 - 2004

Millions of Dollars



Examples of our recent achievements in technologies that help unlock the potential in some of the world's hydrocarbon basins include:

- A promising new technology known as R3M (Remote Reservoir Resistivity Mapping) that uses electromagnetic energy to directly detect reservoirs of oil and gas before drilling, substantially reducing exploration risk

- Our proprietary tool EMpower™ is the industry's only next-generation reservoir simulator, allowing engineers to study reservoirs more comprehensively than ever before
- Proprietary well-bore technology used on Sakhalin Island in Russia's Far East enables us to reach oil reservoirs five miles offshore via extended-reach, horizontal drilling from an onshore location.

With LNG playing an increasingly critical role in meeting demand for natural gas, ExxonMobil engineers have recently developed technology that can double the capacity of liquefaction plants and increase by 80% the LNG carried by a single ship, dramatically reducing LNG costs.

At the same time we have developed unique high-strength steel to lower the cost of transporting natural gas by pipeline.

In the area of vehicle engine and fuel efficiency, ExxonMobil scientists are involved in projects including:

- Partnerships with Toyota and Caterpillar to research improvements to internal combustion fuel and engine systems that could result in a 30% improvement in fuel economy and reduced emissions
- A partnership with DaimlerChrysler to develop new lubricants to improve fuel economy, extend oil change intervals and lower emissions
- Development of new recyclable plastics to enable lighter-weight vehicles
- Groundbreaking research in hydrogen generation (see "hydrogen" - Section 3)

In an effort to apply the combined resources of industry and academia to the challenge of identifying technologies that meet growing energy demand while dramatically reducing greenhouse gas emissions, we launched the Global Climate and Energy Project (GCEP) at Stanford University in 2002. The GCEP research areas are covered in Section 2, and at [gcep.stanford.edu](http://gcep.stanford.edu).

## Section 2: Greenhouse Gas Emissions – A Global Issue

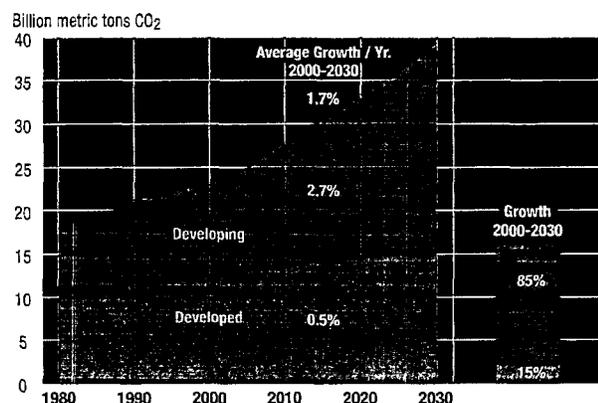
**Managing the risks from increases in global greenhouse gas emissions is an important concern for ExxonMobil, industry and governments around the world.**

### **Economic growth and emissions reduction**

Section 1 described how increasing population and prosperity, especially in developing countries, will drive up global energy demand. This will result in substantial increases in greenhouse gas emissions, particularly from developing countries, which will account for about 85% of the growth in CO<sub>2</sub> emissions from 2000 through 2030 (See Fig.10).

Fig. 10

### **CO<sub>2</sub> Emissions Growth Driven by Developing Countries**



This poses a challenge. To deliver the benefits of continued economic progress, fossil fuels are expected to remain the predominant source of world energy supply over this period. At the same time, governments at all levels are responding to growing concern about climate change by taking policy actions to reduce greenhouse gas emissions. Policymakers face a difficult task: where these policies restrict fossil-fuel use or add cost to their use, they can also retard economic development.

It is therefore vital that policymakers and society take into account the wider social and economic impacts of energy and climate policies.

ExxonMobil is involved in this process through direct participation in scientific, technical, economic and policy forums and by working through trade associations to engage in public policy discussions. We are also taking actions in our own operations.

### **Climate Policy: Path forward is unclear**

Until recently, the policy debate focused primarily on near-term emissions reductions in the framework of targets and timetables set by the Kyoto Protocol. The first compliance period under the Protocol is 2008-2012.

Among those nations ratifying the Protocol, the European Union (EU) has been most active in seeking to implement it. An emissions trading scheme (ETS) has been established, which will limit emissions of CO<sub>2</sub> from certain industrial activities, including power production and refining. Other nations, such as Japan and Canada, are still considering policies and regulations they may adopt.

Most nations are not on track today to meet their 2008-2012 Kyoto targets with domestic actions. The total shortfall could be several hundred million metric tons of CO<sub>2</sub> per year.

That shortfall may be eliminated if international emissions trading enables countries to purchase sufficient allowances from those countries with surpluses, particularly Russia and the Ukraine. These two countries have substantial excess emissions allowances due to the decline and restructuring of their economies since 1990. No further actual emission reduction steps are required to create the surplus, which is large enough to compensate for missed targets among other industrialized nations.

The international debate on what policy actions to take beyond 2012 is now under way, but the outcome is uncertain. The debate is complicated by the following concerns:

- The developing world has indicated it will not accept greenhouse gas emissions reduction targets, leaving the vast majority of the global growth in greenhouse gas emissions outside the reach of the Kyoto Protocol targets.
- Differing targets in developed countries can increase domestic energy costs and accelerate the shift of new investment abroad, including to developing countries, which already enjoy lower labor costs.

### **The Business Impact: Regulatory uncertainty threatens investment**

The current uncertainty poses challenges for global businesses. Major energy investments usually have long lives. Uncertainty about regulations, both for 2008-2012 and beyond 2012, creates a higher level of risk for companies. In Europe and Canada, for example, concerns are growing regarding companies' willingness to invest in energy-intensive activities, such as new chemical production and heavy oil production. The uncertainty about future regulations raises questions about the longer-term viability of such investments.

### **Increasing recognition of technology's vital role**

As nations have begun to consider other options for reducing GHG emissions, there is a growing interest in the role technology can play in emissions reduction. For example, the recently announced Asia Pacific Partnership for Clean

Development and Climate aims to promote the use of clean, efficient technology. The latest G8 statement and the EU-China Climate Partnership also highlight the importance of using and developing innovative technologies. The focus on technology development and deployment is supported by the recognition that:

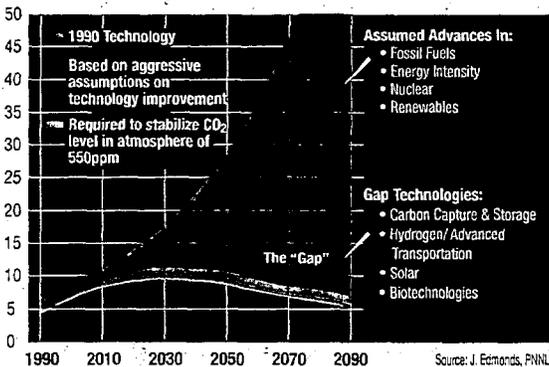
- The more widespread application of existing energy-efficient technologies could significantly reduce the growth in greenhouse gas emissions from economic progress in both the industrialized and the developing world. (See Fig. 12)
- Development and deployment of new, energy-efficient technologies can enable lower energy consumption without damage to economic growth.
- New breakthrough technologies offer the possibility of substantial long-term reductions in greenhouse gas emissions at lower costs than current technology options.

