

1638 Mr. BARTON. Right.

1639 Mr. GARMAN. You know, it varies widely. I can give you  
1640 a very kind of gross median savings.

1641 Mr. BARTON. Well, my understanding is the industry  
1642 estimates that the cost of an air conditioner will increase  
1643 by \$407, 16.9 percent increase at 12 SEER, and \$712 or a 29.5  
1644 percent increase at a 13 SEER. So the difference is nearly  
1645 double between the 12 and 13, just in the cost of the air  
1646 conditioner. Correct?

1647 Mr. GARMAN. Yes, sir. The DOE numbers are actually  
1648 lower than those numbers provided I think by the air  
1649 conditioning manufacturers' trade. But they still are  
1650 significant. It is--we estimate, particularly when you look  
1651 at heat pumps, a SEER 13 heat pump is projected to cost  
1652 \$4,000 when these regulations take place.

1653 Mr. BARTON. A SEER 13 would cost four thousand--.

1654 Mr. GARMAN. \$4,000. And that is lower DOE number  
1655 estimate.

1656 Mr. BARTON. And what would a SEER 12 cost?

1657 Mr. GARMAN. The SEER 12--I don't have that number at my  
1658 fingers. But you are leading me to a very important point,  
1659 and it goes right the issue of energy efficiency. The choice  
1660 that a consumer makes between air conditioners and heat pumps  
1661 is a very important one.

1662 Mr. BARTON. Why?

1663 Mr. GARMAN. Because what can happen, as I said, the  
1664 installed price of a 13 SEER heat pump is projected to be  
1665 \$4,000 compared to \$2,571 for a split air conditioning  
1666 system. Now, if we were to go to the 13 SEER, there would be  
1667 an incentive for the consumer to team up the lower priced air  
1668 conditioning system with a resistance heater furnace at a  
1669 lower cost to get their heating and cooling. If only 4  
1670 percent of the consumers buying new equipment did this, they  
1671 would erase the energy savings achieved by the 13 SEER  
1672 standard.

1673 Mr. BARTON. Can you say that again? Because I think  
1674 that is a critical point in this debate if we are trying to  
1675 get energy conservation.

1676 Mr. GARMAN. If the price difference between a 13 SEER  
1677 heat pump and a 13 SEER air conditioner, which is  
1678 significant, drives only a fraction of consumers, 4 percent,  
1679 to opt for the lower cost up front cost of teaming up an air  
1680 conditioner with a resistance heating unit or resistance  
1681 heating furnace--.

1682 Mr. BARTON. Right.

1683 Mr. GARMAN. --they will more than erase the nationwide  
1684 savings that would be achieved.

1685 Mr. BARTON. So if 96 percent of consumers go for the 14  
1686 SEER air conditioner, if that is the new requirement--.

1687 Mr. GARMAN. Heat pump.

1688 Mr. BARTON. Heat pump. I am sorry--then you would erase  
1689 the savings achieved by the higher standards because you  
1690 would drive people to go to the other.

1691 Mr. GARMAN. That is right. I mean, that is the other  
1692 thing.

1693 Mr. BARTON. So in fact the regulations we put in place  
1694 could actually have an inverse response by consumers and you  
1695 could end up then consuming more energy.

1696 Mr. GARMAN. That is right. 13 SEER could have the  
1697 unintended effect of actually making us take a step backward  
1698 in terms of energy conservation.

1699 Mr. BARTON. All right. My time has expired. Thank you,  
1700 Mr. Garman.

1701 The Chair now yields 5 minutes to the gentleman from  
1702 Michigan, Mr. Dingell.

1703 Mr. DINGELL. Mr. Chairman, I thank you.

1704 I would simply observe that the policies of this  
1705 administration on these matters appear to be a triumph of  
1706 conservative ideology of over technology and good sense, and  
1707 I yield to my good friend from Massachusetts.

1708 Mr. MARKEY. I thank the gentleman very much.

1709 Let me move back in, Mr. Garman, about the  
1710 administration's concern for poor people. And, by the way,  
1711 congratulations. Because the New York Times poll yesterday,  
1712 polling all voters in the United States, when asked the

1713 | question of which Americans the Bush administration favors  
1714 | most, an astounding 57 percent of all Americans--Bush  
1715 | policies generally favor the rich--57 percent of Americans  
1716 | say the rich, 8 percent say middle class, and 2 percent of  
1717 | all voters say that the Bush administration favor poor  
1718 | people. So congratulations. You seem to have found the one  
1719 | issue where the Bush administration is favoring poor people.

1720 |       Now let's explore that concern as the driving force for  
1721 | rolling back this air conditioning standard.

1722 |       So there are about 15 million people, Mr. Garman, who  
1723 | live at or below the poverty line in the United States. Now,  
1724 | 3.7 million of those households use central air conditioning,  
1725 | 60 percent of those rent. So we are talking maybe 2.2  
1726 | million households now. Now, understanding the way the  
1727 | population of the United States works for central air  
1728 | conditioning, most of those homes would be in Texas and  
1729 | Florida and California. They would be in the warmer States,  
1730 | obviously. Almost by definition, those are the people who  
1731 | would need it most, and that is where they would be  
1732 | centralized.

1733 |       Now, central air conditioners last about 18 years and  
1734 | cost between \$2,000 and \$5,000. According to DOE's high-cost  
1735 | estimates, a 30 percent improved standard will cost about  
1736 | \$340 more than current basic models. If a landlord chose to  
1737 | attempt to recoup this increment by raising rent over an

1738 | 18-year product life, the rent increase would be less than \$2  
1739 | per month.

1740 |         Now the 40 percent of the 3.7 million low-income  
1741 | households with central air conditioning who own their homes  
1742 | at some point would face the cost of replacing a central air  
1743 | conditioning system, and there--I think you would agree that  
1744 | for most of these households the monthly utility bill savings  
1745 | from the strongest standard over the life of the home will  
1746 | outweigh the incremental cost of financing a more inefficient  
1747 | air conditioner. So, again, could you go back through this  
1748 | analysis and tell me why the low-income renter or owner is  
1749 | worse off having a national SEER 13 standard 5 years from now  
1750 | than having a 12 standard over the lives of their families?

1751 |         Mr. GARMAN. I will again reiterate as best I can the  
1752 | consumer impact comparison between 12 and 13 SEER for split  
1753 | air conditioners and heat pumps. The median payback period  
1754 | for an average consumer and the 12 SEER standard is 10 years,  
1755 | according to DOE analysis, notwithstanding the fact that the  
1756 | law tells us to use as a general guidepost a rebuttable  
1757 | presumption of a 3-year payback. But, nevertheless, the  
1758 | administration placed the emphasis and the importance of  
1759 | energy efficiency as saying that we are going to promulgate a  
1760 | minimum national standard that the average consumer could not  
1761 | recoup until 10 years. The low-income consumer would take 12  
1762 | years to recoup it. In the case of the 13 SEER standard,

1763 | those numbers become 11 years to 14 years.

1764 |       Mr. MARKEY. What is the electricity price that you  
1765 | assume in that?

1766 |       Mr. GARMAN. These are minimum payback periods.

1767 |       Mr. MARKEY. No. What is the minimum?

1768 |       Mr. GARMAN. It depends, because electricity prices vary  
1769 | with region.

1770 |       Mr. MARKEY. How long would it take the electricity rates  
1771 | that have been in California for the last year and that the  
1772 | Bush administration refuses to interject themselves to use  
1773 | cost of service rate, how long would it take to get a  
1774 | recovery for California low-income users?

1775 |       Mr. GARMAN. For, of course, a much shorter time in any  
1776 | area of the country--.

1777 |       Mr. MARKEY. Thank you.

1778 |       Mr. GARMAN. --where rates are higher or when temperatures  
1779 | are higher and air conditioners are used more often.

1780 |       Mr. MARKEY. How about in Texas? How long would it take  
1781 | to get a return?

1782 |       Mr. GARMAN. It should not--it should take a matter of  
1783 | several years to get a return in Texas.

1784 |       Mr. MARKEY. What do you mean, "several years"?

1785 |       Mr. GARMAN. Well, again, it depends on a number of  
1786 | factors.

1787 |       Mr. MARKEY. So you would get the return after maybe 3 or

1788 | 5 years in Texas or California, and then for every other year  
1789 | after that there would be savings which the consumer or the  
1790 | landlord would be enjoying.

1791 |       Mr. GARMAN. Correct. Remember, sir, we are promulgating  
1792 | a minimum national standard. Consumers in Texas or Louisiana  
1793 | are free to buy Energy Star devices today in the marketplace.

1794 |       Mr. MARKEY. But you understand that the landlord has no  
1795 | incentive.

1796 |       Mr. BARTON. The gentleman's time has now expired.

1797 |       Mr. MARKEY. If I may just finish my thought. The  
1798 | landlord has no incentive to buy an efficient central air  
1799 | conditioning system since they can pass the cost on to the  
1800 | tenant, to the poor tenant; and so it is not the poor person  
1801 | who makes that decision. The poor person is subjected--.

1802 |       Mr. BARTON. The gentleman's time is expired.

1803 |       We want to thank the panelists for their presentations  
1804 | today. If members have further questions, they are welcome  
1805 | to submit them in writing.

1806 |       We have a number of panelists who are here today to  
1807 | testify in our next panel, so we would welcome them up to the  
1808 | committee table at this time.

1809 |       We want to welcome our panelists this morning. Each of  
1810 | you will have 7 minutes to make your presentations. We have  
1811 | your written testimony which has been entered into the  
1812 | official record of the committee. Feel free to work off of



**Department of Energy**  
Washington, DC 20585

September 25, 2001

The Honorable Joe Barton  
Chairman  
Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce  
U.S. House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

On July 26, 2001, we sent you the edited transcript of the June 22, 2001, testimony given by David K. Garman, Assistant Secretary for Energy Efficiency and Renewable Energy, regarding National Energy Policy: Conservation and Energy Efficiency.

Enclosed are two inserts requested by Representatives Boucher and Tauzin to complete the hearing record. It has been determined that no action is required for the insert requested by Representative Burr.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Lillian Owen, at (202) 586-2031.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Brouillette".

Dan Brouillette  
Assistant Secretary  
Congressional and Intergovernmental Affairs

Enclosures



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28822



854 their assumption is that as the price of oil escalates, fuel  
855 cells become more competitive because they can bring the fuel  
856 cell cost down and the oil cost is going to go up.

857 I may have misinterpreted his reaction, but my  
858 interpretation of his reaction was, they haven't given any  
859 thought to what happens when OPEC says, oh, fuel cells are  
860 becoming pretty efficient. We had better lower the price of  
861 oil so that internal combustion engines are still  
862 competitive. We better pump more.

863 If your only asset is hundreds of billions of barrels of  
864 oil reserves, and the Western economy moves to fuel cells and  
865 says, the heck with the internal combustion engine, then you  
866 don't have an asset. So all these projections that oil  
867 prices are going to \$50, \$60, \$70, \$80 a barrel, that is only  
868 if we don't develop an alternative.

869 If we really develop an alternative, those prices are  
870 going to go down to stay competitive. I don't think that at  
871 least the GM people had thought about that. We need to think  
872 about that if we are going to put all of our eggs into fuel  
873 cell technology, because the people that are providing the  
874 oil are not crazy people. They are going to eventually say,  
875 we have got to lower our price to stay competitive.

876 The gentleman from Virginia is recognized for 5 minutes  
877 for questions.

878 Mr. BOUCHER. Well, thank you very much, Mr. Chairman.

879 And, Mr. Garman, I also want to congratulate you on your  
880 appointment and thank you very much for being here today and  
881 say that we look forward to working with you as we develop  
882 the energy conservation and efficiency portions of our  
883 national energy strategy legislation.

884 Let me direct your attention to a provision in the report  
885 of the administration's Energy Task Force, recently released,  
886 which recommends--and I will simply quote this; that will  
887 save you actually having to open it up. You are probably  
888 familiar with this direction, in any event. The  
889 recommendation is that "the President direct the Secretary of  
890 Energy to establish a national priority for improving energy  
891 efficiency."

892 I would like for you, if you would this morning, to give  
893 us a sense of how that direction is going to be translated  
894 into concrete recommendations. Give us a status report, if  
895 you would, on your work in developing the recommendations  
896 stemming from that direction.

897 Here is where you may want to take a note or two. In  
898 particular, I would appreciate your indicating how the  
899 Department of Energy would propose to have energy efficiency  
900 improvements in the following areas. And I will be very  
901 precise about the areas that I would like for you to address.

902 First of all, how soon do you intend to update the  
903 existing standards for a residential dishwasher and for

904 refrigerators, residential dishwashers and refrigerators?

905 Secondly, how soon do you expect to complete the ongoing  
906 proceedings, which I think have been under way for a matter  
907 of years, extending well back into the last administration,  
908 relating to electricity distribution transformer efficiency?

909 Then, third, will the administration support new  
910 efficiency standards for the following: commercial  
911 refrigerators, exit signs, traffic lights, icemakers, and  
912 commercial unit heaters?

913 The reason I have selected these precise latter topics is  
914 because we are getting recommendations from other witnesses  
915 who will appear this morning that in our legislation we  
916 include these precise items with directions that energy  
917 efficiency improvement standards be established. So  
918 anticipating those recommendations, I would like to get your  
919 view on those subjects.

