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# U.S. ENERGY PROSPECTS: 1990'S AND BEYOND

## EDITOR'S NOTE

The following article was adapted from remarks delivered by the U.S. Deputy Secretary of Energy, W. Henson Moore, before the conference on Energy for a New Century: The European Perspective held in Brussels, Belgium on May 3, 1990 (Part I) and before the Forum on U.S.-Soviet Trade Relations held in Washington, D.C., on March 14, 1990 (Part II).

The Deputy Secretary explains that the U.S. is developing a national energy strategy that seeks to balance energy demand, the economy, and the environment, and which will encourage the removal of trade barriers and the exchange of technology and expertise. He endeavors to reach the European community as well as the Soviet Union in an effort to boost economic growth and environmental progress through global cooperation and participation in world markets.

### I. ENERGY FOR A NEW CENTURY: THE EUROPEAN PERSPECTIVE

Like the member countries of the European Community, the United States is planning its energy future through the development of a national energy strategy that will seek to integrate the economic, environmental, and strategic aspects of energy production and use.

The key objectives identified in the Report of the "*Groupe des Sages*"<sup>1</sup> are the same objectives the United States seeks in its national energy strategy: strong economic growth, a clean environment, and moderately priced and secure energy supplies. To some, these objectives appear inherently in conflict. But to others of us, they pose challenges that can and will be met through sound domestic policies coupled with effective international cooperation.

### HISTORY'S LESSONS

In this regard, history is instructive. Certainly, in the United States, the 1970s began as the "decade of the environment" with the enactment of a number of important new laws to protect the environment and the creation of the Environmental Protection Agency.<sup>2</sup> But in a few short months during the winter of 1973-1974,<sup>3</sup> the "decade of the environment" quickly became the "decade of the energy crisis." Along with our European friends and much of the rest of the

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1. Report of the "*Groupe des Sages*", Prof. Umberto Colombo, Dr. Martin Gallego, Dr. Heinz Horn, The Rt. Hon. David Howell MP, Prof. Jacques Lesourne, Dr. Peter Winsemius, to the Conference on Energy for a New Century: the European Perspective, Commission of the European Communities: Directorate-General for Energy, May 3-4, 1990 (available in Brussels, Belgium).

2. EPA Establishment: Reorg. Plan No. 3 of 1970, 3 C.F.R. § 199 (1970 comp.), reprinted in 5 U.S.C. app. at 1343-1348 (1988). New Environmental Laws: National Environmental Policy Act of 1969 U.S.C. §§ 4321-4347; Clean Air Amendments of 1970 (Pub.L.No. 91-604; 84 stat. 1676); Federal Water Pollution Control Act Amendments of 1972 (commonly known as the "Clean Water Act") (Pub.L.No. 92-500; 86 stat. 816).

3. The Arab oil embargo began in October 1973 and its effects were generally felt in the U.S. in January-March, 1974. *Project Independence: A Summary*, Federal Energy Agency, November 1974.

world, we worried first about the availability of energy, and particularly oil supplies, and later about the soaring cost of oil — and whether it would bankrupt our economy.

But interestingly, despite the cartel practices of some major producing nations, market forces reasserted a balance and the pendulum swung widely in the opposite direction. Oil prices plummeted far more quickly than they had risen. As a major petroleum producer, the United States was seriously affected and our domestic industry is still recovering today.

So in the course of less than two decades, we transversed the entire energy circle: from environmental concern to supply uncertainty . . . to soaring prices . . . to collapsing prices . . . and now, today, we complete the circle with the reemergence of environmental concerns worldwide.

What are the lessons of this experience?

First, that secure supplies of affordable energy are essential to economic well-being.

Second, that a strong economy is a prerequisite to sustained environmental progress.

Third, that all nations, producers and consumers alike, are best served when energy supplies are adequate and prices stable.

Fourth, that market forces will inevitably prevail, but with far greater economic and social dislocation to the extent they are arbitrarily manipulated in the short-term.

Now, we must apply these lessons in our planning for the new century. Open markets and free trade among all nations will encourage stability in the energy sector, which in turn will support economic growth and enable nations to cooperate in addressing global environmental problems — which largely comes down to developing and sharing cleaner, more efficient energy technologies.