Fig. 11

### The Need for Innovative Technology<sup>5</sup>

#### Carbon Emissions

Billions of Metric Tons of Carbon



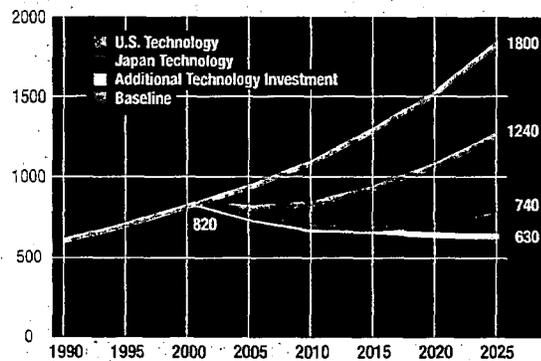
Worldwide carbon emissions are expected to grow rapidly over the next century even with significant technology advances. The middle curve (red line: from the Intergovernmental Panel on Climate Change 1992) shows projected growth in greenhouse gas emissions over the coming century. The IPCC projection assumes major ongoing improvements in the efficiency with which energy is supplied and used from oil, coal and gas, as well as enhanced penetration of nuclear and renewable energy. Without technological improvements, emissions would be much higher, as shown in the top curve (purple line) where energy is supplied and used with efficiency at 1990 levels. The lowest (blue) curve illustrates one emissions trend corresponding to stabilizing CO<sub>2</sub> concentrations at 550 parts per million (ppm). Reducing emissions to the lowest trend line would require widespread introduction of innovative, currently non-commercial technologies to fill the remaining gap. In this study these 'gap' technologies include carbon capture and storage, hydrogen production and use, solar and biotechnologies, all of which require fundamental breakthroughs in research to overcome current barriers to cost, performance, safety and public acceptance before they could enter into widespread use.

Fig. 12

### Existing Technologies Offer Significant Potential

#### Projected Chinese Emissions with Enhanced Technology<sup>6</sup>

MMTCE



Source: Bernstein, Tuladhar, Montgomery

Applying OECD country technology to developing economies could dramatically reduce carbon emissions. In China, for example, investments today have, on average, significantly poorer energy efficiency and higher greenhouse gas emissions than investments being made today in OECD countries. A recent study showed that adopting today's U.S. or Japanese-level technology in future investments in China could reduce China's anticipated 2025 carbon emissions by over 30 and over 50% respectively (see graph). Furthermore, if policies to increase R&D investment could increase the rate of improvement in energy efficiency to twice today's levels, then emissions could decrease to around 65% of anticipated 2025 emissions, and result in a continuous decrease in China's future emissions. In fact, the study concluded that "the potential for reducing emissions through changing technology in developing countries over the next 15 years is estimated to be of similar magnitude to the reductions in emissions that would be achieved if all Annex B countries were to achieve their Kyoto Protocol emission caps."

### ExxonMobil Recommendations: Key Objectives for Long-term Climate Policy

- Promote global participation
- Encourage more rapid use of existing efficient technologies (in both developed and developing countries)
- Stimulate research and development to create innovative, affordable, lower GHG technologies sooner
- Address climate risks in the context of developing country priorities: development, poverty eradication, access to energy
- Continue scientific research to assess risks, pace policy response

## **Climate Science: What we know**

ExxonMobil has undertaken climate science research for 25 years. Our work has produced more than 40 papers in peer-reviewed literature, and our scientists serve on the Inter-governmental Panel on Climate Change (IPCC) and numerous related scientific bodies. Contributed papers on climate science are listed on our web site.<sup>7</sup>

Based on this experience, we recognize that the accumulation of greenhouse gases in the Earth's atmosphere poses risks that may prove significant for society and ecosystems. We believe that these risks justify actions now, but the selection of actions must consider the uncertainties that remain. Notwithstanding these uncertainties, ExxonMobil is taking action to address these risks.

### **Our world has changed**

Since the 1800s concentrations of carbon dioxide (CO<sub>2</sub>) in the atmosphere have increased by roughly 30% (from 280 to 380 parts per million today).<sup>8</sup> Concentrations of other greenhouse gases have also increased – including a doubling of methane levels. Human activities have contributed to these increased concentrations, mainly through the combustion of fossil fuels for energy use; land use changes (especially deforestation); and agricultural, animal husbandry and waste-disposal practices.

Surface temperature measurements have shown that the average global temperature has risen by about 0.6 °C since the mid-1800s. Other changes, consistent with the surface temperature rise, have also been observed. For example, scientists have documented a decrease in the volume of mountain glaciers and an increase in the length of growing seasons. These observations have fueled concern about the potential longer-term consequences of climate change.

### **Climate is a complex science**

The complexity of the climate system makes it difficult to understand past and future consequences of greenhouse gas increases. As a result, the extent to which recent temperature changes can be attributed to greenhouse gas increases remains uncertain.

Limits in climate knowledge – for example in describing the behavior of clouds, hydrology, sea ice and ocean circulation – are well known and continue to be researched.<sup>9</sup> Climate observations display significant natural variability that cannot be explained with existing models and knowledge. In the recent and ancient geological past, for example, climate has been both warmer and cooler than today for reasons that are not yet understood.<sup>10</sup>

Projections of climate change require estimates of future emissions from energy use and other sources over the 21st century. In our own Energy Outlook it is difficult to predict how technology will develop even over the next 25 years. Longer-term economic and climate forecasts face even more uncertainty about how new technologies and changes in human behavior may affect greenhouse gas emissions.

As a result, researchers must rely on scenarios based on various assumptions, which deliver results ranging from significant emissions growth (a threefold increase in emissions over the 21st century) to a drop in global emissions, even without policy interventions.<sup>11</sup>

When climate models are used to analyze the implications of these emissions scenarios, they project more severe consequences at the high end – including sea level rises, droughts and polar ice melting – and relatively benign climate changes at the low end.

### **Uncertainty and risk**

While assessments such as those of the IPCC have expressed growing confidence that recent warming can be attributed to increases in greenhouse gases, these conclusions rely on expert judgment rather than objective, reproducible statistical methods. Taken together, gaps in the scientific basis for theoretical climate models and the interplay of significant natural variability make it very difficult to determine objectively the extent to which recent climate change might be the result of human actions. These gaps also make it difficult to predict objectively the timing, extent and consequences of future climate change.

Consequently, the National Research Council<sup>12</sup> cautioned after the most recent IPCC report:<sup>13</sup> "Because of the large and still uncertain level of natural variability inherent in the climate record and the uncertainties in the time histories of the various forcing agents (and particularly aerosols), a causal linkage between the buildup of greenhouse gases in the atmosphere and the observed climate changes during the 20th century cannot be unequivocally established. The fact that the magnitude of the observed warming is large in comparison to natural variability as simulated in climate models is suggestive of such a linkage, but it does not constitute proof of one because the model simulations could be deficient in natural variability on the decadal to century time scale."