920 I will yield the balance of my time to you for that.

921 Mr. GARMAN. One of the things that we are working to  
922 do--and I will be candid with you, looking at that particular  
923 recommendation that you cited, making energy efficiency a  
924 national priority, gives us something of an open field.

925 What the Secretary has directed, the Deputy Secretary,  
926 the number two official in the Department, us to do is to  
927 take this document and to translate it into implementation  
928 actions. We were in a meeting yesterday in his office going

929 | over some of these very points.

930 |       It is going to require in most cases a collaboration  
931 | between the other agencies--the Department of Transportation,  
932 | the Environmental Protection Agency--frankly, a level of  
933 | collaboration we haven't always seen in the past. So in  
934 | addition to the fundamental issue of translating this, we are  
935 | going to have to refashion the dialogue and improve  
936 | dialogue between the disparate Federal agencies to begin to  
937 | put some meat on the bones of these recommendations.

938 |       Now, that process is under way, and on a weekly basis, we  
939 | have updated matrixes to try to implement the policy and  
940 | really put a fine point on it.

941 |       With respect to the specific standards, we are well along  
942 | the way on distribution transformers, and I can't give you an  
943 | exact time frame because, of course, it is a regulatory  
944 | process and there are opportunities for some of the  
945 | stakeholders in the process to lengthen or expedite depending  
946 | on--but let me--.

947 |       Mr. BOUCHER. Can you just give us a general sense?

948 |       Mr. GARMAN. Sure. I think we can--I think that  
949 | distribution transformers are an opportunity for a reasonably  
950 | expeditious win. I think that--and part of this, because one  
951 | of the programs that we are actually going to review in the  
952 | context of this strategic review are our rulemaking processes  
953 | on setting new standards for these various items.

954 I can tell you that some that you have mentioned,  
955 refrigeration, commercial, are on our higher priority list.  
956 And I would beg the indulgence of the committee--and perhaps  
957 this is something I can provide you for the record--something  
958 of a matrix of our current thinking on the prioritization of  
959 these various appliances and the general time frames in which  
960 we think we will be turning to them.

961 Mr. BOUCHER. Mr. Chairman, thank you. My time has  
962 expired. Let me simply conclude by thanking Secretary Garman  
963 for his attendance here and his answer to this question.

964 And, Mr. Secretary, I would very much welcome at the  
965 earliest time that you could provide it that written response  
966 to this question that establishes these priorities and some  
967 suggested time frames for completing these various  
968 rulemakings. And to the extent that you can talk about your  
969 level of support for the specific items that I indicated in  
970 the last part of the question for refrigerators and the other  
971 items, that would be welcome, too.

972 Now, we are proceeding on a fairly rapid schedule here to  
973 adopt legislation on this set of issues, and so if you could  
974 provide an answer perhaps by next week, that would be timely  
975 and helpful to us. And I thank you and thank you, Mr.  
976 Chairman.

977 [The information follows:]

**COMMITTEE:** HOUSE ENERGY AND COMMERCE  
**SUBCOMMITTEE:** ENERGY AND AIR QUALITY  
**DATE:** June 22, 2001  
**WITNESS:** David Garman  
**PAGES:** 37-41 Lines 844-977

**Summary of Priorities**

**Standards and Determinations (D)**

<b>High Priority Products</b>	<b>Low Priority Products</b>
Residential Central AC/HP**	Clothes Dryers
Distribution Transformers	Clothes Washers*
Residential Furnaces and Boilers	Cooking Products - Electric*
Air-Cooled Central Air Conditioners and Air-Source Heat Pumps. 65-240 kBtu/h	Direct Heating Equipment. Gas
Packaged Terminal Air Conditioners and Heat Pumps	Dishwashers
Small Electric Motors (D)	Electric Motors. 1-200 HP
Niche Products-Residential A/C	Fluorescent Lamp Ballasts*
Cooking Products - Gas*	High Intensity Discharge Lamps (D)
	Lamps
	Mobile Home Furnaces
	Plumbing Fixtures/Fittings
<b>Medium Priority Products</b>	Pool Heaters. Gas
Central Air Conditioners and Heat Pumps. 3 phase. <65 kBtu	Refrigerators*
Oil- and Gas-Fired Commercial Packaged Boilers	Residential Water Heaters*
Tankless Gas-Fired Instantaneous Water Heaters	Room Air Conditioners *

Drops to Low Priority upon Completion.

\* Final Rules for these products have been recently published

1084 Mr. GARMAN. But, as you pointed out, there are new  
1085 modifications and possibilities that it affords. I think  
1086 in--particularly in some of, you know, energy renewable where  
1087 an external heat source can be applied.

1088 Mr. TAUZIN. We are also told that in distributive energy  
1089 systems Sterling engines can be extraordinarily useful,  
1090 particularly new designs. I would love to have something  
1091 from you to complement what Charlie Bass has brought on our  
1092 committee, if you can to give us your latest of its potential  
1093 as part of a conservation and distributive energy initiative.

1094 Finally, I just wanted a comment from both of you on one  
1095 of the most important elements of conservation. In  
1096 California, when California had price caps on the retail  
1097 market on its electricity, we discovered in our surveys in  
1098 California a drop in conservation of 8 percent. It shouldn't  
1099 have surprised us. Price controls tend to encourage demand  
1100 and weaken conservation efforts. Price increases have the  
1101 opposite results always. We saw a 13 percent increase in  
1102 conservation in California the moment it was announced that  
1103 those price controls would be lifted on the retail market.

1104 Is the price of gasoline going up, shortage of natural  
1105 gas, prices of natural gas going up? How much do prices and  
1106 increases in prices under your analysis create conservation  
1107 incentives? What is the relationship in that? Is it a  
1108 one-to-one relationship? Is it a one-to-two?

**COMMITTEE: HOUSE ENERGY AND COMMERCE**  
**SUBCOMMITTEE: ENERGY AND AIR QUALITY**  
**DATE: June 22, 2001**  
**WITNESS: David Garman**  
**PAGE: 48 Lines 1088-93**

**INSERT FOR THE RECORD**

Stirling engines have several attributes that make them attractive for distributed energy applications as well as renewable energy applications:

(1) **Flexible.** Stirling engines are external combustion engines and can accept heat input from a variety of sources, including solar energy. Stirling engines can be designed to burn more than one fuel and operate in a "Hybrid" mode. DOE has worked with several engine manufacturers (such as STM Corporation) to develop an engine that is capable of using solar energy and/or biogas in combination with natural gas, landfill gas, and hydrogen. This would provide a potentially dispatchable power supply for grid-connected utility as well as off-grid remote applications.

(2) **Efficient.** The efficiency of the Stirling engine is approximately 40 percent as compared to 30 percent for microturbine technologies. This is the reason why the Stirling technology is currently the engine of choice for solar dish systems. Solar dish systems, with a Stirling engine at the focal point, have an overall system solar-to-AC power efficiency of nearly 30 percent.



(3) **Modular.** Current Stirling engines range in size from several hundred watts to 25 kilowatts, with applications including refrigeration, cryogenics, cogeneration, and power generation. This makes them ideal for on-site power applications.



**Department of Energy**  
Washington, DC 20585

2001-800100

September 18, 2001

The Honorable Roscoe G. Bartlett  
Chairman  
Subcommittee on Energy  
Committee on Science  
U.S. House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

Enclosed is the edited transcript of the June 12, 2001, testimony given by Robert S. Kripowicz, Acting Assistant Secretary for Fossil Energy, regarding the "Fossil Energy Research and Development and Clean Coal Technology."

Enclosed also is an insert that you requested for the hearing record.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Lillian Owen, at (202) 586-2031.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Brouillette".

Dan R. Brouillette  
Assistant Secretary  
Congressional and Intergovernmental Affairs

Enclosure



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**28832**

1 | YORK STENOGRAPHIC SERVICES, INC.

2 | HEARING ON THE PRESIDENT'S NATIONAL ENERGY POLICY:

3 | CLEAN COAL TECHNOLOGY AND OIL AND GAS R&D

4 | Tuesday, June 12, 2001

5 | House of Representatives,

6 | Subcommittee on Energy

7 | Committee on Science

8 | Washington, D.C.

9 |       The Subcommittee met, pursuant to call, at 10:05 a.m., in  
10 | Room 2318 of the Rayburn House Office Building, Hon. Roscoe  
11 | G. Bartlett [Chairman of the Subcommittee] presiding.

62 | from R&D efforts in the government, private sector, and in  
63 | our universities assist us in producing more energy more  
64 | efficiently and in a way that comports with the needs of  
65 | public and worker health and safety and the health of our  
66 | environment?

67 |       Our first Panel will consider all aspects of clean coal  
68 | power technology, including how the President's proposed 2  
69 | billion in spending on clean coal technologies may both  
70 | increase efficiency and reduce emissions from utilities and  
71 | find innovative new uses for coal and coal bed methane.

72 |       Our witnesses will be Robert S. Kripowicz, Acting  
73 | Assistant Secretary for Fossil Energy at the U.S. Department  
74 | of Energy. Mr. Kripowicz will also appear on Panel II. Bob  
75 | Yamagata, Executive Director of the Coal Utilization Research  
76 | Council; James E. Wells, Director of Natural Resources and  
77 | Environment at the U.S. General Accounting Office; Katherine  
78 | Abend, hopefully, Global Warming Associate at the U.S. Public  
79 | Interest Research Group, U.S. PIRG; and John S. Mead,  
80 | Director of the Coal Research Center at Southern Illinois  
81 | University, Carbondale. I understand that my colleague, Mr.  
82 | Costello, will be introducing his constituent, Mr. Mead,  
83 | formally at the conclusion of my remarks.

84 |       The second Panel will consider how technologies derived  
85 | from petroleum and gas R&D can be employed to improve  
86 | exploration, extraction, refining, and processing, and

87 | transportation of these fossil fuels. Our witnesses will  
88 | include Virginia Lazenby, Chairman and CEO of Bretagne, GP,  
89 | Nashville, Tennessee, on behalf of the Independent Petroleum  
90 | Association of America; Paul Cuneo, Vice President and Chief  
91 | Information Officer of Equiva Services, LLC, Houston, Texas,  
92 | on behalf of the American Petroleum Institute; Dr. Craig W.  
93 | Van Kirk, Professor of Petroleum Engineering and Head of the  
94 | Department of Petroleum Engineering at the Colorado School of  
95 | Mines, Golden, Colorado; and Dr. Alan Huffman, Manager of  
96 | Conoco's Seismic Imaging Technology Center, Houston, Texas.

97 |       I look forward to hearing today's testimony and pursuing  
98 | these subjects in greater detail. Before we get started,  
99 | however, I would like to remind the members of the  
100 | Subcommittee and our witnesses that this hearing is being  
101 | broadcast live on the Internet, so please keep that in mind  
102 | during today's proceedings. I would also like to ask for  
103 | unanimous consent that all members who wish may have their  
104 | opening statements entered into the record. Without  
105 | objection, so ordered. I now turn to my distinguished  
106 | colleague, Mr. Costello, for an introduction and his opening  
107 | remarks.

108 |       [Statement of Mr. Bartlett follows:]

109 | \*\*\*\*\* INSERT 1 \*\*\*\*\*

110 Mr. COSTELLO. Well, Mr. Chairman, thank you very much,  
111 and I thank you for calling this hearing today. I will submit  
112 my statement, my formal statement, for the record. I welcome  
113 all of our witnesses here today and I look forward to hearing  
114 their testimony.

115 In particular, I welcome a constituent and friend, John  
116 Mead, who is a part of the first Panel. Mr. Mead is the  
117 Director of the Coal Research Center at Southern Illinois  
118 University in Carbondale. In fact, I recently attended just a  
119 few weeks ago a forum on clean coal technology and the future  
120 of coal at Southern Illinois University in my Congressional  
121 district. Mr. Mead was the moderator. It was a forum called  
122 by the Governor of Illinois and Senator Dick Durbin, as well  
123 as members of the Congressional delegation, my colleagues,  
124 David Phelps and John Shimkus, also attended. John is very  
125 familiar with coal issues. He has been at the research center  
126 at Southern Illinois University for many years and is very  
127 familiar with clean coal technology.

128 Mr. Chairman, there is no question that clean coal  
129 technology exists today that, in fact, significantly reduces  
130 emissions of air pollutants. And there is new technology that  
131 I believe will reduce emissions to a greater extent than we  
132 ever imagined or anticipated. Over 50 percent of all  
133 electricity generation comes from coal-powered plants in the  
134 United States today. We have an abundance of coal in

135 | southwestern Illinois and other parts of this country and I  
136 | believe that we, in fact--any policy--energy policy coming  
137 | out of the White House or the Congress should, in fact,  
138 | include, to a large part, coal.

139 |       I applaud the Administration and Vice President Cheney,  
140 | as well as President Bush, for asking the Congress to put  
141 | additional money in fossil fuel research and development and  
142 | in clean coal technology. We, in fact, need to continue to do  
143 | research and development so that we can burn coal in the most  
144 | efficient and environmentally friendly manner. And with that,  
145 | Mr. Chairman, I will insert my statement in the record and  
146 | look forward to hearing from our witnesses. Thank you.

147 |       [The statement follows:]

148 | \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

149 Chairman BARTLETT. Thank you very much. I note that we  
150 have been joined by two additional members of our Panel, Mr.  
151 Smith and Ms. Biggert. You may make an opening statement if  
152 you wish. Any formal statement will be included in the  
153 record. Do you have comments before we welcome our witnesses?  
154 Mr. Smith.