#### EUROPEAN COMMUNITY 1992

The countries of the European Community are embarking on a grand experiment in the EC 92 process.<sup>4</sup> In a sense, it marks the realization of the Allied dream in 1945, to rebuild a Europe politically free and economically strong, an anchor of prosperity and democracy in a vital region of the world.

Secretary of State James Baker has put it well: “To work with our allies is not a sign of American weakness; it is a proof of our strength. And that strength should be guided by a wisdom attuned to our times, just as . . . 45 years ago.”<sup>5</sup> Today’s times demand not a “Fortress Europe” but a “Partnership Europe” among its member countries and with the rest of the world. Above all, today’s times require open markets and free trade among nations to promote global cooperation in support of economic growth *and* environmental progress.

We believe that the United States will benefit from access to a single European market, as Europeans have long benefited from access to a single American

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4. The 12 member countries of the European Community are the Reunified Germany, France, Italy, Netherlands, Belgium, Luxembourg, United Kingdom, Ireland, Denmark, Greece, Spain, and Portugal. The EC 92 process seeks to establish a single internal market by the end of 1992.

5. “Democracy and American Diplomacy,” address by Secretary of State James A. Baker, III before the World Affairs Council, Dallas, Texas, March 30, 1990.

market. In fact, the EEC will constitute our largest trading partner. In 1989, our exports to the EC countries totaled some \$86.6 billion, while imports from the EC were \$85.13 billion.<sup>6</sup> One can hardly get more balanced than that. Neither the U.S. nor the EC should have any difficulty justifying such a trading relationship to its people. Moreover, we anticipate this trade link will become even more important as the EC moves forward with economic integration and institutional reform.

All of this has special relevance for the energy sector. More than most, energy is truly the international commodity, in terms of its economic, environmental, and strategic impacts. Energy production and trade must not be manipulated for narrow self-interest — whether by overt cartel practices or by more subtle “cultural” and “local preference” barriers. With either approach, the ultimate result is likely to be economic and social dislocation affecting citizens of many nations.

This is why we continue to be so concerned about Article 29,<sup>7</sup> about the services article now being drafted, and about any similar articles that may be proposed under the Utility Directive or other EC directives. The discriminatory measures allowed under such directives would harm not only those countries at which they are aimed, but all countries because they compromise the principles of free trade and open the door to the contagion of protectionism. Whether in the area of oil field equipment and services, clean coal technology, nuclear safety, or conservation and renewable technologies, we know that strong and fair competition will promote efficiency and benefit all nations. This is why U.S. energy industries are open to all, and why we are steadfastly committed to keeping them that way.

For almost a half-century, open markets and free trade have given the United States, the nations of Western Europe, and an increasing number of countries around the world a level of prosperity and a quality of life unimagined in 1945. Now the peoples of Eastern and Central Europe are also throwing off the yoke of closed societies and central planning in favor of democracy and the rewards of economic competition. Today's times require that we increase the operating freedom of our markets rather than restrict the aspirations of people.

I have heard the rejoinder, that there is protectionist pressure in the United States, too, and I cannot deny it. But I can assure you, the Bush Administration is fully committed to tear down barriers, open markets, and oppose unfair trade practices anywhere in the world. Unfortunately, protectionist trends in any one country or region give ammunition to those in the United States who oppose the President's open trade policies.

Also, I would point out that United States actions have continued, in recent years as in past years, to reflect a fidelity to the principles of free trade. Our Free Trade Agreement with Canada, implemented in January 1989, is already working well in the energy area. Today, the U.S. buys substantial amounts of hydroelectric power, oil, and natural gas from Canada, and we sell them coal

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6. Department of Commerce, *Economic Data Book, the United States and the European Community* (unpublished internal document).

7. An article under the Government Procurement Directive for EC 92 which permits the arbitrary exclusion of those bidders deemed to be “foreign firms.”

and smaller amounts of natural gas, oil, and electric power.<sup>8</sup> The key point is that, under the Treaty, national borders are receding as an impediment to the efficient production and distribution of energy, much to our *mutual* economic and environmental benefit.

Within the Department of Energy, we are now beginning to explore interest in similar arrangements with Mexican officials. President Bush and Mexican President Salinas agreed at their meeting on June 10, 1990, to initiate discussions toward negotiations of a free trade pact. While the process is not likely to be quick or easy, we will continue to pursue opportunities for open trade wherever we can.