Even with many scientific uncertainties, the risk that greenhouse gas emissions may have serious impacts justifies taking action. ExxonMobil's actions to reduce greenhouse gas emissions are described in the next section.

## ExxonMobil Actions to Reduce GHG Emissions

Recognizing the risk of climate change, we are taking actions to improve efficiency and reduce greenhouse gas emissions in our operations.

We are also working with the scientific and business communities to undertake research to identify and develop economically competitive and affordable technologies to reduce long-term global greenhouse gas emissions while meeting the world's growing demand for energy.

Examples of our efforts include:

- **Reporting.** ExxonMobil is committed to consistent, comprehensive reporting of greenhouse gas emissions. We have publicly reported greenhouse gas emissions<sup>14</sup> as they relate to our operations since 1998. Starting in 2003, we report direct greenhouse gas emissions, based on our equity share of ownership, both from facilities we operate and those in which we share ownership. We believe that direct, equity-based accounting best reflects shareholder interests in this area.

In 2004 our greenhouse gas emissions rose by 1% compared to 2003 due to throughput increases and more intense processing to meet clean fuels demand. Energy efficiency steps helped to offset the impact of more intense operations and prevented further increases in emissions per barrel (See Fig. 13).

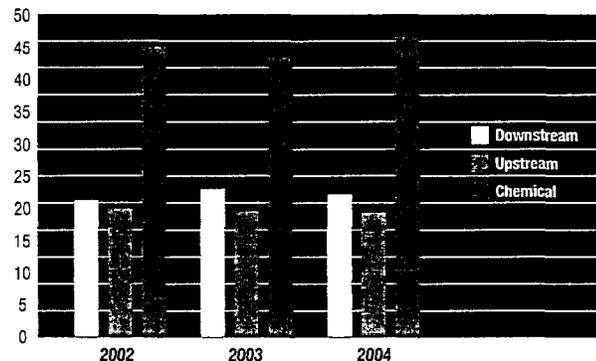
- **Research.** We have conducted and supported scientific, economic and technological research on climate change for more than two decades. Overall, our research has been designed to improve scientific understanding, assess policy options, and achieve technological breakthroughs that reduce GHG emissions in both industrial and developing countries. Major projects have been supported at institutions including the Australian Bureau of Agricultural Resource Economics, Battelle Pacific Northwest Laboratory, Carnegie Mellon, Charles River Associates, The Hadley Centre for Climate Prediction, International Energy Agency Greenhouse Gas R&D Programme, Lamont Doherty Earth Observatory at Columbia University, Massachusetts Institute of Technology, Princeton, Stanford, University of Texas and Yale.

- **Advanced vehicle technology:** Because the majority of GHG emissions associated with the production and use of oil arises from consumer use of fuels (87%), with the remainder from our industry's operations (13%), we partner with automobile manufacturers to help develop advanced vehicles and fuels. The internal combustion engine is expected to power more than 95% of vehicles in 2030,<sup>15</sup> so technologies that improve fuel efficiency and the emissions performance of the internal combustion engine could substantially reduce environmental impacts for decades to come. Examples of ExxonMobil's

Fig. 13

### Greenhouse Gas Emissions (Normalized)

Direct equity CO<sub>2</sub> equivalent emissions; metric tons of emissions per 100 metric tons of throughput (excludes Cogeneration)



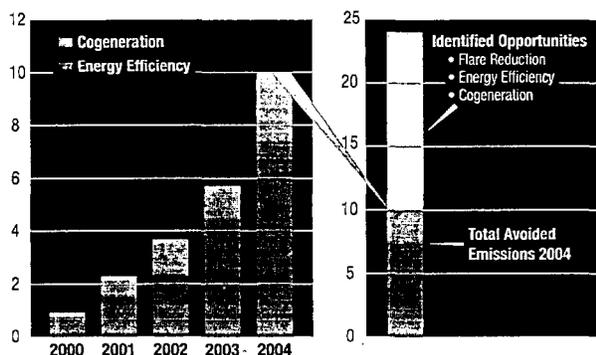
Note: Adding cogeneration of power and steam increases ExxonMobil's emissions but reduces those of others that would have produced the power. The overall impact is a reduction by as much as half in emissions for the same amount of energy produced.

work in this area include:

- Working with Toyota and Caterpillar on separate programs to design high-efficiency, low-emission gasoline and diesel fuel/engine systems. This has already produced groundbreaking research in combustion science.
- Developing a novel technique for hydrogen production, potentially compatible with both on-board vehicle and larger-scale applications.
- **Global energy management system (GEMS):** Improving energy efficiency in our operations helps us to reduce costs as well as reduce emissions. ExxonMobil's proprietary GEMS system focuses on opportunities to reduce energy consumed at our refineries and chemical complexes. Since its launch in 2000, the GEMS system has helped us identify opportunities for more than one billion dollars in pre-tax savings, and our energy-conservation efforts have saved enough energy to supply over one million European households each year. The greenhouse gas emission effect has been equivalent to taking more than one million cars off the road (See Fig. 14).
- **Cogeneration** is the simultaneous production of electricity and steam, typically using clean-burning natural gas. With the latest technology, cogeneration is up to twice as efficient as traditional methods of producing steam and power separately. ExxonMobil has interests in 85 cogeneration facilities at some 30 locations worldwide, representing a capacity of about 3,700MW, enough to power nearly 3 million U.S. homes. These facilities, which represent decades of investment, enable a reduction in carbon dioxide emissions by 9 million metric tons a year versus traditional methods

Fig. 14

**Avoided Greenhouse Gas Emissions from ExxonMobil actions since 1999**  
Million metric tons per year



Since 1999, our energy-saving initiatives have had a GHG effect in 2004 equivalent to taking over 1.5 million U.S. cars off the road. We have identified opportunities for avoiding GHG Emissions equivalent to taking another two million U.S. cars off the road.

of separate power and steam generations. Our cogeneration capacity has increased by 800MW in the last two years, representing an investment of \$1 billion. In 2005 the cogeneration system at our refinery in Beaumont, Texas, was awarded a Certificate of Recognition from the U.S. Environmental Protection Agency. The EPA commended ExxonMobil for "exceptional leadership in energy use and management" and estimated that the system at Beaumont alone reduced CO<sub>2</sub> emissions by more than two million tons.

- Reduction in flaring:** Flaring is the burning of natural gas that is produced along with oil during oil production. In parts of the world where gas has no market outlet, gas production beyond that needed for fuel and other operational needs is often flared. In Africa, the region where flaring is most significant, we are undertaking major projects to reduce flaring. When fully implemented, we expect these projects to reduce greenhouse gas emissions by about seven million metric tons per year, the equivalent of removing approximately one million cars from U.S. roads. We are also working to reduce flaring at our refineries and chemical plants. For example, flaring at our Baytown refinery in Texas has been reduced by more than 70% since 2002.