155 Mr. SMITH. Mr. Chairman, if I may, I was on the  
156 Presidential Oil Policy Committee during the Arab Oil Embargo  
157 back in the early '70s and it seems like again a revisiting  
158 of some of the concerns of our increased dependency on  
159 especially imported petroleum products. At that time, we were  
160 importing about 35 percent of our petroleum energy needs.  
161 Now, it is approaching 58 percent, I believe. And so, again,  
162 it should be a heads up and a reminder that that kind of  
163 dependency makes us more vulnerable and has a tremendous  
164 impact on both the economy and the environment. So thank you  
165 and the Ranking Member for holding this hearing. Thank you.

166 Chairman BARTLETT. Well, thank you very much. And I might  
167 add that there is a national security implication too and we  
168 are getting nearly 60 percent of oil from overseas. That is  
169 too little recognized, I think. Without objection, the full  
170 written testimony of all the witnesses will be entered into  
171 the record. I would ask that you summarize your testimony in  
172 5 minutes so we will have plenty of time for questions. And  
173 let me assure you that any detail that you wish to expand on,



174 | you will have ample opportunity to do that during the  
175 | question and answer period. So without any further delay, Mr.  
176 | Kripowicz, you may begin.

177 STATEMENT OF ROBERT S. KRIPOWICZ, ACTING ASSISTANT SECRETARY  
178 FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY

179 Mr. KRIPOWICZ. Thank you, Mr. Chairman. Mr. Chairman, and  
180 members of the Subcommittee, I appreciate the opportunity to  
181 appear today with both panels and I want to commend the  
182 Subcommittee for holding this hearing. I believe it is  
183 important that periodically we step back from the day-to-day  
184 conduct of our programs and ask the questions, are we making  
185 progress, is that progress benefiting the American people,  
186 and are we moving in the right direction?

187 I believe that for the Federal Fossil Energy Program, the  
188 answer to each of those questions is an unequivocal yes. And  
189 I appreciate the initiative, Mr. Chairman, you have taken in  
190 holding this hearing to review the progress and benefits to  
191 date and to discuss the course we should be setting for the  
192 future.

193 In my formal statement I have used specific examples to  
194 illustrate some of the technology advances that have resulted  
195 from our partnerships with industry and academia. For each  
196 items I have cited, there are many more that could be  
197 referenced. In the interest of time, however, and to provide  
198 adequate opportunity for my fellow panelists, I will  
199 highlight only a few examples.

200 Let me begin with the Clean Coal Program. As you are  
201 aware, the President has made clean coal technology one of

202 | the core elements of his National Energy Policy. Why clean  
203 | coal?

204 |       As the chart on page 2 of my statement illustrates, coal  
205 | supplies more than half the electricity consumed in this  
206 | country and America has more than two-and-a-half centuries of  
207 | recoverable coal. So at a time when a major issue confronting  
208 | this Nation is the future reliability of electricity, it  
209 | makes little sense to turn our back on this abundant  
210 | resource, especially if we can develop technology that  
211 | reduces, or perhaps one day soon eliminates, environmental  
212 | concerns over its use.

213 |       The Clean Coal Technology Program that began in the  
214 | mid-1980s and extended through five rounds of industry  
215 | competition laid the groundwork for such technology.  
216 | Thirty-eight projects ultimately were part of this program.  
217 | Several are still underway. Of the 30 or so that have been  
218 | completed, 22 have achieved some form of commercial success.

219 |       But more importantly, the Nation has benefited. When the  
220 | Clean Coal Program began, power generations had only a  
221 | limited number of choices for reducing most types of air  
222 | emissions, and what was available was generally expensive  
223 | and, in some cases, unreliable.

224 |       Today, largely because of the Clean Coal program and  
225 | related R&D, the menu of options has been greatly expanded.  
226 | Low-NOx burners, for example, were unproven when the Clean

227 Coal Program began. Now, because of the experience gained in  
228 several Clean Coal projects, three out of every four  
229 coal-fired power plants in the U.S. are, or will soon be,  
230 equipped with low-NOx burners.

231       Within the next 2 years, 30 percent will be outfitted  
232 with selective catalytic reduction for even greater NOx  
233 control. Again, the Clean Coal Technology Program helped  
234 demonstrate the technology and lower costs.

235       In fact, before the Clean Coal Program, options for  
236 controlling nitrogen oxides could cost as much as \$3,000 per  
237 ton of NOx removed. Today, these costs have been cut in half  
238 for selective catalytic reduction. And low-NOx burners can  
239 reduce nitrogen oxide pollutants at costs of less than \$200  
240 per ton.

241       Flue-gas scrubbers for sulfur dioxide, once expensive and  
242 unreliable, now cost 1/3 of their 1970's costs. Not only are  
243 they reliable, but the technology is now available to convert  
244 the sulfur they take out as a pollutant into a product that  
245 can be used to make wallboard, for example.

246       Again, Mr. Chairman, for a country that is increasingly  
247 concerned about the costs of electricity, having technology  
248 available that can reduce environmental compliance costs from  
249 what is already our lowest cost fuel for power generation,  
250 creates an enormous economic benefit.

251       Perhaps, equally important, the Clean Coal Program has

252 | provided the basis for future benefits, benefits that the  
253 | President's new clean coal initiative is intended to achieve.  
254 | Coal gasification-based power generation is one of those new  
255 | technologies. Because of the Clean Coal Program, we now have  
256 | the first pioneering gasification combined cycle power plants  
257 | operating commercially in the U.S. Their environmental  
258 | performance approaches that of natural gas.

259 |       Moreover, further improvements lie in the future. The use  
260 | of fuel cells and advanced turbines, in combination with a  
261 | coal gasifier, the ability to convert a portion of the coal  
262 | gas into premium liquid fuels and chemicals, the potential to  
263 | develop a coal-based energy system that lends itself to the  
264 | future capture and sequestration of carbon dioxide--all of  
265 | these are future pathways opened up by the clean coal  
266 | gasification projects underway at Tampa, Florida and West  
267 | Terre Haute, Indiana.

268 |       In fact, Mr. Chairman, as I mention briefly in my  
269 | prepared statement, we see the very real possibility of  
270 | future coal-fired plants that are virtually pollution-free.  
271 | That for all intents and purposes, remove environmental  
272 | objections from the use of our most abundant fossil energy  
273 | resource.

274 |       Now, let me turn briefly to the subject of your second  
275 | panel, which is petroleum and natural gas technology. Again,  
276 | the long-term ability of our energy industry to find and

277 | produce the liquid and gaseous fuels on which our economy  
278 | depends, will largely be dictated by continuing advancements  
279 | in technology.

280 |       The Vice President's National Energy Policy Development  
281 | Group recognized this and recommended efforts to continue  
282 | fostering improvements in oil and gas technology. Again, in  
283 | this area, I believe our track record is good.

284 |       One of the major advancements in oil and gas technology  
285 | in the last 20 years has been the polycrystalline diamond  
286 | drill bit, and we are proud of the fact that one of our  
287 | national labs solved the bonding problem that made such bits  
288 | possible. Today, we are working with national laboratories,  
289 | universities, and the industry to make the next leap forward  
290 | in drill bit technology. For example, using special microwave  
291 | techniques to develop a bit that will last longer and drill  
292 | deeper and faster.

293 |       I have described new seismic technologies that were  
294 | supported in our program, like four-dimensional seismic  
295 | technology that adds time to the imaging equation, and new  
296 | imaging systems that work at the bottom of an oil or gas well  
297 | and whose resolution is ten times more precise than other  
298 | technology.

299 |       These are technologies that offer benefits across the  
300 | board for all types of companies drilling in more complex  
301 | environments. But in recent years, the nature of our domestic

302 | oil industry has changed and so has the focus of much of our  
303 | research.

304 |       Today, smaller independent companies are rapidly becoming  
305 | the dominant oil and gas producers in the United States.  
306 | Independent producers account for 40 percent of the crude oil  
307 | produced in the United States and 50 percent of the oil  
308 | produced in the lower 48. They produce 2/3 of our Nation's  
309 | natural gas and they account for 85 percent of all the new  
310 | wells drilled in the United States.

311 |       Now, very few of these companies conduct significant  
312 | research by themselves. Traditionally, most have relied on  
313 | technology to trickle down from the majors, but with more and  
314 | more of the larger companies moving to more lucrative  
315 | prospects overseas, the flow of new technology has slowed.

316 |       Our program attempts to fill the gap, working with  
317 | independent producers to determine whether promising, but  
318 | high-risk approaches work, and, if they do, requiring the  
319 | producer and others in the industry to undertake an  
320 | aggressive technology transfer effort.

321 |       I have cited two examples in my testimony of partnership  
322 | projects that have worked. One of the projects involved a  
323 | complete oil field workover using new technology to locate  
324 | and produce oil that had been previously abandoned. In the  
325 | last 5 years, that project, near Bakersfield, California, has  
326 | produced more than 1 million barrels of oil that, otherwise,

327 | would have remained in the ground. More importantly, it  
328 | stimulated 100 new privately funded wells in the surrounding  
329 | area.

330 |       That was a full cost-shared field test. Often, however,  
331 | we find that small grants, targeted at very specific  
332 | production problems, can return major benefits. A small  
333 | producer working in a field in Los Angeles wanted to try a  
334 | new type of acid treatment to remove downhole deposits that  
335 | were on the verge of putting many of his wells out of  
336 | operation. He applied for a DOE grant to help cover the risks  
337 | of this unproven technique and was selected for a  
338 | cost-sharing project in a DOE competition. The treatment has  
339 | exceeded expectations. Oil flow not only has been restored,  
340 | but is now four times the previous rate. And the producer is  
341 | now holding workshops and technical meetings to describe the  
342 | new acid treatment process to other producers.

343 |       These, I believe, Mr. Chairman, are the keys to  
344 | successful federal research programs. First, partner with  
345 | industry to support the new ideas that otherwise would be too  
346 | risky to pursue. Secondly, wherever possible, support new  
347 | ideas through cost-sharing and where industry must compete  
348 | with their peers for federal support. And third, ensure that  
349 | there is a built-in technology transfer, where the  
350 | involvement of industry and the financial commitment that  
351 | industry makes provide natural conduits for successful



352 | technologies to be used commercially once the federal project  
353 | is over.

354 |       Our goal is to foster this type of research program in  
355 | the Fossil Energy Program at the Energy Department. With  
356 | fossil fuels supplying 85 percent of the Nation's energy, we  
357 | believe that such a program is a necessary component of a  
358 | more energy secure, economically strong, and environmentally  
359 | healthy future. Thank you for the opportunity to testify.

360 |       [Statement of Mr. Kripowicz follows:]

361 | \*\*\*\*\* INSERT 2A \*\*\*\*\*

362 [The information follows:]

363 \*\*\*\*\* INSERT 2 \*\*\*\*\*

364

Chairman BARTLETT. Thank you very much. Mr. Yamagata.

365 STATEMENT OF BEN YAMAGATA, EXECUTIVE DIRECTOR, COAL  
366 UTILIZATION RESEARCH COUNCIL (CURC), WASHINGTON, D.C.

367 Mr. YAMAGATA. --public and private partnerships. I  
368 pretend to be a technologist, but that is clear evidence that  
369 that is not the case. In any case, we have submitted a  
370 written statement. In that written submittal, may I commend  
371 to you, Mr. Chairman, and to members of the Subcommittee, for  
372 your review, there is a detailed description and discussion  
373 of our organization's coal technology road map which has been  
374 an attempt by our membership to outline the technology needs  
375 for coal that at least we believe will best ensure the  
376 long-term economic and environmentally acceptable use of this  
377 very plentiful domestic and secure energy resource.

378 May I also commend to your viewing an electronic version  
379 of a document prepared by the National Mining Association  
380 that describes the overall benefits of coal and the value of  
381 the government and industry's Clean Coal Technology Program.  
382 Within the time allotted to me, Mr. Chairman, I would like to  
383 use this handout that I have prepared for the Committee's  
384 perusal, and to discuss with you very generally the elements  
385 of the CURC technology road map and then to suggest to you  
386 that successful pursuit of this road map or any other like  
387 technology road map will require a commitment, a commitment  
388 on the part of industry and government, a commitment that  
389 must form--be formed by adequate amounts of time and adequate

390 amounts of cost-shared funding.

391 Over the course of the last couple of years, the  
392 membership of CURC has drafted and agreed upon the key  
393 elements of a coal technology road map. This is not unlike  
394 the road maps that have been produced by the Department of  
395 Energy in their Vision 21 program.

396 May I turn your attention to page 3 of this handout? That  
397 page is entitled, "Performance Targets for Coal  
398 Generation." Herein lies the essence of our coal technology  
399 road map that sets forth the goals and the timetables for  
400 technologies to ensure the continued long-term use of coal.

401 Very, very briefly, this is a chart that attempts to  
402 explain the time frames for technology development. That is,  
403 the technologies that we have today, both their costs and  
404 their performance criteria, along with the technologies in  
405 the 2010 and the 2020 time frame, which we believe industry  
406 and government are capable of achieving.

407 Let me just point out that one of the metrics in the 2020  
408 time frame is that we try to, and we believe we can, develop  
409 technologies that are twice as efficient as the type of power  
410 plants we see today. Technologies that will be cost effective  
411 and embedded in the technologies themselves are the ability  
412 to sequester CO2 to the extent that that is necessary.