In the United States, our long tradition of open state borders offers irrefutable testimony to the economic and social value of free trade. We have a unitary federal structure governing interstate commerce. The result, in all energy sectors, has been the development of efficient, reliable energy transportation and delivery systems that span our entire nation, providing the American consumer relatively low-cost energy on a regular basis and responding effectively to short-term emergencies. Our experience clearly parallels much of what you are seeking in EC 92, and we are happy to share the lessons of this experience as you move forward with market integration.

#### ENVIRONMENTAL STEWARDSHIP

I mentioned at the beginning that the United States is developing a national energy strategy. Like in the EC, we are seeking to balance and integrate what we call "the three E's" —energy, the economy, and the environment. As we each move forward with our respective plans, I believe it would be useful to consult and cooperate on our findings and ideas.

We are mid-way through our national energy strategy process, having collected a wide diversity of facts and public opinion. Now we are beginning the hard part: formulating and analyzing options and forging consensus on the proper course for U.S. energy policy.

One thing we have clearly learned, however — on which there is very strong consensus in the United States — is that the first building block of U.S. energy policy must be efficiency and renewable technologies. Accordingly, we have increased the Energy Department's budget request for conservation and renewable energy research and development for fiscal year 1991 by seventy-eight percent over the 1990 request.<sup>9</sup>

In fact, the United States has made large strides in both energy efficiency and environmental protection since the 1970s. Today, we power an economy that is fifty percent larger than in 1973, and we do it with just nine percent more energy. We have twenty million more homes today, yet use less than five percent more energy to run them.<sup>10</sup>

We have fifty million more vehicles on the road today, and they are measurably cleaner and more fuel efficient. Passenger cars emit ninety-six percent

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8. Energy Information Administration (various publications).

9. U.S. Department of Energy Posture Statement and Fiscal Year 1991 Budget Overview, January 1990.

10. *Monthly Energy Review*, DOE/EIA, June 1990, Table 1.7.

fewer smog-causing hydrocarbons than cars of twenty years ago. Our new cars are also far more fuel efficient, averaging better than twenty-seven miles per gallon, compared to about fourteen miles per gallon in 1974 — a ninety percent improvement.<sup>11</sup>

Overall, air pollution has decreased substantially. In most major categories, emissions on a national basis have either leveled off or declined since 1970. Emissions of particulates are down sixty-four percent; sulfur dioxides, down twenty-five percent; volatile organics, down twenty-nine percent; carbon monoxide, down thirty-eight percent; and lead, down ninety-six percent.<sup>12</sup>

This is progress, but it is not enough. That is why, at President Bush's direction, the United States is taking a number of steps to improve the environment now and also to improve our knowledge of the earth's ecology, so that better science can beget better technology to meet the energy and the environmental needs of the new century.

We are investing heavily to obtain new knowledge. An inter-agency Committee on Earth Sciences<sup>13</sup> is directing comprehensive, multi-disciplinary research efforts to expand scientific understanding of the earth's climate patterns and changes. President Bush is requesting more than \$1 billion in his fiscal year 1991 budget for this program, and these funds will support international as well as domestic research activities.

We are also taking sensible actions now to reduce net greenhouse gas emissions,<sup>14</sup> namely:

(1) We support the worldwide phase out of chloroflorocarbons (CFCs) and halons by the year 2000 where safe substitutes are available.<sup>15</sup>

(2) We issued improved efficiency standards for refrigerators and freezers earlier this year, which will reduce annual carbon dioxide emissions by an estimated ten to twelve million tons annually by the year 2000.<sup>16</sup>

(3) We are actively promoting the use of improved building standards and more efficient lighting in public and private housing and commercial buildings; and there will be additional such initiatives in the following months.

(4) We are working with state and local regulators to encourage utilities to adopt integrated resource planning programs. Particularly, we want to encourage the same treatment for investments in energy efficiency as for investments in new supply.

All these efforts seek to reduce electricity demand and, hence, carbon dioxide emissions.

We also expect that new clean air legislation, the first in over a decade, will pass our Congress this year. The acid rain and alternative fuels provisions

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11. William K. Reilly, administrator, Environmental Protection Agency, in remarks before the Detroit Economic Club, April 30, 1990.

12. *Id.*

13. A 13 member inter-agency group established in March 1987 under the Federal Coordinating Council for Science, Engineering, and Technology, the Committee on Earth Sciences coordinates federal research and development efforts in the earth sciences.