**The Global Climate and Energy Project (GCEP):**

ExxonMobil worked to establish and is providing \$100 million to Stanford University's Global Climate and Energy Project – the largest-ever independent climate and energy research effort. GCEP is a major long-term research program designed to accelerate development of commercially viable energy technologies that can lower GHG emissions on a worldwide scale. Current GCEP research



**GCEP Research Programs**

At the end of 2005, 27 GCEP research programs were under way at Stanford and other institutions, comprising:

- 7 hydrogen**
- 6 advanced combustion**
- 5 solar energy**
- 4 CO<sub>2</sub> storage**
- 2 CO<sub>2</sub> capture and separation**
- 2 biomass**
- 1 advanced materials and catalysts**

Building capacity to address climate change risks – through research results and by training a new generation of scientists and engineers – is an important GCEP deliverable. GCEP research programs involve contributions from more than 30 faculty and from more than 80 students and postdoctorate fellows.

areas include hydrogen, solar energy, biomass, advanced combustion, CO<sub>2</sub> sequestration and advanced materials. A full list of ongoing projects is available on the GCEP web site ([gcep.stanford.edu](http://gcep.stanford.edu)).

In 2005 GCEP announced new research grants totaling approximately \$20 million to Stanford faculty and collaborating researchers at several U.S. and international institutions.<sup>16</sup> Other participating institutions include the Energy Research Centre of the Netherlands, the Delft University of Technology in the Netherlands, the Swiss Federal Institute of Technology in Zurich, the Carnegie Institution of Washington, D.C., University of Montana, University of New South Wales in Australia and the Research Institution of Innovative Technology for the Earth in Japan.

**Responding to Greenhouse Gas Regulations**

We actively engage with government authorities seeking to implement regulations regarding greenhouse gas emissions accounting and trading.

We believe that reliable inventories of emissions are an essential component of emissions control procedures and trading. As a result, we played a leading role in developing reliable, consistent tools to estimate and report greenhouse gas emissions in the oil and gas industry, namely:

- API Compendium of Greenhouse Gas Emissions Estimation Methodologies for the Oil and Gas Industry, April 2001. (available at <http://api-ec.api.org/policy/>)<sup>17</sup>
- IPIECA Petroleum Industry GHG Reporting Guidelines, December 2003. (available at [www.ipieca.org/](http://www.ipieca.org/))<sup>18</sup>

These procedures now form the basis for our own internal measurement and reporting. Building on these guidelines, our Rotterdam refinery developed a monitoring and reporting protocol that was recognized by the Dutch government as a best practice and recommended for use throughout the European Union.

#### **Climate Policy: Assessing risks to investors**

ExxonMobil continually considers risks to operations and investments from a wide variety of perspectives. In the case of climate change, market and technological considerations are important as well as policy and regulatory developments. In our view, it is impossible today to assess the potential implications for shareholder value from initiatives to address climate change. No governments have established definitive regulations for the 2008-2012 Kyoto Protocol compliance period, and there is currently no consensus on plans for the post-2012 period.

There has been some recent effort to quantify the potential implications of climate-related policies for oil and gas industry shareholders.<sup>19</sup> However, in light of trends in climate negotiations, the regulatory assumptions made are speculative and unlikely. The analyses also fail to take into account adjustments to investments and other business decisions that companies may make in the context of evolving regulatory frameworks or, indeed, how OPEC and other producing nations may react to regulations affecting demand for oil.

Technological, political and regulatory risks have been inherent in the oil industry since its earliest beginnings. Shareholder value will depend, as it always has, on how companies manage operations and investments in a changing business environment. Those best able to manage investment risks and operate efficiently will achieve competitive advantage.

Against this background we believe that the same strengths that have generated industry-leading returns for ExxonMobil in the past position us well to succeed in an uncertain future:

- Our strong financial position enables us to evolve in new directions when attractive opportunities appear.
- We manage business operations and investments with disciplined efficiency based on strong management and management systems.
- We utilize industry-leading technical capacity both to develop proprietary technologies that provide a competitive advantage and to maintain a window on external research developments that might affect our business.

#### **Assessing the Impact on ExxonMobil of Europe's Emissions Trading Scheme (EU-ETS) for 2005-2007**

In Europe ExxonMobil operates approximately 40 facilities and shares ownership in another 40 facilities that are covered under the EU-ETS. In total, ExxonMobil's equity share of covered emissions amounts to approximately 20 million metric tons of CO<sub>2</sub> annually.

As a result of internal actions, we expect to meet our obligations for the period 2005-2007 without acquiring allowances through emissions trading.

The overall impact of the EU-ETS for 2005-2007 includes the cost of monitoring and reporting efforts, third-party verification and the increased cost of purchased electricity due to EU-ETS restrictions on power generation. These costs will be offset in some part by the revenue from sales of surplus emissions allowances. While the net impact of these factors is unknown, it is not expected to be material to the Corporation.

The impact of the EU-ETS for 2008-2012 is unknown, as the member governments have not yet determined what emissions will be covered or how emissions allowances will be allocated.

To comply with the EU-ETS, we have established management systems to:

- monitor, report and verify emissions
- control and manage disposition of greenhouse gas allowances
- participate in emissions trading
- plan future emission reduction steps

Required system changes have been fully implemented and are in place at all covered ExxonMobil facilities.

## Section 3: Technology Options for the Longer Term

**Meeting future energy needs will require a diverse range of energy technologies. Looking to the long term, concern about energy security and rising greenhouse gas emissions has brought a number of new or enhanced technologies to the forefront of public discussion.**

Among these, wind, solar and biofuels are growing rapidly, albeit from a small base. Other technologies, such as hydrogen, are considered to hold promise, but face substantial challenges in terms of cost and large-scale implementation.

Over and above the technical hurdles, the scale of the global energy business means that widespread global deployment of new technologies, however promising, will take decades before the cumulative effect of investments makes a substantive contribution to overall energy supply.

Energy companies are involved in a wide range of new technology options, whether through research, or the manufacture and marketing of products.

Our own approach is based on the belief that technological breakthroughs, and not simply expanded scale, are key to unlocking the potential of alternative energy technologies. We closely analyze the potential of emerging technologies. Based on these assessments, we determine our approach, and – if appropriate – a level of involvement consistent with our business needs and strengths. This may involve proprietary research, shared knowledge through participation in industry groups or the funding of external research in those areas where fundamental breakthroughs are needed for a technology to reach its potential.

In this section, we highlight some of the most prominent technology options, the challenges that need to be overcome and – where relevant – ExxonMobil's involvement.

### Carbon Capture and Storage

Fossil fuels are expected to dominate the world's energy supply portfolio for some decades to come. A technology option that could play a significant role in helping reduce CO<sub>2</sub> emissions from the use of fossil fuels is carbon capture and storage (CCS). CCS technology separates CO<sub>2</sub> from a gas stream, compresses it to reduce volume, and transports it by pipeline to a storage site (See Fig. 15).