413 May I turn your attention to page 4 of the handout  
414 entitled, "CURC Highest Priority, Coal-Fired Generation

415 | Technology Development?'' Here we have attempted to identify  
416 | the critical technology needs for coal by describing a set of  
417 | five technology platforms. That is along the left-hand hash  
418 | marks of the chart. These technology platforms focus upon  
419 | coal technology needs that are required in the near term to  
420 | address existing power plant emission regulations. In the mid  
421 | term, that is to 2010. For--so that we can contemplate the  
422 | expanded use of what we know we have today--that is,  
423 | pulverized coal units in the form of supercritical and  
424 | ultra-supercritical coal units. And in the farther out  
425 | period, that is the 2020 time period, primarily to use  
426 | gasification or combustion gasification systems to achieve  
427 | very high, cost-effective high efficiency and high emission  
428 | control technologies.

429 |       I would hasten to add that gasification currently exists  
430 | with Texaco and others, as it is now applied commercially  
431 | around the world. It is, however, also the building block  
432 | upon which future technology ought to be developed.  
433 | Importantly--importantly, we have also estimated the total  
434 | funding requirements that these technology platforms will be  
435 | acquired. That is, to meet the goals and the time tables laid  
436 | out in the chart on page 3.

437 |       In our view, an investment of at least \$10 billion will  
438 | be required over the next 20 years, up to 1/2 from the  
439 | private sector and the remaining from the public sector, over

440 | the next 20 years. This public/private commitment includes  
441 | time and funding for research and development and also for  
442 | demonstration and deployment of new first-of-a-kind systems.

443 |       Two quick points, Mr. Chairman, if I may. First, the  
444 | existing Clean Coal Program has been a great success. As  
445 | Assistant Secretary Kripowicz has pointed out, 38 projects  
446 | undertaken, a total of more than 5 billion committed and  
447 | spent. I commend to you an attachment in my written  
448 | testimony, drafted by the Southern Company, that seeks to  
449 | identify the benefits of joint industry government clean coal  
450 | efforts, for those so critical of past clean coal efforts,  
451 | please look at the facts.

452 |       Second, and most importantly, we are delighted with  
453 | President Bush's commitment to a multi-year clean coal  
454 | development program. He has sought to initiate that  
455 | commitment with \$150 million request this year, to begin a  
456 | long-term demonstration program. I would point out, however,  
457 | that you cannot take funds away from the basic coal R&D  
458 | program to cover the costs of the demonstration program. We  
459 | need both of them. We need R&D, particularly, because it is  
460 | the seed corn that will grow improvements later on.

461 |       In this same vein, the Vision 21 program, which, frankly,  
462 | is more aggressive in its technology goals and even the CURC  
463 | road map, needs to contemplate demonstration programs on a  
464 | scale that will provide industry with confidence that the

465 | technology actually works.

466 |       In conclusion, there are plenty of technology road maps.

467 | We have one of them. We know what needs to be done, Mr.

468 | Chairman, and, members of the Subcommittee. It is time and

469 | money that must be committed by both the private sector and

470 | the public sector. We need to set a course for coal-based R&D

471 | and then we need to stick to it. Thank you.

472 |       [Statement of Mr. Yamagata follows:]

473 | \*\*\*\*\* INSERT 3 \*\*\*\*\*



474

Chairman BARTLETT. Thank you very much. Mr. Wells.

475 STATEMENT OF JAMES E. WELLS, DIRECTOR, NATURAL RESOURCES AND  
476 ENVIRONMENT, U.S. GENERAL ACCOUNTING OFFICE

477 Mr. WELLS. Thank you, Mr. Chairman, and, members of the  
478 Subcommittee. We, too, are pleased to be here today to  
479 discuss our past work on the Clean Coal Technology Program.  
480 In almost 20 years since it started, a lot has been said,  
481 both for and against this program. Our report last year that  
482 looked at the status of the program at the end of 1999,  
483 talked to 60-some projects <sup>that</sup> had been awarded and funded out of  
484 roughly 210 proposals that had been submitted.

485 In reporting on the status of the program, we noted that  
486 24 projects had been completed at that time, 16 were  
487 currently active, and 10 had been terminated or withdrawn,  
488 along with another 10 or so that had fallen out earlier in  
489 the program. No new projects have been started in the last 5  
490 or 6 years. About \$800 million of the 1.8 billion federal  
491 funds, of the share, had not been spent at that time.

492 The just-completed White House National Energy Policy  
493 Group is recommending that the Administration invest \$2  
494 billion in a new restructured Clean Coal Program over the  
495 next 10 years. In this context, my testimony today will focus  
496 on the findings of our last decades of audits of the Clean  
497 Coal Program and the lessons that may have been learned from  
498 those past efforts. My full statement was prepared and talks  
499 to the successes and the weaknesses that we saw in the

500 | program.

501 |       This morning, I will let the other distinguished Panel  
502 | members here speak to the successes of the program and I will  
503 | highlight some of the problems that we observed over the last  
504 | decade. As you know, as auditors, we are best at identifying  
505 | problems.

506 |       1989--as the first awards were made, there were many  
507 | company financial problems and delays in getting the business  
508 | arrangements made. The awardees raised issues to DOE relating  
509 | to their reluctance to repay the federal cost share. Again,  
510 | concerns over viability in a competitive marketplace.

511 |       Proprietary data issues arose over the possible public  
512 | release of competitive information that may have  
513 | disadvantaged companies. Again, frustrating delays in  
514 | achieving and obtaining various permits, either at the  
515 | national or state or local levels, and not surprisingly, with  
516 | any new federal program, there were cumbersome headquarters  
517 | review <sup>and</sup> ~~in~~ approval processes.

518 |       1990--as we looked at DOE, as how they were evaluating,  
519 | ranking, and selecting the projects, we found that some of  
520 | the awards that appeared weak in meeting all of the  
521 | evaluation criteria, especially as it related to solving some  
522 | of the acid rain issues. Some technical readiness issues were  
523 | observed that surfaced, that showed up in major project  
524 | delays and completion date slippages. This caused us to

525 | think, in the early '90s, that perhaps too much money may be  
526 | chasing less than the best projects. We suggested that the  
527 | program be slowed down a little bit in awarding new money to  
528 | new projects again in 1990.

529 |         We also did some work looking at the potential for the  
530 | utilities to use the clean coal technology and found, at that  
531 | time, a cloudy vision for the future. Their interest was  
532 | relatively low at the time. Most utilities were not sure what  
533 | the future demand for coal was going to be, given the  
534 | expanding natural gas availability and pricing structure. We  
535 | are uncertain, at this time, and suspect that the future and  
536 | the vision still may be cloudy today.

537 |         1991--we raised concerns about how we were using federal  
538 | funds to support projects that were close to  
539 | commercialization. We also raised concerns related to being  
540 | unable to find buyers for the developed products and the  
541 | technologies.

542 |         1994--we commended DOE for doing good cost-sharing  
543 | features of the cooperative agreements that they put in place  
544 | to be used in the Clean Coal Program. The process of using  
545 | multiple solicitations in stages allowed DOE, as the program  
546 | progressed, to make major improvements and adjustments to how  
547 | the program was being run. Some earlier problems with  
548 | financing, with proprietary data handling and sharing of  
549 | costs were improved. However, the instances of continuing

550 project delays, cost increases, and compliance issues, and  
551 projects still changing locations throughout the country,  
552 remained.

553 1996--we looked in general at recovering federal  
554 investments in technology, especially if the products were  
555 being used overseas. Having flexible repayment provisions,  
556 such as was used in the Clean Coal Program, was found to be a  
557 positive thing. Adjustments were made and an increased  
558 federal cost recovery was achieved. However, again, some of  
559 the companies continued to be concerned about lowering their  
560 rate of returns which may have, at that time, discouraged  
561 some participation. Even the agency themselves worried about  
562 the administrative burden of negotiating, auditing, and  
563 enforcing repayment provisions.

564 Year 2000--our most recent work for the House Budget  
565 Committee were, we were asked to go in and focus on the money  
566 that was left in the program and what was happening with 13  
567 of the projects that were remaining that had millions of  
568 dollars unspent. Five of those projects were nearing  
569 completion and the remaining eight showed signs of the same  
570 problems that we had seen over the years--serious delays in  
571 being completed--2 to 7 years; continuing financial problems  
572 with company financing, including ongoing bankruptcy  
573 procedures--proceedings. And once again, we observed that  
574 projects continued to be moving around the country, cities to

575 | cities, owners to owners, in some sense, continuing to look  
576 | for success.

577 |       In summary, I think I will stop here, Mr. Chairman. My  
578 | time is running out. The Clean Coal Program clearly has had  
579 | its ups and downs. Today, as you and fellow Members of the  
580 | Congress are addressing today's energy challenges, we would  
581 | hope that you would take some of the lessons learned from the  
582 | Clean Coal Technology Program to allow you help decide how  
583 | you would like to spend your future research dollars. Mr.  
584 | Chairman, this concludes my short summary and I would be glad  
585 | to answer questions at the end of the Panel presentation.  
586 | Thank you.

587 |       [Statement of Mr. Wells follows:]

588 | \*\*\*\*\* INSERT 4 \*\*\*\*\*

589 | Chairman BARTLETT. Thank you very much. Ms. Abend,  
590 | welcome, and you may proceed. Could you turn on your  
591 | microphone, please?

592 | STATEMENT OF KATHERINE ABEND, GLOBAL WARMING ASSOCIATE, U.S.  
593 | PUBLIC INTEREST RESEARCH GROUP, WASHINGTON, D.C.

594 |       Ms. ABEND. Good morning. My name is Katherine Abend, and  
595 | I am the Global Warming Associate for U.S. PIRG. Thank you,  
596 | Mr. Chairman, and the Subcommittee for the opportunity to  
597 | testimony on our views on the Department of Energy's Clean  
598 | Coal Technology Program.

599 |       U.S. PIRG is the national lobbying office for the state  
600 | Public Interest Research Groups. The PIRGs are nonprofit,  
601 | nonpartisan and work on environmental, consumer, and good  
602 | government issues across the country.

603 |       We believe that the so-called Clean Coal Program is  
604 | mismanaged and threatens public health and the environment by  
605 | subsidizing the burning of dirty coal. Since 1985, the DOE's  
606 | so-called Clean Coal Technology Program has received more  
607 | than \$2.3 billion in federal funds, as well as hundreds of  
608 | dollars through a separate DOE coal research and development  
609 | program. Unfortunately, there is no such thing as clean coal.  
610 | Proposed clean coal plants will still emit carbon dioxide,  
611 | which causes global warming, smog-forming nitrogen oxide,  
612 | lung-damaging particulates, toxic mercury, which contaminates  
613 | water and land.

614 |       Now President Bush wants to waste an additional \$2  
615 | billion subsidizing the coal industry. It is time to protect  
616 | our pocketbooks and stop wasting money on so-called clean



617 | coal programs, and it is time to protect our health with  
618 | stronger clean air standards. It is time for the wealthy coal  
619 | industry to finance its own research.

620 |       No Clean Coal Technology Program can eliminate carbon  
621 | dioxide pollution, nor would they need to. Reducing carbon  
622 | dioxide emissions is not a criterion for the program. In  
623 | fact, some attempts to reduce emissions of NOx, SOx, and  
624 | mercury from coal-fired power plants results in greater  
625 | emissions of carbon dioxide, the main component of global  
626 | warming pollution. In all, coal-fired power plants are  
627 | responsible for 27 percent of total U.S. global warming  
628 | pollution. Last week, the National Academy of Science  
629 | released a report confirming that there is a consensus in the  
630 | scientific community that global warming that has occurred in  
631 | the last 50 years is likely the result of increases in  
632 | greenhouse gases.

633 |       Extreme weather events, which are associated with global  
634 | warming, are on the rise. According to U.S. PIRG's recent  
635 | report, worldwide, the number of great weather disasters in  
636 | the 1990s was more than five times the number for the 1950s  
637 | and the damages were more than ten times as high, adjusted  
638 | for inflation. In the United States, extreme weather caused  
639 | \$204 billion in economic losses during the 1990s. Clearly,  
640 | global warming is too expensive to ignore.

641 |       Coal-fired power plants emit 90 percent of all pollution

642 from the electric industry. The four main pollutants, NOx,  
643 SOx, CO2, and mercury, cause serious environmental health  
644 threats, including smog, particulates, acid deposition, and  
645 toxic impacts to health and ecosystems.

646 Fine particulate pollution from U.S. power plants is  
647 responsible for the deaths of more than 30,000 people each  
648 year. Eighteen thousand of these could be avoided with a  
649 75-percent reduction in emissions. A typical coal-powered  
650 plant releases about 170 pounds of mercury, a neurotoxin,  
651 into the air annually. Less than a teaspoon deposited in a  
652 25-acre lake can make the fish unsafe to eat. Most so-called  
653 clean coal systems in use remove less than 30 percent of  
654 mercury.

655 Clearly, burning coal has a huge impact on our health and  
656 environment. Unfortunately, the Department of Energy's  
657 optimistically named clean coal programs subsidize burning  
658 more dirty coal. Billions of dollars have been spent, yet our  
659 health and that of the planet is threatened by dirty coal  
660 plant emissions. So called clean coal still leads to more  
661 dirty air. According to a General Accounting Office report,  
662 emerging coal technologies will probably not contribute  
663 significantly to the reduction of acid rain causing emissions  
664 in the next 15 years.