14. "Greenhouse" gases, carbon dioxide, methane, chloroflorocarbons, nitrous oxides, and ozone trap solar heat in the earth's atmosphere, contributing to global climate change.

15. U.S. State Department, London Amendments to the Montreal Protocol, June 1990.

16. 10 C.F.R. § 430.32(a)(1990).

proposed by President Bush would provide energy efficiency and carbon dioxide reduction benefits estimated at over sixty million tons per year.

Equally important, this legislation, as proposed by the President, sets standards but leaves implementation decisions to the market place. This means that the whole range of alternative fuels, from methanol to ethanol, compressed natural gas, reformulated gasoline and even electric cars are open to research and experimentation in both the public and the private sectors. Furthermore, there is a significant effort underway within U.S. industry, singly and in joint ventures, to develop cleaner vehicles.

As noted previously, lead levels in our air are down ninety-six percent since 1970, largely because we began the transition to unleaded gasoline, which Europe is now beginning, back in 1975.<sup>17</sup> Today, ninety-five percent of all gasoline purchased in the United States is unleaded.<sup>18</sup>

Now our "big three" auto manufacturers have joined with fourteen major oil companies to test and identify the cleanest, most economic *combination* of motor engine, exhaust system, and fuel. This effort has an initial commitment of over \$11 million in industry funding, and the first results are due before the end of the year.<sup>19</sup>

In the meantime, however, several U.S. petroleum companies are already test marketing cleaner-burning, "reformulated" gasoline in selected cities nationwide.<sup>20</sup> Such reformulated gasolines produce substantially lower emissions of unburned hydrocarbons and carbon monoxide, and many believe they may represent economically affordable progress toward cleaner air.

Note that the term "economically affordable" does not mean "cheap." One major U.S. oil company CEO estimates that a wholesale shift to reformulated gasoline production would probably require his company to invest \$300 to \$400 million in refinery changes.<sup>21</sup> The American consumer would most likely pay about 8 to 10 cents more per gallon for reformulated gasoline.<sup>22</sup>

Overall, even the most "economic" approaches to environmental improvement will come at substantial cost, which can only be absorbed by countries with dynamic, growing national economies. This is why the economic cost/environmental benefit ratio is so important, and why economic growth is essential to environmental progress. They are two sides of the same coin, as President Bush pointed out in his opening address to the delegates at a White House conference on global change: "In a climate of poverty or persistent economic struggle,

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17. The transition to unleaded gasoline was required by Environmental Protection Agency regulations authorized by the Clean Air Amendments of 1970 (Pub. L. No. 91-604; 84 stat. 1976). The EPA was specifically authorized to set these standards in 42 U.S.C. § 7521(a)(1990).

18. Department of Energy/Energy Information Administration, MONTHLY ENERGY REV., Table 3.4, June 1990.

19. Participants are Chrysler Corporation, Ford Motor Company, and General Motors Corporation on the automotive side and from the petroleum industry: Amoco Corporation; ARCO; Ashland Oil, Inc.; BP America Inc.; Chevron Corporation; Conoco Inc.; Exxon; Marathon Oil Co.; Mobil Corporation; Phillips Petroleum Co.; Shell Oil Co.; Sun Company, Inc.; Texaco Inc.; and Unocal Corporation. (PR Newswire Oct. 17, 1989, Tuesday.)

20. Companies offering at least limited sales of reformulated gasolines include: Amoco, ARCO, Conoco, Chevron, Diamond Shamrock, Exxon, Marathon Petroleum, Phillips, Shell, and Sun.

21. Interview with Lodwick M. Cook, chairman of ARCO, in N.Y. Times, April 3, 1990.

22. Draft, Department of Energy Staff and Contractor analysis, Spring 1990.

protecting the environment becomes a far more difficult challenge."<sup>23</sup>

In fact, in such circumstances, protecting the environment generally becomes impossible, as the terrible blight of Central and Eastern Europe so painfully attests. In many ways these countries today face a devastation comparable to that faced by Western Europe in 1945. They must build whole new economic and social systems, even as they deal with overwhelming environmental problems. If they are to make the transition to market economies and healthier environments, they will above all need efficient, clean energy technologies and the management know-how to operate and maintain them.