This technology could have a major impact, as it is applicable to any large-emission source of CO<sub>2</sub>. The IPCC estimates that these large facilities account for nearly 60% of global man-made CO<sub>2</sub> emissions.<sup>20</sup>

All of the important components of CCS systems are practiced commercially today at industrial scale by ExxonMobil. For example, ExxonMobil recovers CO<sub>2</sub> at LaBarge, Wyoming which is used for enhanced oil recovery. As part of that activity, a gas stream including CO<sub>2</sub> is removed and geologically sequestered. Commercial-scale CCS is practiced today only in a few niche applications and pilot demonstration studies. One of the best-known and longest-running CCS projects is in the Sleipner Field in the North Sea<sup>21</sup> – in which ExxonMobil shares ownership. Before CCS can be widely deployed on a global scale, it must overcome important challenges. In particular,

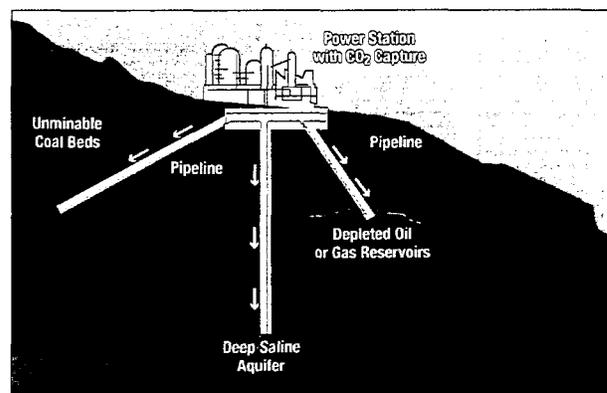
- CO<sub>2</sub> capture from power plants and most other large combustion facilities remains expensive.
- CO<sub>2</sub> storage presents technical and regulatory issues associated with ensuring safe operations and the integrity of the site over the long term.

Recognizing these challenges, ExxonMobil believes that CCS represents an important option to address global CO<sub>2</sub> emissions.

We have conducted research relevant to CCS for many years, and have supported external research and other activities to understand scientific, economic, technical and policy aspects of carbon capture and storage. In addition to the CCS studies as part of GCEP, ExxonMobil has supported the IEA's Greenhouse Gas R&D Programme and the Geological CO<sub>2</sub> Storage Research Program at the University of Texas. The research that we conduct and support is aimed at improving the performance, lowering the cost and assuring the integrity of CCS systems and their component technologies.

Fig. 15

### Carbon Capture and Storage



## Hydrogen

Hydrogen is widely considered to hold promise as an energy carrier, particularly as it offers the potential for fuel-efficient, emissions-free vehicles and can be produced from multiple primary energy sources.

It is important to remember that hydrogen, while abundant, does not occur naturally in pure form and must first be produced from water or hydrocarbons. This requires the use of energy generated from primary sources: oil, gas, coal, nuclear or renewables. So any evaluation of hydrogen needs to recognize the costs and the greenhouse gas emissions associated not only with its consumption, but also its production and distribution.

For hydrogen to become a viable transportation fuel, a number of formidable challenges must be met, including its safe handling and the high cost of production and distribution. While hydrogen has been used safely for decades by highly trained technicians in industrial settings, its characteristics pose unique challenges for use in consumer markets such as self-service vehicle fueling.

The high cost of producing and distributing hydrogen results in a fuel cost that is higher than gasoline on a cents-per-mile-driven basis. Based on an analysis by the National Academy of Engineering (NAE), the cost of fueling a hydrogen fuel cell vehicle is 1.9 to about 15 times greater than that of fueling a gasoline hybrid, depending on how the hydrogen is produced.<sup>22</sup> (See Fig. 16). Significant R&D effort will be required to lower these costs to a competitive level.

A number of studies conducted by different sponsors in different regions have assessed the potential for reducing CO<sub>2</sub> emissions via the use of hydrogen. All have concluded that there is some reduction in full-cycle CO<sub>2</sub> emissions for hydrogen fuel cell vehicles compared with hybrid technology (approximately 11% to 35%).<sup>23</sup>

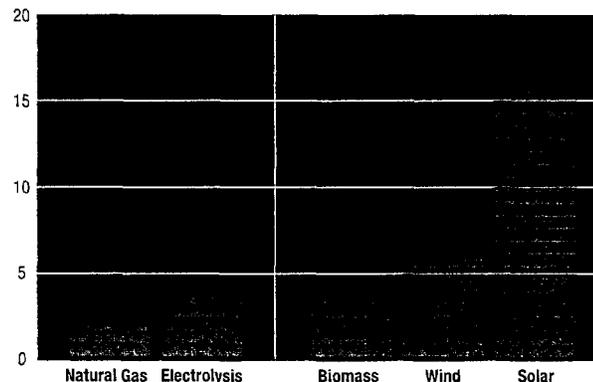
Interest in the use of renewable energy to make hydrogen is high, as this is the only option that would result in a "zero emissions" transportation fuel system on a total supply-chain basis. There are, however, a number of additional challenges associated with the manufacture of hydrogen from renewable energy. The NAE estimated that hydrogen is five times more expensive than gasoline when produced from wind and 15 times more expensive when produced from solar energy.<sup>22</sup>

With limited supplies of renewables in the coming decades, it is reasonable to ask whether the use of renewables to produce hydrogen for transportation would be the best use of those resources. A unit of wind or solar energy that is used to displace coal in power generation saves 2.5 times more carbon dioxide than using the same unit of wind or solar energy to replace gasoline with hydrogen.<sup>24</sup>

Fig. 16

### Cost of fueling a vehicle with hydrogen from different energy sources relative to fueling a gasoline hybrid engine

Cost multiple to gasoline



Source: National Academy of Engineering

ExxonMobil is currently pursuing groundbreaking research in hydrogen generation. Our unique skills in catalysis and process technologies have enabled us to identify a new approach to hydrogen production from hydrocarbon fuels that overcomes many of the challenges faced by alternative approaches.

If successfully developed, this technology would be scalable for applications ranging from on-board a vehicle to use at either retail stations or large centralized production facilities to produce hydrogen for fleets of fuel cell vehicles. We are also active members of the U.S. Department of Energy's FreedomCAR and Fuel Partnership.

## Biofuels

The use of biofuels in transportation is another way that CO<sub>2</sub> emissions could be reduced. Today ethanol and biodiesel, liquid fuels derived from organic matter, are receiving a lot of attention.