665 The DOE's own evaluations of some of its projects show  
666 that new coal technologies were 40 percent less effective in

667 removing SO2 emissions than conventional smokestack  
668 scrubbers.

669       Clearly, more subsidies will not help protect public  
670 health. Unfortunately, some coal supporters are proposing to  
671 squander even more money and explicitly roll back health  
672 protections. Twenty-four senators have co-sponsored S.60 an  
673 industry-backed bill to spend \$1 billion over 10-years for  
674 research on clean coal, and up to \$6 billion in tax breaks  
675 for utilities to upgrade plants or building new ones using  
676 the technology. This bill would exempt even new coal  
677 technology from its promises. Congress should oppose this and  
678 other harmful bills that would waste our money and weaken  
679 clean air protections.

680       Environmental problems are not the only shortcomings of  
681 the clean coal programs. Since its conception, clean coal  
682 technology has been marked by mismanagement. The GAO has  
683 released at least seven reports documenting waste and  
684 mismanagement in the Clean Coal Technology Program. Last  
685 year, in a sampling of 13 government-supported clean coal  
686 projects, GAO watchdogs found 588 million in unspent federal  
687 funds. As of March 2000, 1/5 of the total projects had either  
688 been withdrawn or eliminated.

689       The Clean Coal Technology Program is redundant with the  
690 Clean Air Act Amendments of 1990, which already create  
691 financial incentives to develop cleaner burning coal

692 technologies by allowing utilities to buy, sell, and trade  
693 emissions allowances to reach required emission levels.

694 For the past 8 years, U.S. PIRG has been working to cut  
695 polluter pork programs, federal spending or subsidies that  
696 harm the environment at taxpayer expense. Our coalition of  
697 environmental, taxpayer, and safe energy groups has helped to  
698 save taxpayers nearly \$24 billion by cutting funding for  
699 harmful programs. In February, the PIRGs released with other  
700 groups, the Green Scissors Report, which recommends cutting  
701 74 wasteful, environmental-damaging programs to save  
702 taxpayers \$55 billion. One of these programs is the so-called  
703 Clean Coal Technology Program.

704 The coal power industry is mature and lucrative. At a  
705 time of scarce federal dollars, these industries should be  
706 weaned from the federal dole. Some of the Nation's largest  
707 and wealthiest corporations are also--are beneficiaries of  
708 the program, including General Electric, United Technologies,  
709 and Westinghouse. General Electric reported record earnings  
710 of over \$3 billion for the first quarter of 2001.

711 The GAO seems to agree that these mature, profitable  
712 companies do not need subsidies. In an audit, the GAO noted  
713 that clean coal technology spending may not be the most  
714 effective use of federal funds. For example, some projects  
715 are demonstrating technologies that might have been  
716 commercialized without federal assistance.

717 Any legislation from the House Science Committee  
718 authorizing funding for the DOE should phase out wasteful  
719 spending on clean coal programs and increase funding for  
720 energy efficiency and renewable energy programs. Continued  
721 subsidies for the polluting coal industry creates an unfair  
722 playing field for clean energy sources. Congress should  
723 reauthorize the 588 million in unused clean coal funds to pay  
724 for part of the following proposals.

725 There are clean, affordable energy alternatives. Energy  
726 efficiency offers the fastest, cleanest, cheapest solution.  
727 Americans today consume 40 percent less energy and thus have  
728 40 percent lower energy bills as a result of smart energy  
729 efficiency policies created over the past 25 years.

730 President Bush's proposed energy budget would cut funding  
731 for some energy efficiency and renewable--would cut funding  
732 for energy efficiency and renewable energy programs in half.  
733 Instead, this Committee should direct the Department of  
734 Energy to double funding for energy efficiency between 1998  
735 and 2003.

736 According to the DOE, 100 square miles of solar panels  
737 could meet the annual electricity needs of the United States.  
738 Meanwhile, wind energy is now cost competitive with fossil  
739 fuel energy in some areas. The Bush Administration cut  
740 funding for renewables by nearly 50 percent. Instead, this  
741 Committee should direct the DOE to increase funding for

742 | renewable research and development to over \$750 million per  
743 | year.

744 |       In conclusion, we believe that the so-called Clean Coal  
745 | Program is mismanaged and threatens public health and the  
746 | environment by subsidizing the burning of dirty coal. This  
747 | Subcommittee should seize the opportunity to end the  
748 | oxymoronic Clean Coal Program. Thank you.

749 |       [Statement of Ms. Abend follows:]

750 | \*\*\*\*\* INSERT 7 \*\*\*\*\*

751

Chairman BARTLETT. Thank you very much. Mr. Mead.

752 | STATEMENT OF JOHN S. MEAD, DIRECTOR, COAL RESEARCH CENTER,  
753 | SOUTHERN ILLINOIS UNIVERSITY, CARBONDALE

754 |       Mr. MEAD. Thank you, Mr. Chairman. Mr. Chairman, and,  
755 | members of the Subcommittee, while the future of coal's use  
756 | is really a national concern, some states have taken a  
757 | leading role in supporting clean coal research, development,  
758 | and deployment. Midwestern states, with their high-sulfur  
759 | coal reserves, have been significant stakeholders since the  
760 | 1970 Clean Air Act Amendments. These states, particularly  
761 | Ohio and Illinois, have been frequent participants in U.S.  
762 | DOE clean coal projects.

763 |       In the past year, the State of Illinois has taken  
764 | dramatic steps to increase the development of new power  
765 | generation with a strong emphasis on development and  
766 | deployment of clean coal technologies. Mr. Chairman, I think  
767 | I can say that Illinois is very enthusiastic about clean coal  
768 | technology.

769 |       Illinois has been a pioneer in the development of these  
770 | technologies, dating back to the early 1970s, with the  
771 | development of the first generation of fluidized bed  
772 | combustion, the earliest gasification tests, and other  
773 | technologies designed to help the high-sulfur coal reserves  
774 | of the state.

775 |       That has continued with a partnership with the U.S. Clean  
776 | Coal Technology Program and with significant state programs



777 | that are--that have been developed with industry and without  
778 | federal government support.

779 |         This year, the Illinois General Assembly, with the  
780 | support of Governor Ryan, developed a dramatic new set of  
781 | coal-enhancement programs, including a total of \$3.2 billion  
782 | of state resources dedicated to the development of new power  
783 | generation capacity, particularly coal-fired capacity. These  
784 | incentives include \$500 million in potential grants from  
785 | state funding for new development of projects; \$1.7 billion  
786 | in revenue bond authority to provide loans for the  
787 | development of new power plants; and \$300 million in the  
788 | development of advanced systems, including alternative  
789 | technologies, the improvement of the infrastructure of power  
790 | transmission.

791 |         And included in this will be an examination of where it  
792 | may be appropriate to increase and further strengthen the  
793 | state's Clean Air Act laws as they are applied to older,  
794 | existing power plants. And these are power plants that will  
795 | have higher emission levels than new generation because of  
796 | the nature of the requirements for new power plants under the  
797 | Clean Air Act.

798 |         Exploratory clean coal research and development with an  
799 | emphasis on eventual commercial adoption of clean coal  
800 | technologies, is another hallmark of Illinois' program.  
801 | Southern Illinois University has been involved in the

802 | development of an exciting new program, based on \$25 million  
803 | of funding from a major state utility, to develop and  
804 | commercialize more advanced coal technologies. We issued our  
805 | first request for proposals one year ago and we are very  
806 | excited to receive 16 proposals from projects that would  
807 | total over \$400 million in investment in new power generation  
808 | capability. This was a single program developed by a single  
809 | state at one of its universities. A very dramatic  
810 | development--and I think one that in the recent months has  
811 | been amplified in Illinois and throughout the country with a  
812 | tremendous increase in the interest in new power generation.

813 |     While Illinois is really emphasizing the development of  
814 | commercial projects, there is a very significant need for the  
815 | continued development, aggressive development, of very  
816 | advanced ultra clean coal-fired capacity for this country.  
817 | This is still at the level of exploratory research and pilot  
818 | scale development. This is an area where a single state or  
819 | groups of states interested in coal production and power  
820 | generation cannot, on their own, solve these technical  
821 | scientific problems. We need the help of the Federal  
822 | Government. We need the continued support of the Department  
823 | of Energy.

824 |     Mr. Kripowicz and Mr. Yamagata talked about the need for  
825 | the development of these high-performance, high-efficiency  
826 | systems. I agree. I believe that we need increased federal

827 | support for these very advanced technologies that can promise  
828 | both reduced emissions of global climate-changing gases and  
829 | of the current criteria pollutants, as well as increased  
830 | efficiency and better mining methods. Together and  
831 | integrated, these technologies can provide a truly advanced  
832 | clean source of energy for our country for the next hundred  
833 | years. Mr. Chairman, thank you very much.

834 | [Statement of Mr. Mead follows:]

835 | \*\*\*\*\* INSERT 6 \*\*\*\*\*

836 Chairman BARTLETT. Thank you very much for your  
837 testimony. I want to thank all of the witnesses for their  
838 testimony. Obviously, some differences of opinion. I hope we  
839 will have a chance to explore those. And later on in the  
840 hearing, I will invite members of the Panel to pose questions  
841 for other members of the Panel because we want a full airing  
842 of all of the issues today. And a whole lot more wisdom is  
843 represented at the witness table than represented here at the  
844 dais. So we will invite you to ask questions of each other  
845 later.

846 I want to note now that we have been joined by my  
847 colleague, Ms. Hart, and by our Full Committee Chair. And I  
848 would like to yield my first-round questioning time to our  
849 Full Committee Chair.

850 Mr. BOEHLERT. Mr. Chairman, I appreciate the courtesy,  
851 but I prefer to take my turn. That is the way we operate in  
852 the Full Committee, first come, first serve, and those of you  
853 who have been through the entire hearing deserve to have  
854 their questions asked first. I will be the clean-up batter.

855 Chairman BARTLETT. Well, thank you, and I will follow you  
856 as clean-up batter then. So let me now turn to Mr. Costello.

857 Mr. COSTELLO. Mr. Chairman, thank you. Mr. Kripowicz, one  
858 is, you have testified, as some of the other members of the  
859 Panel have testified, that the Clean Coal Technology Program  
860 has worked. How do you see the \$2 billion proposal that the

861 | President has submitted to the Congress and to the American  
862 | people for a clean coal technology impacting the future of  
863 | technology in the area of clean coal?

864 |       Mr. KRIPOWICZ. Mr. Costello, I think it builds on what is  
865 | already a successful program. You know, since the program was  
866 | introduced, several things have happened. One, there have  
867 | been tighter environmental controls put in place and there  
868 | are <sup>Prospective</sup>~~perspective~~ environmental controls, for instance, on  
869 | mercury that are going to be put in place and in ozone coming  
870 | up in the future. These things were not addressed in the  
871 | original program.

872 |       Secondly, there is a large requirement for power plant  
873 | construction that did not occur in the original period of the  
874 | Clean Coal Program. Actually, over the past 10 years, there  
875 | <sup>were</sup>~~was~~ only about 10,000 megawatts of coal capacity built in the  
876 | United States. And so with the requirement for power we would  
877 | expect a large increase in that requirement.

878 |       And, thirdly, there is a lot of new technology that is in  
879 | the development stage now that was not available in the early  
880 | '90s when this program was initiated. So the demonstration of  
881 | that technology, which will lead to higher efficiency and  
882 | lower pollution from coal plants is what the attempt of the  
883 | new Clean Coal Program would be.

884 |       Mr. COSTELLO. On page 5 of your testimony, Mr.,  
885 | Kripowicz, you indicate the cost benefits of clean coal

886 | technology. And I guess I have two questions. One, you say  
887 | that the American people pay over 200 billion a year for  
888 | electricity and you attribute the low cost of electricity to,  
889 | in fact, coal in the Clean Coal Technology Programs. In fact,  
890 | you say the lower cost clean coal technologies that have  
891 | become available in the '90s are one reason why the Nation's  
892 | utilities could meet new environmental standards without  
893 | imposing harsh price hikes on rate payers.

894 | I wonder if you might rest two issues here. One is, what  
895 | initiatives are we currently working on as far as clean coal  
896 | technology? And, number two, as Ms. Abend has suggested, we  
897 | know that over 50 percent of the electricity generation today  
898 | through power plants is--that are coal-powered plants. And I  
899 | am wondering if we stopped the use of coal tomorrow, one, do  
900 | we have something to replace it with, and, number two, what  
901 | would happen to the rate payers?

902 | Mr. KRIPOWICZ. Well, to answer the second question first,  
903 | it is apparent currently that with the large amount of  
904 | construction of natural gas-fired power plants, which are, I  
905 | will admit, somewhat cleaner than coal plants are currently,  
906 | we have run into a problem of natural gas supply. If you  
907 | remove the 50 percent of electricity that is generated from  
908 | coal, there would not be any substitute on an immediate basis  
909 | for that. So it wouldn't be a question of a rate <sup>hike</sup>~~hike~~ it  
910 | would be a question of not having enough electricity,

911 | particularly in the short term.

912 |         In the long run you need a balance. It is clear that the  
913 | utility industry is still going to build a lot of natural gas  
914 | plants. As much as they can get a cheap natural gas-fired  
915 | facility, they will go to that rather than building a  
916 | slightly more expensive coal plant--for two reasons. One,  
917 | because of the economics, and, two, because it is easier to  
918 | meet the environmental requirements.