These countries together with developing countries around the world represent the greatest potential future source of environmental pollution, but also the greatest opportunity for cost-effective environmental progress through increased efficiency in all energy sectors and the wider use of clean coal and renewable technologies. The member countries of the Organization of Economic Cooperation and Development (OECD)<sup>24</sup> have an obligation to respond by developing effective mechanisms for the transfer of technology and technical assistance to the developing countries. This is not altruism; this is self-interest, for we all share this planet Earth.

### CONCLUSION

In conclusion, let me repeat the key points.

First, energy is a global commodity, critical to every nation's economic, social, and strategic well-being. Accordingly, it must be traded freely in a global marketplace.

Second, countries must develop long-term plans to serve as a framework for identifying future energy supply needs and sources, and for determining the appropriate balance between economic and environmental interests. This is what the United States is doing in our national energy strategy, and what the European Community is doing in its planning for EC 92 and beyond.

Third, an emphasis on conservation and renewable technologies must be central to the energy plans of all nations, developed and developing alike. Energy efficiency serves the economic and environmental interests of individual countries and the environmental interests of our entire planet.

Fourth, the developed nations have an obligation to share technology through a global marketplace of free trade and open competition. Today's times require a true partnership among nations to serve our mutual advantage.

Fifty years ago, Europe and a great part of the world stood at the edge of cataclysm. But together, Western Europe and the United States met a succession of severe challenges, and because our alliance was staunch, our successes have been great.

Now we stand at the edge of a new century, full of promise and opportunity. If we are able to realize its potential, we must reaffirm our partnership and

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23. President George Bush, in remarks to the White House Conference on Science and Economics Research Related to Global Change, April 17, 1990.

24. The Organization of Economic Cooperation and Development members include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, The Reunification of Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.



extend it to all nations who share our ideals and our values. Free nations engaging each other in open markets and cooperating to address global environmental problems will ensure greater wealth, greater security, and a better life for people everywhere. Let us proceed with confidence and a spirit of generosity toward all.

## II. U.S.-SOVIET TRADE RELATIONS

Over the past year we have had the good fortune to experience a "deluge of democracy" worldwide, as welcome as it is astounding. From the heartland of Europe to Latin America to South Africa, we have watched with amazement as one country after another has moved to embrace political freedom and open markets. They have moved from one extreme to the other, in the most unlikely of places, and with breathtaking speed. The Soviet Union itself is pursuing *glasnost*, and to a lesser extent *perestroika*, with striking vigor.<sup>25</sup>

These changes have been coming so fast that, in the words of Czechoslovakia's new president, Vaclav Havel, "We have literally no time even to be astonished."<sup>26</sup> Yet we must make the time for clear-headed thinking. These events are far too important for knee-jerk, scatter-shot responses.

To paraphrase President Bush, reason, not rhetoric, must prevail. We must take time to consider carefully what these changes — totally unimaginable only a year ago — can mean for the future. We must act with deliberation and use this unique opportunity wisely, to shape a more stable and peaceful world for the twenty-first century.

Let me begin with a very basic premise: countries which are trading partners are far less likely to succumb to hostilities than those which are separated by walls. The walls we build, nation against nation, whether for reasons of ideology, historic alliance, or just old-fashioned protectionism, undermine social stability, limit economic growth by preventing a daily exchange of people, ideas, and products, and aggravate ethnic and nationalist antagonisms.

Walls work to the benefit of no nation. History teaches this lesson, century after century. Yet mankind has been slow to learn. Now we stand at a moment in history when democracy is quite suddenly and truly the ascendant force throughout the world — a moment in history when strategic, economic, and foreign policy interests are converging to open enormous opportunities for cooperation and mutual benefit among nations.

If we are to seize this moment and realize the opportunities, we must first be very clear about what the United States can and cannot do to support positive change. We must also recognize the interdependent but distinct roles of government and the private sector in fostering economic cooperation and productive trade relations with other nations.

The United States cannot make political freedom or market economies "work" in other countries. This responsibility lies with the people in each country. And what they most need are the systems and the processes that underlie free governments and competitive industries — electoral, legislative, legal, media,

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25. *Glasnost* ("openness") and *perestroika* ("economic restructuring") are the cornerstones of President Mikhail Gorbachev's program to revitalize Soviet society and economy.

26. Address to a Joint Session of the U.S. Congress, February 21, 1990.

telecommunications, accounting, banking, management, and most of all, a profit-incentive work culture.