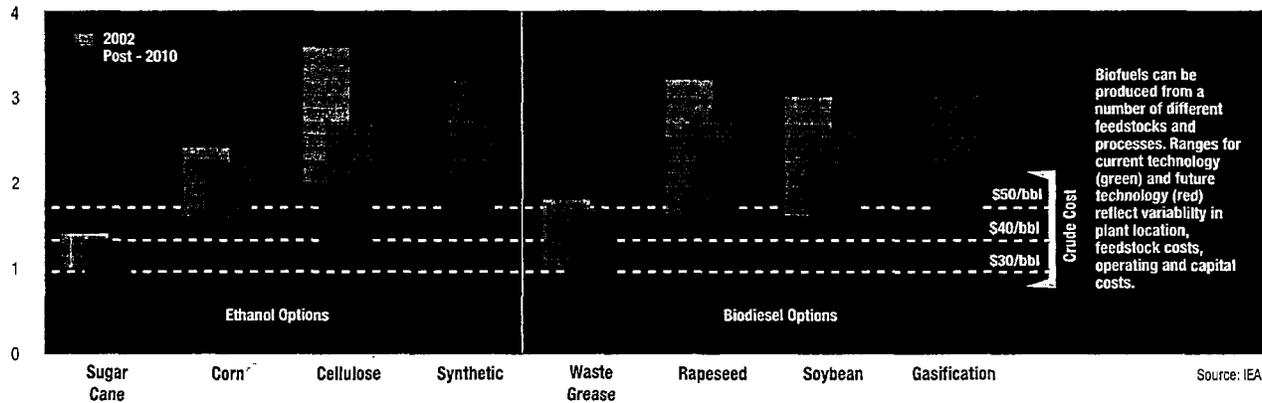
The current generation of biofuels, however, has scale limitations due to their cost and large land requirements. With continued research, a new generation of processes capable of using a more diverse set of biomass feedstocks may be able to overcome these challenges. A recent study by the International Energy Agency examined the economics of both current and potential future technologies (See Fig. 17).<sup>25</sup>

When considering the potential of biofuels, a number of factors must be analyzed, including land use impacts, fertilizer requirements and water use. The last is particularly important as studies indicate that by 2015 half the world's population will live in countries where availability of sufficient fresh water is a concern.<sup>26</sup>

Most current biofuels production processes convert only a small portion of the plant. In the future, however, processes involving cellulosic conversion hold the promise of being able

Fig. 17

**Cost of Production for Biofuels Options**  
2004 \$ per gallon gasoline equivalent



to utilize a much larger portion of the feed biomass. This would result in full-cycle CO<sub>2</sub> savings of about 90% versus up to 50% with current processes.<sup>27</sup>

Important too, is the question of which biomass applications yield the greatest benefit. A recent study in Europe involving the energy and auto industries, as well as the Joint Research Commission of the European Union, concluded that greater energy and GHG savings can be achieved if biomass is used in heat and power generation rather than in transportation, especially if efficient cogeneration schemes can be used.<sup>28</sup>

**Wind and Solar**

Currently, the most competitive renewable energy source is wind power (Fig. 18). While growing rapidly, its impact on the overall energy supply mix is limited. In some applications, wind-generated electricity can be cost-competitive with that generated from natural gas, but it generally relies on government subsidies to be economical.

A key challenge for wind power is that the areas best able to produce electricity at low cost from wind are also located far from where the electricity is needed. New technology will be required to allow either the capture of wind energy in areas with low average wind speeds or to enable transmission of electricity over long distances at lower cost and with lower losses than is currently possible.

Solar energy remains far more costly, except in limited applications. Existing solar photovoltaic technology is significantly more costly than conventional electricity generation. Breakthrough technology is needed to enable fundamentally new photovoltaic materials that will allow power generation at competitive costs.

A key issue in the ability of wind and solar technologies to contribute to electric power supply is intermittence. Stable electric grids require traditional generating facilities or costly

backup systems to ensure uninterrupted supply to consumers on cloudy days, at night or at times the winds fail.

Without a breakthrough in energy storage technology, intermittency limits the ability of wind and solar energy to contribute to electricity supplies and increases the overall costs of integrated power supply systems.

Research into solar energy is a core research area of the ExxonMobil-sponsored Global Climate and Energy Project at Stanford University.

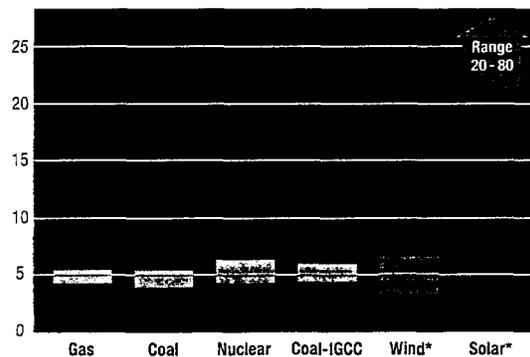
**Gasification**

Gasification, a technology that was developed decades ago, may see increased use in the future.

Gasification can process any carbon containing feedstock – such as coal, biomass or heavy oil – and convert it into a “synthesis gas” that can be used to produce electricity, liquid fuels, hydrogen or chemicals. Gasification is also better suited to use with carbon capture and sequestration than other processes that can use the same feeds.

Fig. 18

**Cost of Electricity from Traditional and Emerging Sources**  
Cents per kWh (2005 \$)



\* Site limited and excludes intermittency costs

While gasification has many attractive properties, it is still more costly relative to alternative ways of producing the same products. For example, electricity produced by the gasification of coal (without CO<sub>2</sub> capture) is about 13%<sup>29</sup> more costly than that from a conventional coal power plant. By comparison, if CO<sub>2</sub> capture were included, then a coal gasification plant could produce electricity at a cost 20% lower than a conventional coal-powered plant retrofitted for carbon capture and storage (CCS).<sup>30</sup> Clearly there are synergies between gasification and CCS technologies.

Further work is needed to both lower the costs and improve the reliability of gasification technology, and ExxonMobil researchers are evaluating the opportunities in this area. If successful, studies could result in a technology option that provides a level of both feed and product flexibility that no current process is able to offer.

### Advanced Nuclear

Nuclear energy has the potential to become an increasingly important option for meeting a growing portion of our long-term energy needs, specifically in the power generation sector.

Key barriers to increased use of nuclear today are cost, perceived safety risks and the lack of an acceptable solution to the long-term management of radioactive waste.

Research is continuing into advanced nuclear systems that are passively safe and offer the potential of significantly lower cost than current reactors. Systems with these safety features will have a very low likelihood of reactor core damage and address the problems that occurred at Three Mile Island and Chernobyl.<sup>31</sup>

Designs include advanced third-generation versions of conventional reactors, as well as fundamentally new designs such as the "pebble bed modular reactor." If successful, these designs could reduce the capital cost of nuclear power plants by 15 to 20% and thereby add another economically competitive option to our long-term energy supply portfolio. Addressing the long-term waste storage issue is largely a matter that will require extensive dialogue between governments, communities and industry to resolve.