919 |         But in addition to coal and natural gas, you also have to  
920 | look to nuclear and renewables and hydro and other things in  
921 | order to meet the overall electricity requirements of the  
922 | country. You need a balance--not just clean coal, not just  
923 | natural gas. You need to do all those things.

924 |         Mr. COSTELLO. And--

925 |         Mr. KRIPOWICZ. I would also say you need to--in reference  
926 | to some of the testimony, you do need to increase efficiency  
927 | ~~in the Administration~~ And their National Energy Policy has  
928 | quite a few initiatives in that area.

929 |         Mr. COSTELLO. And the last question--what initiative are  
930 | you currently working on that will improve the current clean  
931 | coal technologies?

932 |         Mr. KRIPOWICZ. Our largest research and development  
933 | initiative right now is what we call Vision 21, which is a  
934 | flexible coal-fired power plant, which would, in the future,  
935 | double the efficiency of coal plants and decrease the

936 | emissions of pollutants to well below the new source  
937 | performance standards there are now. In addition, we are  
938 | developing carbon sequestration technology and coal-burning  
939 | technologies that would be compatible with that so that, in  
940 | addition to reducing CO2 emissions by increasing efficiency,  
941 | we would also be able to capture the remaining CO2 at  
942 | reasonable costs.

943 |       Mr. COSTELLO. Mr. Chairman, I have other questions, but I  
944 | see I am out of time. So hopefully we will have another round  
945 | or two. Thank you.

946 |       Chairman BARTLETT. We will, indeed. Thank you very much.  
947 | We will recognize witnesses who were here at gavel fall in  
948 | the order of their seniority. For those who appeared after  
949 | gavel fall, in the order of their appearance at the  
950 | Committee. So, Mr. Smith, you are recognized.

951 |       Mr. SMITH. Mr. Chairman, thank you very much. You know, I  
952 | am sorry I missed some of it. In the clean coal technology,  
953 | if we were to be more aggressive with our research funding  
954 | and our efforts, is it--could you foresee an effort where we  
955 | could reduce 95 to 98 percent of the pollutants and cut in  
956 | half the CO2 discharge? What are the possibilities  
957 | technologically if we were to put our shoulder to the  
958 | research wheel?

959 |       Mr. KRIPOWICZ. Mr. Smith, those are exactly the kind of  
960 | targets that we have--~~is~~ to reduce the pollution by 95 to 98



961 | percent and also to double the efficiency of coal-fired power  
962 | plants. The time frame in which that can be done, it depends  
963 | a lot on the existing coal-fired fleet. You just can't ~~you~~  
964 | ~~can't~~ economically replace that fleet all at one time, so it  
965 | will be done over a considerable period of time. But by the  
966 | year 2010 or 2015, we should be well on our way to replacing  
967 | a lot of that capacity with much higher efficiency  
968 | technology and lower polluting technology.

969 | Mr. SMITH. Mr. Mead, any other comments?

970 | Mr. MEAD. Yeah. I think it is a goal that science can  
971 | achieve. And research and further development in a variety of  
972 | energy sources is critical for this country. But the  
973 | investment in increasing the efficiency and the cleanliness  
974 | of coal, I think, is crucial because we are using so much  
975 | coal today and are likely to continue to for some time. The  
976 | reduction of greenhouse gases, such as carbon dioxide, that  
977 | is one of the great issues in terms of technology today and  
978 | energy. But advances are being made. There are now concepts  
979 | out there that are past the point of just being discussed.  
980 | They are not being looked at in the laboratory. That is a  
981 | very good sign. The development of energy processes is a slow  
982 | task because of the size of the power plants. But I think  
983 | with government help we can accelerate that effort.

984 | Mr. SMITH. The Chairman said earlier--Mr. Yamagata, did  
985 | you have a comment?

986 Mr. YAMAGATA. Thank you, Mr. Smith. Yes. In my testimony,  
987 I referenced a number to answer your shoulder-to-the-wheel  
988 question, of about \$10 billion over the next 20 years, which  
989 is, at least in our estimation, a cost-share arrangement  
990 between the public sector and the private sector. And that  
991 kind of an aggressive program, that is time and money, over  
992 that period of time, will, we think, achieve the kind of  
993 performance criteria that you outlined, that is, cost  
994 -competitive, certainly exceeding the emission requirements  
995 and regulations that we have today and into the future, and  
996 also addressing issues like CO2 emissions.

997 Mr. SMITH. And would this--then does it become less  
998 relevant whether it is high sulfur coal or whether it is the  
999 cleaner, lower-sulfur coal? I mean, will the technology be so  
1000 that it doesn't make that difference--really much difference  
1001 on what coal you use?

1002 Mr. YAMAGATA. That is correct. It is nondiscriminatory to  
1003 the type of coal that you use.

1004 Mr. SMITH. In terms of our--the other areas becoming less  
1005 dependent, the Chairman said earlier that it is a national  
1006 security issue being--having this kind of dependency,  
1007 especially on the OPEC suppliers for our petroleum energy.  
1008 Are we looking--and I am trying to see whom ought to answer  
1009 this question--it might be the next Panel. Are we  
1010 aggressively looking at developing the kind of infrastructure

1011 | and laws in some of the other areas of the world in terms of  
1012 | importing some of our petroleum energy from those other  
1013 | countries rather than from the OPEC countries? Does anybody  
1014 | know that answer? Mr. Chairman, you probably know that  
1015 | answer.

1016 |       Mr. KRIPOWICZ. Yes, sir. The Department of Energy, over  
1017 | the years, has worked a lot with countries outside of OPEC  
1018 | and is working very hard, for instance, with countries in  
1019 | this hemisphere also, Canada and Mexico, in particular, to  
1020 | develop their sources of oil so that we won't be entirely  
1021 | dependent on OPEC. There is no question that we need to  
1022 | develop diverse sources of oil in the world as well as our  
1023 | own resources.

1024 |       Mr. SMITH. Do we--do I understand we have the technology  
1025 | now and it is simply making it more cost effective in  
1026 | utilizing that technology, or is it developing new  
1027 | technology? And I see my time has expired.

1028 |       Mr. KRIPOWICZ. Mr. Smith, I think it is a combination of  
1029 | both. Some of it needs to be made more economic, but I am  
1030 | willing to bet that we will find new technologies, as we go  
1031 | along, that we don't have in place right now.

1032 |       Mr. SMITH. Thank you for the opportunity, Mr. Chairman.

1033 |       Chairman BARTLETT. Thank you. Ms. Biggert.

1034 |       Ms. BIGGERT. Thank you, Mr. Chairman. Ms. Abend--is that  
1035 | right--Abend?

1036 Ms. ABEND. Yes. Abend.

1037 Ms. BIGGERT. All right. Thank you. It seems that we are  
1038 in a technological revolution in most everything in our lives  
1039 and yet we are still in the dark ages as far as some our  
1040 technology for energy is and we have spent nothing really in  
1041 the last 10 years probably with the energy policy. Does PIRG  
1042 see a way to continue our economic and technology expansion  
1043 and continue to improve our standard of living and provide  
1044 for an increased population without gaining access to  
1045 additional fossil fuel supplies?

1046 Ms. ABEND. I think what we need to focus on right now is  
1047 finding a smarter, cleaner energy future. We can meet 60  
1048 percent of our Nation's future energy needs through energy  
1049 efficiency and renewable energy by 2020. Forty-eight percent  
1050 of the 1,300 plants that President Bush proposes for his  
1051 energy plan are already under construction. So I think that  
1052 we do have adequate options for meeting our future energy  
1053 needs.

1054 Ms. BIGGERT. But--well, you talked about like 100 square  
1055 miles of solar power would produce how much--

1056 Ms. ABEND. Would produce as much energy as the United  
1057 States used--uses annually.

1058 Ms. BIGGERT. Why--if that was possible, why wouldn't be  
1059 doing that now? You know, I have driven by those windmills in  
1060 Palm Springs and they seem to be going like mad, but that is

1061 a huge area that only powers such a small part of California.

1062 Ms. ABEND. Right. Well, these programs don't receive  
1063 sufficient funding. And compared with the funding that fossil  
1064 fuel programs receive, they are not on a level playing field.  
1065 The Bush Administration cut funding for renewables by nearly  
1066 50 percent from 376 million to 186 million in its budget  
1067 proposal. That is why we strongly support DOE's energy  
1068 programs, but we encourage these programs to be expanded.

1069 - Ms. BIGGERT. But--

1070 Ms. ABEND. And DOE should increase funding for those to  
1071 \$750 million a year.

1072 Ms. ABEND. And how long would that take to develop such a  
1073 plan? And we--only 2 percent of our energy is--

1074 Ms. ABEND. Well, the technology is already available. For  
1075 example, wind power is already competitive with fossil fuel  
1076 in some situations. Other countries are way ahead of this on  
1077 this, and we should be the leaders of this technology. For  
1078 example, Denmark, very soon is going to be having 50 percent  
1079 of its power coming from wind. So these aren't things that  
1080 need to be so far off in the future if we increase funding  
1081 for these programs.

1082 Ms. BIGGERT. Well, I think we really need to look at  
1083 renewables, but, you know, the size of Denmark compared to  
1084 the size of the United States in trying--I don't know, coming  
1085 from Chicago, where we didn't--

1086 Ms. ABEND. Right.

1087 Ms. BIGGERT. --see the sun for at least 3 weeks in a row.

1088 How do you--

1089 Ms. ABEND. Right. Well--

1090 Ms. BIGGERT. How do you store that power?

1091 Ms. ABEND. --6 percent would be--yeah, 6 percent of the

1092 continuous United States land area could actually produce

1093 1-1/3 the amount of electricity that the United States used

1094 in 1999. So it is just really a matter of focusing on these

1095 programs.

1096 Ms. BIGGERT. Mr. Mead, in your presentation, you talked

1097 about Governor Ryan's initiative and what is going on. How

1098 can--can you suggest ways in which the state programs and

1099 federal programs can increase their coordination and

1100 collaboration? Do you think there is enough of that right now

1101 or are there impediments in the federal program to really

1102 provide the benefit and usefulness to the--to Illinois and

1103 other states?

1104 Mr. MEAD. There has been a lot off cooperation and

1105 collaboration over the years, as I address in my testimony.

1106 One of the factors that I think would be very useful is that

1107 both programs operate often on a competitive selection basis

1108 and independently. And so that a project selected through

1109 review by a federal agency may be different than one that is

1110 chosen at a state level. There could be, perhaps, greater

1111 examination of the common issues and needs in a region where  
1112 projects that would have particular value for Illinois or the  
1113 Midwest could be factored into the federal program.

1114 In addition, I want to emphasize again the critical need  
1115 for advanced research and development on issues that we do  
1116 not face today with our current regulation, but issues that  
1117 we expect to face in the future. The overall reduction of all  
1118 emissions is going to be crucial for the life of the coal  
1119 industry, such as Illinois. We have experienced this with the  
1120 sulfur issue. Now, we look ahead and see other issues for the  
1121 future.

1122 This is where, I believe, the Federal Government can  
1123 really dovetail with state economic development efforts and  
1124 nearer-term state efforts.

1125 Ms. BIGGERT. Thank you. Thank you, Mr. Chairman.

1126 Chairman BARTLETT. Thank you very much. Ms. Hart.

1127 Ms. HART. Thank you, Mr. Chairman. I am glad to see a  
1128 hearing being held on this issue. I--and I am sure a lot of  
1129 other members represent some very interesting technology  
1130 organizations. And I have a company in my district, actually,  
1131 called Export Tact that some of you may be familiar with. It  
1132 is developing and continuing to research advanced form of  
1133 clean coal technology--one that cleans the coal removing  
1134 mineral impurities using magnets resulting in a coal waste  
1135 that can be returned to the environment without being

1136 | hazardous and also, obviously, a cleaner burning coal.

1137 |       I know that there is a lot of other technologies out  
1138 | there and I am glad to see them. I think it has been a long  
1139 | time in coming and I am also pleased to see some of the  
1140 | progress, you know, made by organizations within the  
1141 | government and some of the research.

1142 |       I think I have a general question, basically, for the  
1143 | Panel. As far as, you know, we are focused on the first Panel  
1144 | pretty much on clean coal technology, but I am interested in  
1145 | a general question of future resources to--future sources of  
1146 | energy, future sources of energy, especially electricity. And  
1147 | as we look to the future, unfortunately, I think, we have  
1148 | taken a turn toward using natural gas for electricity. And I  
1149 | would like your opinion on that as a direction. I would like  
1150 | to know if you think we made a wrong turn and if you think  
1151 | that we have to turn more heavily toward coal from natural  
1152 | gas.

1153 |       Mr. KRIPOWICZ. I think the industry turned to natural gas  
1154 | because it was the cheapest available alternative and the  
1155 | industry will go to the most economic thing that they can do.  
1156 | And the problem with exclusively burning natural gas, of  
1157 | course, is that ~~there~~ you run into supply problems. At least  
1158 | you do on any foreseeable basis that we can imagine. There is  
1159 | a very large supply of natural gas in the country, but  
1160 | demand, even with reasonable expansion of the electricity



1161 market, is supposed to go up by 60 percent by the year 2020.  
1162 So there is a tremendous demand on natural gas, mainly from  
1163 the utility business. And at that, natural gas would still  
1164 only be about 25 percent of the installed utility capacity.  
1165 So you need to continue to look at the other resources and  
1166 coal is one of those.