For the most part, this expertise must come from the private sector — business-to-business, profession-to-profession. Government's role is to be the facilitator — to remove the barriers and negotiate the agreements that will encourage the flow of ideas, investment, goods and services, and know-how among private managers and public officials.

As previously stated, trading partners are less likely to succumb to hostilities than nations which are separated by walls. Governments around the world share a unique and critical responsibility to work through bilateral and multilateral agreements to break down the walls and open markets to free and fair trade. Only then can competition and prosperity flourish. How effectively specific governments meet this responsibility will largely determine which countries will be the leaders in the next century.

There are enormous needs in every corner of the globe. Many countries will be competing for limited investment resources and working through a maze of government constraints. Those countries most aggressive in instituting reforms and reducing the level of perceived risk for private investors are most likely to attract the largest share of development capital, experience the most economic growth, and enjoy the greatest social progress.

Energy is the cornerstone of successful market economies. In Eastern Europe and the Soviet Union today, technology is badly outdated, factories are old and inefficient, and environmental controls weak or even non-existent. Efficient energy technologies, on both the supply and demand side, will be essential if these countries are to rebuild their industrial bases, develop consumer economies, and produce quality goods for world markets. These technologies and the management expertise to support them exist in the West, and especially in U.S. companies — if enough structural reforms can be realized to attract private investment.

The Soviet Union, facing major problems in every energy sector, could clearly benefit from U.S. technology, equipment, and services.

(1) Petroleum production dropped some 300,000 barrels a day in 1989, and is likely to continue on a downward curve for the next few years, if not longer.

(2) Coal production in 1989 fell some thirty-two million metric tons below 1988 levels.

(3) Natural gas production grew less than five percent, to about 28.1 trillion cubic feet, well below the target level of 28.95 trillion cubic feet.<sup>27</sup>

(4) As a result of Chernobyl,<sup>28</sup> and a rising environmental movement that increasingly questions the safety and siting of nuclear power plants, prospects for expanding nuclear energy are in doubt.

Moreover, the Soviet Union is experiencing these production problems despite the fact that energy received a disproportionately high share of capital investment during the 1980s. Soviet officials report that in the 1981-1985 period, overall Soviet industrial investment increased less than twenty percent, but investments

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27. Soviet fossil fuel production estimates: *Oil & Gas Jnl.*, "Soviet Fuel Output Shows First Decline of Post War Years," February 19, 1990, p. 27.

28. Site about 60 miles northwest of Kiev, where a serious nuclear power generating plant accident occurred on April 26, 1986.

in fuel production grew by fifty-three percent, with more than half of this going to the oil industry.<sup>29</sup> In 1986-1987, Soviet investment in fossil fuels alone was more than two-and-a-quarter times higher than investments in science, art and culture, and public education combined.<sup>30</sup> Yet problems persist in every area — production, transportation and distribution.

Now with *perestroika* and strong public demand for consumer goods, the Soviets are beginning to examine the economics of oil production and exports even as they are opening the door to wider foreign business participation in the industry. U.S. energy companies are responding. Some like Occidental, Camco, and Dresser Industries have a long history of Soviet commercial dealings; others like Chevron, Parker Drilling, Combustion Engineering, Enron, and McDermott are also exploring opportunities.

Every U.S. company walking through that Soviet door, whether to market goods and services or to negotiate a joint venture, will face project-specific problems. But they will also face a far more challenging and difficult set of common structural problems. The "short list" of economic problems includes the non-convertibility of the ruble, questions regarding the repatriation of profits in hard currency, access to raw materials in a command economy, protection of intellectual property rights, and development of an effective arbitration mechanism for settling commercial disputes.

To date, the fundamental nature of the Soviet economy has not really changed. Of more than 1000 joint ventures registered, only a handful are actually operating, and these tend to be small and relatively simple.<sup>31</sup> Still, the Soviets did ease the laws governing joint ventures to allow foreign participants to hold the majority interest and to control project management. They also provide more favorable tax treatment in the early years of a project.<sup>32</sup>

Whether the Soviets will continue in this direction and provide broader economic reforms in time to attract substantial foreign investment, in energy or any other sector, is uncertain.

On the U.S. side, we are evaluating our policies and procedures for tariff treatment, export controls, and export financing assistance to make sure U.S. companies are not disadvantaged in the international marketplace.