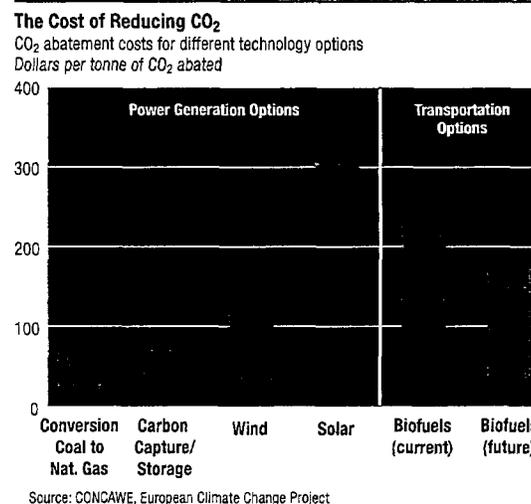
### Technology Choice and CO<sub>2</sub> Emissions

If new technologies are to be applied to realize reductions in CO<sub>2</sub> emissions then it is important to understand the cost of various options in terms of dollars per tonne of CO<sub>2</sub> abated. Applying the lowest abatement cost options first will maximize impact while minimizing costs. European researchers in both the power and transportation industries have been working to quantify the abatement cost of technologies and their work is helpful in understanding the relative attractiveness of different options.<sup>32</sup>

The chart (Fig. 19) illustrates ranges of abatement costs for various power generation and transportation technologies. The lowest cost reductions in CO<sub>2</sub> are likely to be realized in the power generation sector. This is due in part to the fact that it is easier to deal with a few large point sources of CO<sub>2</sub> than millions of individual sources, such as vehicles. It is also important to note that continued R&D can have a significant impact on lowering the cost of CO<sub>2</sub> abatement as illustrated by the current and future biofuels ranges.

ExxonMobil is well positioned to participate in the implementation of the lowest cost options through our focus on natural gas resource development, our experience with carbon capture and storage and our support of breakthrough research.

Fig. 19



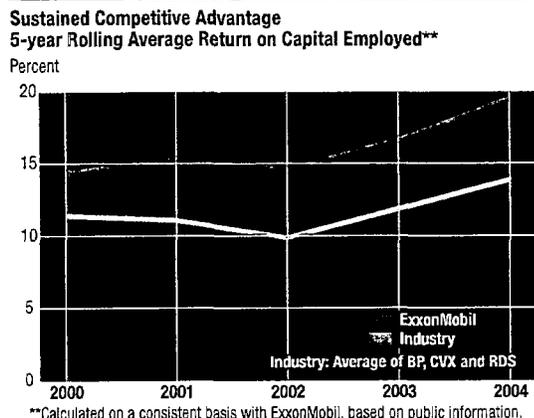
Although wind, solar, biofuels and nuclear all compete with fossil fuels as sources of primary energy, their contribution to the world's total energy demand is limited because they are more expensive than fossil fuels – and in the case of nuclear, by waste and disposal concerns. Technology advances and government policy will support rapid growth in alternative fuels, but they start from such a small base that their contribution to total energy supply will be modest well into the future. Their limited but growing contribution should be used in ways that make the greatest possible difference in CO<sub>2</sub> emissions.

While we recognize the risks of climate change, we also conclude that the world will continue to demand oil and gas for a majority of its primary energy supplies for many decades to come. This will be true even if governments continue to support alternative energy sources and limit greenhouse gas emissions. ExxonMobil is well positioned across a range of possible futures to conduct our operations competitively in a responsible and profitable manner.

## Section 4: Managing in a Changing Environment

**ExxonMobil's long-term perspective, disciplined approach to investment and focus on world-class operational performance explain why the company has continually delivered industry-leading returns, even through times of dramatic and unforeseen change.**

Fig. 20



In addition, our scale, geographic diversity and range of businesses provide a hedge that reduces sensitivity to changes in commodity prices, business cycles and local market conditions. Our financial and technology strength enables us to invest in any opportunity that meets our rigorous investment criteria.

These attributes, which we believe set us apart from our competitors, position us well to respond successfully to change, whether driven by markets, competitors or governments.

In response to rising environmental concerns, we anticipate more regulatory requirements than we face today. Uncertainty and risk is familiar territory in our industry, but we believe the way we manage our business puts us at an advantage over the competition in meeting new expectations.

### Investment discipline and long-term perspective

The \$200 billion industry investment required annually to meet growing demand for oil and gas through 2030 reflects not just the scale of demand, but also the fact that significant new resources are increasingly found in more remote areas and difficult environments.

Investment decisions can have long-term consequences. So we adopt a highly selective and disciplined approach to investment, which considers:

- political and technical risks, along with potential regulatory changes
- business and societal trends

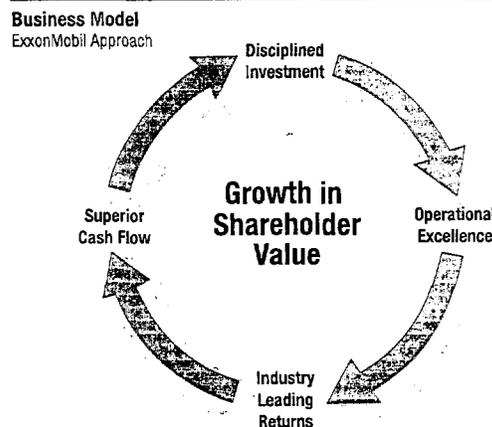
- the resilience of investment opportunities over a range of economic scenarios

Regular, formal reviews enable us to evaluate emerging issues and plan accordingly.

Our objective is to seek out projects that:

- are profitable and sustainable over the long term
- are not reliant on government subsidies
- are consistent with our own scale and capabilities
- yield a well-balanced and diversified business
- do not compromise our high safety and environmental standards

Fig. 21



We believe that the world's energy needs will be met through consistent investment strategies that are not driven by periodic swings in commodity prices. Our capital investments over the period 1995 through 2004 averaged \$14 billion a year, although our annual earnings ranged from \$8 billion to \$25 billion over that period.

### A focus on operational excellence

We apply the same rigor to our operations as we apply to our investments, via a wide range of proven management systems, including:

- **Standards of Business Conduct:** These 16 foundation policies and related procedures form the framework by which we operate around the globe – providing employees with principles for managing compliance with company standards.

- **Financial Controls:** Sound financial control is fundamental to our business model. Authority to approve business arrangements on behalf of our company is clearly assigned and delegated. Our System of Management Control (SMC) defines the principles, concepts and standards and our Control Integrity Management System (CIMS) provides common processes and tools for compliance with the SMC.
- **Project execution and appraisal:** Our disciplined approach continues from concept through start-up and ongoing operations. All projects are rigorously appraised after completion, and learnings are incorporated into future planning. These processes have earned ExxonMobil a reputation for excellence in project management and distinguish us from the competition. For example, in Africa and the Gulf of Mexico, ExxonMobil-operated projects have consistently started up on or ahead of schedule.
- **Operating Reliability:** Safely increasing plant reliability and availability while lowering total maintenance costs is the objective of our Reliability and Maintenance Management System. This program has been applied to all our refineries worldwide and has reduced the amount of time that units are down for maintenance by 40% and reduced maintenance costs by 30%.
- **Safety, Health and Environment:** At the core of our approach to safety, health, security and environment management is our Operations Integrity Management System (OIMS). This system fully meets the requirements of the International Standards Organization (ISO) 14001 benchmark and is used at every ExxonMobil facility. It is a disciplined management framework that enables us to track experiences, measure progress, plan future improve-

### 2004 OIMS assessment by Lloyd's

"It is the opinion of Lloyd's Register Quality Assurance that the environmental management components of ExxonMobil's Operations Integrity Management System are consistent with the intent and meet the requirements of the ISO 14001 Environmental Management Systems Standard."