1167 Now, I would be the first to say that what we don't want  
1168 to do is put in coal plants that are just like the ones that  
1169 have been in existence for the past 25 years. We want to  
1170 build cleaner, more efficient, coal plants, that have much  
1171 less environmental impact. I think we also need to look at  
1172 the nuclear option to see whether we can extend the existing  
1173 nuclear plant life and increase the efficiency of those  
1174 plants over a period of time.

1175 And we also have to look at renewables. Not just hydro,  
1176 but solar, as other Panel members have said, because in  
1177 certain circumstances, those kinds of technology will be  
1178 economic. But I believe we need to look at all of those  
1179 things.

1180 Mr. YAMAGATA. Ms. Hart, if I may just add to that? Let me  
1181 quote to you a quote from William Wise, the Chairman and CEO  
1182 of the El Paso Corporation, which happens to be the world's  
1183 largest natural gas pipeline company. He says--I quote in the  
1184 Utility Spotlight of March 5, 2001--''Conventional sources of  
1185 natural gas in North America won't be able to produce enough

1186 deliverability to meet the kind of demands that power  
1187 generation is going to drive." And I think the point that  
1188 you made is absolutely right on.

1189 I want to second what Mr. Kripowicz has said, and that  
1190 is, it seems to me we need to be looking at and trying to  
1191 develop all of our energy resources, as well as all of our  
1192 energy efficiency and energy conservation and renewal  
1193 endeavors that we have in mind. Frankly, we need them all.

1194 - One of the issues that has not yet been made in this  
1195 Panel discussion is, with respect to coal and with deference  
1196 to my other Panel colleagues here is, we are not just going  
1197 to use coal in the United States where we have a 250-year  
1198 supply and it supplies 51 percent of the current electrical  
1199 base in this country. We are going to use it around the  
1200 world. We are going to use it in China and India and other  
1201 places like that. And the promise of better, cleaner coal  
1202 technologies is something that we ought to be aware of. It is  
1203 a technology transfer and an export opportunity for this  
1204 country, but it is also something that is the resource  
1205 itself, that is going to be used around the world. And we,  
1206 perhaps, as stewards of the planet, have an obligation, it  
1207 seems to me, to try and make that use as clean as possible.

1208 Ms. HART. Go ahead, Mr. Wells.

1209 Mr. WELLS. In terms of your resource question, whether it  
1210 is \$2 billion or the current proposal of the 10 or \$20

1211 billion, the niche in the market for GAO would be to look at  
1212 whether these resources are spent effectively and efficiently  
1213 and we are getting the biggest bang for the buck. I would  
1214 agree with my panelists that history has shown us that you  
1215 need a balance of energy sources, and much of what we have  
1216 seen in the natural gas market right now would be the demand  
1217 far exceeded the supply and it was driven by some policy  
1218 considerations that put the market in and up and down  
1219 situation. So future deliberations on energy sources should  
1220 include a balance from all sources, including coal.

1221 Ms. HART. Thank you. I see my time is up, Mr. Chairman.

1222 Chairman BARTLETT. Thank you very much. And now, our Full  
1223 Committee Chair, Mr. Boehlert.

1224 Mr. BOEHLERT. Thank you very much, Mr. Chairman. Ms.  
1225 Abend, I agree with much of what you say and it probably will  
1226 come as no surprise to anyone in this room, given where I  
1227 come from, acid rain entered the Nation's vocabulary as a  
1228 result of the havoc being wrecked on the beautiful  
1229 Adirondacks in my neighborhood. And I certainly agree with  
1230 your comments on global climate change. It is for real. It is  
1231 not some vast left wing conspiracy. And I also agree with  
1232 your commentary about the need for a greater investment, not  
1233 lesser investment, in renewable energy sources and energy  
1234 efficiency. And I am trying my darnedest to convince the  
1235 administration that they should take a different path in some

1236 | of these areas as they address the energy problem we face in  
1237 | America.

1238 |       But some of what you say gives me pause. You summarily  
1239 | dismiss clean coal technology almost out of hand. I don't  
1240 | think that is the right thing to do. I have been supportive  
1241 | in the past. I have been skeptical. I am still supportive. I  
1242 | am still skeptical. I would like to think that this Committee  
1243 | would authorize programs where we have guaranteed success all  
1244 | the time. That is not the nature of research and development.  
1245 | We have to venture forward and with the best hopes and  
1246 | expectations.

1247 |       And as I look over some of the testimony, I--and I refer  
1248 | specifically to Professor Mead. And one part of his testimony  
1249 | says, the eventual application of ultra clean systems will  
1250 | hold tremendous value to a Nation whose greatest fossil  
1251 | energy resource is coal. We can't escape the fact that coal  
1252 | now provides more than 50 percent of our  
1253 | electricity-generating capacity in America, nor should we  
1254 | ignore the potential for wind energy and solar energy and  
1255 | hydro energy and biomass.

1256 |       I think what we have to do is come up with a balanced  
1257 | program, and I am trying very, very hard to convince the  
1258 | Administration of that. I think the initial proposal advanced  
1259 | by the Administration focused almost exclusively on supply.  
1260 | We can't drill our way out of this problem, but we can't

1261 | conserve our way out of the problem. We need balance. And I  
1262 | am also mindful of the statement made by Mr. Wells as he  
1263 | looked at the Clean Coal Technology Program. And, among other  
1264 | things, he pointed out there have been successes and there  
1265 | have been failures, and some of those failures have been  
1266 | costly. But I would suggest that the investment, if very  
1267 | carefully monitored, can offer us what Mr. Mead wants and  
1268 | what we all want.

1269 |     And, as Mr. Wells said in his testimony, this program  
1270 | serves as an example to other cost share programs in  
1271 | demonstrating how the government and the private sector can  
1272 | work effectively together to develop and demonstrate new  
1273 | technologies. That if my hope for this program.

1274 |     You said there is no such thing as clean coal, and I  
1275 | would essentially agree. But there is such a thing as much  
1276 | cleaner coal, much lower emissions. And that is what I am  
1277 | driving at. I have the definitive bill in this session of  
1278 | Congress to deal not just with nitrogen oxide and sulfur  
1279 | dioxide, but also with mercury and CO<sub>2</sub>, which is for real.  
1280 | And the President has now acknowledged that CO<sub>2</sub> is for real.  
1281 | Those are the words I would like to see some deeds follow.  
1282 | And I think working constructively with the Administration,  
1283 | we will see them.

1284 |     But I guess in this long commentary, I would just urge  
1285 | you and your associates in PIRG, not to summarily just

1286 | dismiss something that has potential of doing the right thing  
1287 | for all the right reasons, but try to work with us to develop  
1288 | a program that is responsive to our needs, that is  
1289 | cost-effective, and moves us in the direction, I think, you  
1290 | and I would agree we should move on.

1291 |         With that, let me just ask you if you--if there is any  
1292 | hope that we can convert you to have sort of a glimmer of  
1293 | hope that maybe, maybe, we could get something positive out  
1294 | of the Clean Coal Technology Program, given the proposition  
1295 | that I agree with you, more investments needed in renewable  
1296 | energy sources, more investments needed in energy efficiency.  
1297 | We have to forthrightly address CO2. There are a lot of  
1298 | things we have to do and so there is a lot of area of  
1299 | agreement. But I will give you the opportunity now.

1300 |         Ms. ABEND. Well, first of all, I would like to say that  
1301 | we strongly support your Clean Smokestacks Act of 2001 and,  
1302 | you know, that would reduce NOx and SOx, or smog and soot  
1303 | emissions, by 75 percent and mercury emissions by 90 percent  
1304 | and global warming pollution or CO2 pollution to 1990 levels.  
1305 | And I think the key there is that it imposes strong standards  
1306 | that will need to be met. The truth is, that burning coal  
1307 | will always produce pollution, especially carbon pollution,  
1308 | which causes global warming. Burning coal accounts for about  
1309 | 1/3 of global warming pollution, and we feel that the Federal  
1310 | Government should not be using taxpayer dollars to encourage

1311 | its use.

1312 |       Now, obviously, as you said, we would rather have cleaner  
1313 | coal than dirtier coal. But we believe that polluters, not  
1314 | the public, should pay for cleaning up pollution. That is why  
1315 | we--

1316 |       Mr. BOEHLERT. Let me reclaim my time, if I may, because  
1317 | you got a nice prepared statement and I appreciate that. But  
1318 | I would agree with you that coal is a problem right now and  
1319 | your figures are probably very accurate. I haven't verified  
1320 | them, although I have trust--the 1/3 figure you used. But I  
1321 | don't like that. You shouldn't like it either. I don't accept  
1322 | that. You shouldn't either. And that is why we are talking in  
1323 | terms of investing important and scarce taxpayer dollars in  
1324 | the research and development that is going to lead us to a  
1325 | better day. And I would just hope that you would give some  
1326 | consideration to the possible--to the potential for this  
1327 | program if we do it the way we should do it.

1328 |       And I want to thank you very much for your commitment.  
1329 | And I want to thank all the witnesses because you are stars  
1330 | here. You are resources for the Committee and we really  
1331 | appreciate it. In fairness, since I am calling for a balanced  
1332 | policy, Mr. Yamagata, maybe I ought to give you some time to  
1333 | comment on my little discourse here.

1334 |       Mr. YAMAGATA. Mr. Chairman, thank you very much. I will  
1335 | just take a second of the Committee's time and note, if I

1336 | may, that in the vein of the line of reasoning that you have  
1337 | so eloquently developed, it seems to me that our goal here  
1338 | ought to be to take issues about environmental concerns out  
1339 | of the question about whether or not we can and should use  
1340 | coal. And we need to do that, I think, by making a commitment  
1341 | to the development of those technologies that I believe both  
1342 | the government and industry believes is within the realm of  
1343 | the possible. It will take time. It will take a financial  
1344 | commitment. We have a history of having made real progress,  
1345 | really, since the 1970s in terms of emission reductions from  
1346 | the use of coal. It seems to me that is a better set of  
1347 | metrics from which to judge than one which simply says we  
1348 | shouldn't use it at all.

1349 |         Mr. BOEHLERT. Thank you very much. Mr. Chairman, thank  
1350 | you for your indulgence.

1351 |         Chairman BARTLETT. Thank you very much. Mr. Wu has joined  
1352 | us. Mr. Wu.

1353 |         Mr. WU. Thank you very much, Mr. Chairman. In some  
1354 | respects, I am catching up a little bit to testimony which  
1355 | has been given earlier. But I would like the Panel to clarify  
1356 | for me that if we are not focused on clean coal or other  
1357 | clean technologies--let us just focus on clean coal. What  
1358 | would be the CO2 impact of alternative technologies to the  
1359 | coal technology that we are talking about?

1360 |         Ms. ABEND. Obviously, there are a lot of renewable energy



1361 sources that don't produce any CO2. We talked about wind  
1362 technology, solar technology. And then I would just also like  
1363 to stress that another alternative is just to improve  
1364 efficiency. Like I said, we can meet 60 percent of our future  
1365 energy needs by improving efficiency. One example of a way  
1366 that we can do that is to improve auto fuel efficiency  
1367 standards. If we increase those to 40 miles per gallon, we  
1368 would save 15 times the oil in the Arctic National Wildlife  
1369 Refuge. So there are a lot of viable solutions out there that  
1370 don't produce any carbon dioxide, and we really need to focus  
1371 on putting as much energy as we can into those solutions.

1372 Mr. WU. Let us come back to that in a second. Mr.  
1373 Kripowicz.

1374 Mr. KRIPOWICZ. Mr. Wu, one of the things about the clean  
1375 coal technologies that we are developing is that we--in the  
1376 long term, we expect them to be almost double the efficiency  
1377 of existing power generation technologies. So we would be  
1378 talking about reducing CO2 emissions just with that  
1379 technology itself by around 50 percent. In addition, the  
1380 Department is working to develop economic methods of  
1381 sequestering carbon from the air. And if we can do that on an  
1382 economic basis, then we could essentially have zero carbon  
1383 emissions coal technology as well as other technology.

1384 If we can get indirect sources of--indirect ways of  
1385 capturing CO2, we could actually help reduce the emissions

1386 | from other sectors of the economy than electricity also. It  
1387 | doesn't have to be coal related. It is any kind of carbon. So  
1388 | you could also affect the CO2 emissions of the transportation  
1389 | industry, for example.

1390 |       Mr. YAMAGATA. Mr. Wu, if I may, a rule of thumb, if you  
1391 | will, with respect to increased efficiency of coal plants,  
1392 | for each percentage increase in efficiency, say, going from a  
1393 | 30-percent conversion--I take a lump of coal and I get 30  
1394 | percent of its useful energy out of that coal if I produce  
1395 | electricity, which is kind of today's technology. But if I  
1396 | could produce 60 percent out of that lump of coal, I also, at  
1397 | the same time, reduce on a percentage-basis the amount of CO2  
1398 | that I would emit in the reverse order, just as a point of  
1399 | reference.

1400 |       The second point, to get back to the question you  
1401 | originally raised, that nuclear energy is--has no CO2  
1402 | emissions, just as a point of reference.

1403 |       Mr. WU. Would you care to discuss any other benchmark  
1404 | technologies other than nuclear?