Most Favored Nation ("MFN") status is important symbolically, but probably has only limited economic impact until the Soviet Union and the Eastern European countries are able to produce quality products for world markets. Still, MFN status signals the U.S. commitment to normalized trade relations. Poland, Hungary, and Czechoslovakia have MFN now, and Soviet eligibility is dependent on passage of revised emigration laws.<sup>33</sup>

On the other hand, revising and modernizing export controls may have an immediate impact on these countries' ability to acquire the technology and

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29. "Meeting USSR Oil Requirements," Alexander A. Arbatov, Committee for Productive Forces and Natural Resources, USSR Academy of Sciences, in remarks before the United Kingdom's Institute of Petroleum, November 1989.

30. "Energetics and Perestroika," Alexander A. Arbatov, Committee for Productive Forces and Natural Resources, USSR Academy of Sciences, Moscow.

31. "Cracking the Eastern Bloc: Obstacles Remain, Ventures With Soviets Still Slow, Tough," John M. Berry, *The Washington Post*, December 10, 1989, at H1.

32. *East & West*, an Ernst & Young publication, March 1989.

33. The Jackson-Vanik amendment under the U.S. Trade Act, enacted in 1974, denies MFN status to countries with discriminatory emigration policies. 19 U.S.C. § 2432.

expertise necessary to produce competitive goods for the civilian sector. Modernizing export controls is also a key to leveling the playing field for American companies interested in pursuing Soviet energy ventures. Generally, the news in this regard is good.

To reflect the enormous changes taking place in Eastern and Central Europe and the Soviet Union, and the consequent shift in strategic concerns, the seventeen nation Coordinating Committee for Multilateral Export Controls (COCOM)<sup>34</sup> has undertaken extensive review and revision of its Commodity Control List. Substantial progress has already been made in streamlining the core list of controlled equipment and technology, and particularly in improving access to computers, communications equipment, and machine tools for the emerging democracies. Further liberalization of controls on other dual-use exports is expected by the end of this year. Common standards of classification, compliance, and enforcement within the COCOM framework could provide more effective control of truly critical technology while also insuring a more equitable footing for American firms competing in high tech areas.

Unilateral foreign policy export controls are perhaps the most difficult and contentious issue for American businessmen. Deputy Secretary of State Lawrence Eagleburger set out this Administration's guidelines in recent remarks: [Foreign policy] export controls should be imposed only when suitable policy alternatives are not available, only when they are targeted, and only when the expected benefits outweigh the likely costs. . . . I can assure you that we will weigh the costs and benefits carefully and will seek business input in making our decisions.<sup>35</sup>

This is especially good news for our domestic energy companies, some of which paid a heavy price in complying with foreign policy controls. During the 1970s, U.S. exports of oil and gas equipment and technology accounted for a substantial proportion of the Soviet market; the U.S. generally ranked second or third among western suppliers.<sup>36</sup>

In 1978, however, then President Carter imposed the first foreign policy controls on oil and gas equipment exports, to protest human rights abuses, including the Shcharansky and Ginzberg trials, the arrest of an American businessman, and the harassment of American journalists. Controls were tightened in 1979 under the Export Administration Act, expanded in January 1980 in response to the Soviet invasion of Afghanistan, and further tightened in December 1981 after Poland suppressed the solidarity movement and declared martial law.<sup>37</sup>

While clearly responding to egregious violations, these unilateral foreign policy export controls also disadvantaged American businesses. By 1983, the U.S. share of the Soviet petroleum equipment and services market had dropped to

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34. COCOM was established in 1950, and includes the U.S., its NATO allies (minus Iceland), Australia and Japan. It is an international forum for controlling sales of equipment and technology with potential military applications to the East bloc and China.

35. Remarks before the Bicentennial Foreign Affairs Conference, American Foreign Service Association, November 30, 1989. Excerpts of Eagleburger's speech given in *Foreign Service Journal*, February 1990, pp. 28-29.

36. Petroleum Equipment Suppliers Association estimates, based on a variety of industry sources.

37. The U.S. Foreign Policy Control on Exports of Oil and Gas Equipment and Technology to the Soviet Union, Petroleum Equipment Suppliers Association, December 1986.

four-tenths of one percent. Our European allies, Japan, and Canada stepped in to supply the equipment and services U.S. companies were barred from providing.<sup>38</sup>

The Commerce Department estimates that, had U.S. manufacturers continued to maintain their traditional share of the Soviet market, they would have received about \$2 billion in orders during the 1979-1985 period; instead, they actually received \$170 million. This loss of \$1.83 billion cost individual American energy firms, as well as the U.S. economy.<sup>39</sup>

If the United States is to continue to grow and prosper, to continue as a leader in the world community of free nations, we must continue to expand our economy through widening participation in world markets. Productive trade relations provide an avenue for intellectual as well as commercial exchange, and bind nations through mutual understanding and benefit. Expanding commercial trade is key to an ever-improving quality of life for the American people.