"Deployment of the Operations Integrity Management System has contributed toward the overall improvement in the Corporation's environmental performance. At the locations visited, individuals at all levels demonstrated a high degree of personal commitment to OIMS implementation and environmental care. The integration of Environmental Business Plans into the annual planning cycle has strengthened the process for continual improvement of the Corporation's environmental performance."

ments and ensure management accountability. OIMS covers the collection and reporting of emissions data, including greenhouse gas emissions for all facilities.

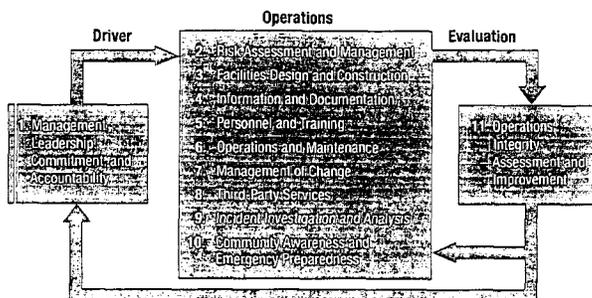
- **Energy Efficiency:** As a major consumer of energy, energy efficiency is important to us. Our Global Energy Management System (GEMS), developed in the late 1990s, uses international best practices and benchmarking techniques to identify energy efficiency opportunities at all our facilities and promote continuous improvement. In 2004, we achieved record energy efficiency performance across our worldwide refining and chemicals businesses, improving by more than 3% over 2003. In fact, our rate of improvement in refining is significantly better than the historical industry average.

- **Environmental Business Planning:** Continuous improvement of environmental performance is the objective of our Environmental Business Planning (EBP) process, which integrates environmental improvement activities into annual operating plans at each of our facilities and businesses. This process includes assessment of potential regulatory changes affecting environmental aspects of our operations and systematic management of any consequent business impacts.

The management systems that underpin our business enable us to consistently deliver superior results in terms of financial, safety and environmental performance, while playing our part in meeting the world's growing energy needs.

Fig. 22

#### OIMS' 11 Elements



### Summary

- Energy is vital to economic growth and progress.
- Global energy demand is expected to grow by 50% by 2030, driven mainly by rapidly growing economies in the developing world.
- Fossil fuels will remain predominant, with a growing role for natural gas.
- Greenhouse gas emissions will rise substantially, particularly as developing economies grow.
- ExxonMobil recognizes that the risk from climate change requires action, and we are taking action both to address our operational emissions and to promote more efficient use of our products.
- Policies to address climate change need to consider consequences not only for environmental risks but also for social and economic development, especially in developing countries.
- More widespread use now of existing efficient technologies in industrialized and developing countries offers significant potential to reduce greenhouse gas emissions growth.
- Over the next 25 years, technologies that enable expanded energy supplies, along with those that moderate energy demand via improved energy efficiency, will be critical to meeting the world's growing need for energy while managing greenhouse gas emissions.
- New energy sources, while they hold promise, require substantial technological advances to enable them to compete for a significant share of global energy supply – and the vast scale of the global energy business means that penetration of new technologies on a meaningful, global scale will take decades.
- Fundamental research is necessary to identify and develop viable technologies for the long term that allow energy demand to be met while dramatically reducing greenhouse gas emissions.
- Uncertainties about future climate-related policies will create issues for investors in global energy provision. However, we believe that ExxonMobil's well-proven, disciplined approach to investment and operational risks positions the company well to successfully manage this uncertainty, maintain our position as the technology leader in our industry and take advantage of attractive business opportunities that may emerge.

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February 22, 2006

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RE: Securities Exchange Act of 1934 -- Section 14(a); Rule 14a-8  
Withdrawal of shareholder proposal regarding investment in  
renewable energy projects

Gentlemen and Ladies:

I refer to ExxonMobil's letters dated January 20 and February 3, 2006, requesting the staff's concurrence that the shareholder proposal referenced above could be excluded from the proxy material for the company's upcoming annual meeting under Rule 4a-8(i)(10).

Enclosed as Exhibit 1 is a copy of email correspondence from the proponent of this proposal, Kirk Miller, confirming that the shareholder proposal has been withdrawn. Accordingly, ExxonMobil also hereby withdraws its request for a no-action letter on this matter.

Please file-stamp the enclosed copy of this letter and return it to me in the enclosed self-addressed postage-paid envelope. In accordance with SEC rules, I enclose five additional copies of this letter and enclosure. A copy of this letter is also being sent to the proponent.

Please feel free to call me directly at 972-444-1478 if you have any questions or require additional information. In my absence, please call Lisa K. Bork at 972-444-1473.

Sincerely,

James E. Parsons

JEP:clh  
Enclosures

Distribution List

Proponent:

Mr. Kirk P. Miller  
777 San Antonio Road, #21  
Palo Alto, CA 94303  
ph: 650-858-1640



"Sachi Itagaki"  
<sitagaki@kepnet.com>

To <david.g.henry@exxonmobil.com>

cc

bcc

02/21/06 03:47 PM

Please respond to  
<sitagaki@kepnet.com>

Subject RE: Withdrawal of Renewables Proposal at ExxonMobil

Dave,

The items below accurately reflect our phone conversation.

I agree to withdraw the climate change/renewable energy proposal submitted for the 2006 ExxonMobil shareholder's meeting in exchange for the conference call and meeting that you outlined below.

I am hopeful that the summer meeting will be productive and keep us out of the shareholder proxy process in the future.

Thank you,

Kirk Miller  
777 San Antonio Rd, #21  
Palo Alto, CA 94303-4833

kirk.miller@stanfordalumni.org  
sitagaki@kepnet.com

-----Original Message-----

From: david.g.henry@exxonmobil.com [mailto:david.g.henry@exxonmobil.com]  
Sent: Tuesday, February 21, 2006 12:06 PM  
To: kirk.miller@stanfordalumni.org  
Subject: Withdrawal of Renewables Proposal at ExxonMobil

Per our telephone conversation, we agree:

- To meet this summer (likely August) at a mutually agreeable location in the San Francisco/Palo Alto area
- Attendees limited to you and 1-2 other individuals, and Henry Hubble, Vice President, Investor Relations and Secretary and myself
- Meeting to be scheduled for about 2 hours
- Also agree to a conference call in advance of the meeting (likely May/June) with the same attendees to talk about the agenda and subjects for the meeting

If you agree to withdraw the proposal on renewable energy submitted for the 2006 ExxonMobil shareholder's meeting on this basis, reply accordingly to this email.

David G. Henry  
Investor Relations  
(972) 444-1193

--

No virus found in this incoming message.

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Version: 7.1.375 / Virus Database: 267.15.12/266 - Release Date: 2/21/2006