This is why the U.S. Energy Department is developing a major Energy Export Initiative.<sup>40</sup> We live in a "buyer's market" today, with no single country dominating the technology field. If a commercial product is not available from one supplier, it is available from another. In examining Soviet needs for petroleum technology and equipment, for example, we find the United States could meet every Soviet need with state-of-the-art equipment and technology; but so could other suppliers, with at least adequate or high quality technology and equipment.<sup>41</sup>

This is yet another reason why we must move toward greater multilateral cooperation and more precise delineation of what constitutes genuine strategic interest. For we must still draw lines. The United States continues to have priority defense interests which must be protected. We cannot forget this fact in the euphoria and excitement of a world turning away from communism and toward democracy. We must continue to cooperate with our allies to ensure the absolute security of important military technologies.

Questions of export financing and investment guarantees have broad trade implications, going well beyond just Eastern Europe or the U.S.S.R. For example, the Energy Department is already analyzing how we might better use the resources of the Export-Import Bank and OPIC<sup>42</sup> to help developing countries acquire modern U.S. energy technologies which improve efficiency and also reduce environmental pollution.

So, on both the Soviet and the American sides, government must act to remove barriers if commercial trade is to grow. Negotiations have already begun, on several levels, and they must be carried forward deliberately and systematically.

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38. Petroleum Equipment Suppliers Association estimates, based on a variety of sources.

39. U.S. Department of Commerce Annual Report to Congress on Extending Foreign Policy Controls, January 17, 1986.

40. Announced by Deputy Secretary Moore on April 20, 1990 before the Petroleum Equipment Suppliers Association, the Energy Department's Export Assistance Initiative consolidates energy trade issues under a discrete Deputy Assistant Secretary. The Office will identify foreign energy opportunities, provide liaison and technical and cultural assistance to U.S. bidders, and work to remove foreign and domestic constraints to free energy trade.

41. Unclassified CIA report: Soviet Needs for Western Petroleum Technology and Equipment, 1986.

42. Overseas Private Investment Corporation, a government-funded entity which guarantees private firms against investment losses due to political change.

I am confident that a reasoned approach, in pursuit of mutual advantage, can lead to agreements which will provide fertile ground for private sector activity.

The Energy Department, for example, has resumed official communications on energy issues with our Soviet counterparts for the first time since 1979. In January, a senior Soviet delegation, led by the Deputy Chairman of the Bureau of Fuel and Energy Complex, came to Washington for two days of meetings, followed by subsequent meetings with industry executives. I personally met with the delegation and expressed our interest in the exchange of research data and expansion of energy trade.

The January meetings were productive, and we reciprocated with a return visit to Moscow this summer. We expect such exchanges to continue, and are coordinating these activities with the Departments of State and Commerce and other government agencies.

As mentioned earlier, most of the energy-related equipment and services the Soviets need must come from the private sector; we have stressed this point repeatedly. However, government-to-government efforts are also necessary in the areas of joint research and development projects, exchanges of data to improve our understanding of the Soviet domestic energy picture and its likely impact on world markets, and easing constraints on energy-based trade.

It is difficult to predict what the outcome of our discussions with Soviet energy officials will be. But one thing is clear — as the two top producers of oil in the world, our biggest mistake would be not to talk to each other at all. And this is a mistake we do not intend to make.

In concluding, let me return again to my initial premise: Countries which are trading partners are far less likely to succumb to hostilities than those which are separated by walls.

As we move to break down walls and welcome the countries of Central and Eastern Europe and the Soviet Union into the community of free nations, let us understand that the process will be less than perfect. It will be plodding, and at times painful. We have a very steep hill to climb.

But we stand at a moment in history when hopes are high and opportunities great. Let us do whatever is necessary to use these historic opportunities wisely to build that Europe “whole and free” envisioned by President Bush. Let us direct all our effort toward fulfilling the shared hopes of people everywhere to live in freedom, peace, and dignity.