1405 |       Mr. YAMAGATA. I think you can look across the board at  
1406 | hydro. You know, there--the point here is that all of these  
1407 | resources that we are blessed with have their own  
1408 | constraints, whether it is nuclear or hydro or renewables,  
1409 | frankly. One of the large problems with our wind energy,  
1410 | which happens to be economic today, and we support it, is

1411 | just the siting of wind systems, which you may well be  
1412 | familiar with. But they all have their problems.

1413 |         Mr. BOEHLERT. I have got some locations in upstate New  
1414 | York for you, if you would like.

1415 |         Mr. YAMAGATA. I know you do, Mr. Chairman.

1416 |         Mr. WU. While we prize our hydro systems in the Pacific  
1417 | Northwest, we have become acutely aware of some of the  
1418 | downsides of renewables, whether it is wind or hydro or other  
1419 | sources. I guess leaving that fertile terrain behind for the  
1420 | moment, perhaps some of you could address the topic of  
1421 | burning, as you say, a lump of coal, and getting 30 percent  
1422 | energy--useful energy out and, I believe, primarily using  
1423 | that for electricity generation versus piping fuel directly  
1424 | to the site where the electricity would otherwise be used and  
1425 | the relative efficiency of those two different systems.

1426 |         Mr. KRIPOWICZ. ~~I--with~~ distributed energy systems, which  
1427 | I think is what you are referring to, in most cases, the fuel  
1428 | you have to use is natural gas. You know, if you pump the  
1429 | fuel directly to a small electric generator, the fuel you  
1430 | have to use is natural gas. And the question then becomes how  
1431 | much natural gas do you have available. I would also point  
1432 | out that you can gasify coal and you can also use that to run  
1433 | fuel cells and other kinds of distributed generation also. So  
1434 | ~~I mean, you know and there are~~ there is a plant that has  
1435 | been in existence for a long time in the United States in

1436 North Dakota that produces pipeline quality gas that can do  
1437 the same thing from coal.

1438 Mr. MEAD. I think another factor is that coal is also a  
1439 good source of other products, chemicals, carbon-based  
1440 materials. So power generation with a co-production of other  
1441 materials, is another way of gaining efficiency. And in some  
1442 sense, co-generation is another type of distributed power  
1443 generation. So coal, as our most plentiful source of  
1444 carbon-based products, is a very important resource beyond  
1445 energy. And the combination of energy and other products can  
1446 really raise the efficiency of the overall system.

1447 Mr. WU. Mr. Chairman, thank you very much for recognizing  
1448 me. I think in what feels to me like record time, but I see  
1449 very quickly we are in the red-light zone already. Thank you  
1450 very much. Thank you to the Panel.

1451 Chairman BARTLETT. Thank you very much. Mr. Kripowicz,  
1452 did I hear correctly that new techniques in Southern  
1453 California enabled them to find a million barrels of more  
1454 oil? Was that the correct number?

1455 Mr. KRIPOWICZ. Yes, sir. They had actually produced over  
1456 the life of the field only about a million barrels. And--

1457 Chairman BARTLETT. Now, they produced a million more. I  
1458 just wanted to put that--

1459 Mr. KRIPOWICZ. And then they produced in this 3 or 4-year  
1460 period an additional million barrels. So the technique not

1461 | only allowed them to go back--

1462 | Chairman BARTLETT. Yeah.

1463 | Mr. KRIPOWICZ. --to the kind of production levels they  
1464 | had before, but actually to exceed those levels.

1465 | Chairman BARTLETT. That is a lot of oil. But I just  
1466 | wanted to put that in perspective. That is about 1/20 of one  
1467 | day's use of oil in this country. Ms. Abend, recently I met  
1468 | with the Vice President. I reminded him that this President  
1469 | is my President, of whom I am very fond, by the way. And I  
1470 | didn't want him to look dumb. And I asked the Vice President  
1471 | to explain to me why cutting the energy budget, when we face  
1472 | a potential energy crisis, particularly the budget for  
1473 | renewables, wasn't dumb? And the Vice President asked OMB to  
1474 | come to my office to brief me. And they came to my office and  
1475 | pointed out that although they had cut a lot of R&D from the  
1476 | renewables budget, that they had also put, in another part of  
1477 | their budget, some tax credits--almost a dollar-for-dollar  
1478 | offset tax credits for using renewables. Does this help?

1479 | Ms. ABEND. Obviously, tax credits can be an important  
1480 | tool in forwarding renewable energy and energy efficiency. I  
1481 | think that tax credits need to be accompanied by standards  
1482 | and goals. For example, for renewable energy, we suggest a  
1483 | goal of having 20 percent renewable energy by the year 2020.  
1484 | Simply by, you know, having tax credits doesn't ensure that  
1485 | we are going to get there. We also need to have sufficient

1486 | funding for these programs for the research and development  
1487 | of these programs.

1488 |         In terms of energy efficiency, tax credits can be  
1489 | dangerous if they are not accompanied with actual standards  
1490 | for improving energy efficiency. For example, again, with  
1491 | automobiles, if you have tax credits without actually  
1492 | improving standards for auto fuel efficiency, then you can  
1493 | just have, at the other end of the spectrum, the industry is  
1494 | able to produce more polluting vehicles. So it is important  
1495 | to accompany these tax credits with improved standards.

1496 |         Chairman BARTLETT. I am a big fan of renewables. I am  
1497 | also a big fan of efficiency. I was just told this morning  
1498 | that California has now reduced its electric consumption by  
1499 | 11 percent. Efficiency and conservation does work, doesn't  
1500 | it, if they have reduced their consumption by 11 percent.

1501 |         I also agree with you on the CAFE standards. I was the  
1502 | first person in Maryland and the first member of Congress to  
1503 | purchase a Prius hybrid electric car. We have now driven it  
1504 | over 16,000 miles. There is no reason that most of the cars  
1505 | on the road shouldn't be this technology. Our auto  
1506 | manufacturers in this country have them on their drawing  
1507 | boards. They need to be in their showrooms. This car performs  
1508 | as well as any other car that we have owned and it pollutes  
1509 | as little as 1/10 as much as competing models. And for the  
1510 | last more than 500 miles, we have averaged 50 miles per

1511 | gallon on the car--now, the EPA mileage. If you don't pay any  
1512 | attention to how you drive, you will get 45. But it has a  
1513 | computer screen there that kind of coaches you to do  
1514 | efficient things in driving. If you do that, it is not very  
1515 | difficult at all to get 50 miles per gallon.

1516 |       I was disappointed they didn't export to us the model  
1517 | they built in Japan with a 1 liter engine. Ours has a  
1518 | liter-and-a-half engine. I guess we like muscle cars and--but  
1519 | I was disappointed they didn't export here the car that they  
1520 | market in Japan. It would have gotten about 60 miles per  
1521 | gallon. And I would note that safety is all very relative.  
1522 | There is no car on the road--there is no SUV that performs  
1523 | much better than the smallest car when they have a  
1524 | head-to-head confrontation with a tractor trailer. So it is  
1525 | all very relative. Isn't it? And the big SUV owner who now  
1526 | claims that he is safer--if all the cars were smaller, they  
1527 | would all have equal safety. And none of us are really all  
1528 | that safe if we are going to run into a big tractor trailer  
1529 | car.

1530 |       Ms. Abend, I noted your remarks about coal and its cost  
1531 | in terms of illness, its cost in terms of the environment. It  
1532 | is not free, you know. It produces the lowest cost to  
1533 | electricity. And that is a very compelling argument, don't  
1534 | you think, as to why we shouldn't go to nuclear?

1535 |       Ms. ABEND. Well, coal actually has not produced a profit

1536 | for the DOE. It has--the DOE has recouped only a small  
1537 | portion of taxpayers' money devoted to the program. A 1996  
1538 | audit of DOE found that there was a potential loss of \$133  
1539 | million out of \$151 million investment in six clean coal  
1540 | technology programs. So obviously, the money isn't really  
1541 | being spent in the most efficient way that we possibly could.  
1542 | And the point here is that we feel that the coal industry  
1543 | should be paying for its own research to reduce emissions.  
1544 | - Chairman BARTLETT. That is another question. In another  
1545 | round, I will ask you that question--

1546 | Ms. ABEND. Uh-huh.

1547 | Chairman BARTLETT. --because Mr. Wells is the only, I  
1548 | think, relatively nonbiased person on the Panel today. So I  
1549 | would like to ask him that--but my question to you was,  
1550 | doesn't your arguments about the problems of burning  
1551 | coal--aren't they very powerful arguments as to why we ought  
1552 | to use more nuclear? It doesn't have any of those negatives  
1553 | that you talked about with coal. You see, if we don't burn  
1554 | coal, we have got a big, big problem. We don't have any way  
1555 | near enough electricity since coal produces half of it. Every  
1556 | fifth home is now powered by nuclear. And the argument you  
1557 | made about the problems with coal, aren't they powerful  
1558 | arguments as to why we have got to look harder at nuclear?

1559 | Ms. ABEND. Nuclear energy is unsafe. It is expensive.

1560 | And, in the past, it hasn't been successful. It has required



1561 a huge amount of taxpayer bailouts. And so I just feel like  
1562 that is--PIRG feels that that is not the solution to our  
1563 energy problems. Obviously, energy efficiency is the  
1564 quickest, cheapest, and cleanest way to save consumers money  
1565 on energy bills to reduce pollution and also to help prevent  
1566 rolling blackouts.

1567 Chairman BARTLETT. Well, I am with you a hundred percent  
1568 on conservation and efficiency. And we will get back in  
1569 another round, but my time is now up. And let me turn again  
1570 to Mr. Costello.

1571 Mr. COSTELLO. Mr. Chairman, I really have no further  
1572 questions. I had a couple of other questions, but they have  
1573 already been asked by other members. I would just like to  
1574 thank all of our witnesses for being here and to give them an  
1575 opportunity, at this time, if they would like to respond  
1576 to--or to add to any question that has been asked, starting  
1577 with Mr. Kripowicz. Anything you want to add at this point?

1578 Mr. KRIPOWICZ. Only one thing, Mr. Costello. And that is,  
1579 that on balance--and even GAO agrees that on balance, I think  
1580 that ~~the clean~~ the original clean coal program was a model  
1581 effort with industry to produce clean technology. And we  
1582 would hope to avoid some of the mistakes and problems that we  
1583 had in<sub>2</sub> to some extent, in the original program, whenever we  
1584 go through the second clean coal technology initiative that  
1585 the President has recommended. And we think we have the

1586 knowledge to be able to do that and to work with industry to  
1587 produce clean technology--cleaner and more efficient  
1588 technology than is available today for the country. Thank  
1589 you.

1590 Mr. COSTELLO. Mr. Yamagata.

1591 Mr. YAMAGATA. Thank you, Mr. Costello. Just an  
1592 observation that 2 percent of the 600,000 megawatts of  
1593 currently installed electrical generation in this country  
1594 comes from renewable energy; 51 percent comes from coal. We  
1595 would be ecstatic if 20 percent of the 3 or 400,000 of  
1596 additional capacity that the President has estimated could  
1597 come from renewable energy and we endorse that if that can  
1598 happen. But I think we need to be realistic.

1599 Mr. COSTELLO. Mr. Wells.

1600 Mr. WELLS. Not often as a GAO witness I get to talk about  
1601 something that is really working well and done good. But for  
1602 the Clean Coal Technology Program we did commend DOE and we  
1603 should commend the Congress for putting together provisions  
1604 that allowed a good cost-sharing agreement. The fact that the  
1605 Congress appropriated money over a longer-term period gave  
1606 confidence to the business world that the government was  
1607 committed to supply the funding necessary for success. The  
1608 fact that DOE gave clear instructions on the roles and  
1609 responsibilities, in terms of their partnership--the fact  
1610 that DOE came to the table and didn't pay for everything, but

1611 much of the industry supported greater cost shares. And once  
1612 you learn that when industry puts more of their dollars in,  
1613 there is a likelihood or a greater chance of success. A lot  
1614 of things were done well and we think that much of that could  
1615 serve for even better cost-sharing provisions in the future.  
1616 So we commend DOE and the Congress for doing that sort of  
1617 thing.

1618 Mr. COSTELLO. Ms. Abend.

1619 Ms. ABEND. I would like to just respond to Mr. Yamagata's  
1620 comment on being realistic about alternative energies,  
1621 because I did talk a lot about Clean Coal Technology Program  
1622 being mismanaged in some ways. And I would just like to  
1623 stress that in comparison to Clean Coal Technology Program,  
1624 energy efficiency, the rate of return for those programs, has  
1625 been staggering.

1626 According to the American Council for an Energy-Efficient  
1627 Economy, the DOE recently documented that 20 of its most  
1628 successful energy efficiency projects have saved the Nation  
1629 5.5 quadrillion BTUs of energy over the past 20 years, which  
1630 is worth about \$30 billion in avoided energy costs. The cost  
1631 to taxpayers for these activities over the past decade was  
1632 \$712 million, which is less than a 3 percent of the savings,  
1633 and the savings are increasing every year. So just in terms  
1634 of the rate of return for that program, it is pretty  
1635 astounding.

1636 Mr. COSTELLO. Mr. Mead.

1637 Mr. MEAD. Well, certainly, I want to emphasize the energy  
1638 mix that we have in this country. We need to invest in all of  
1639 our resources. But coal represents the largest single source  
1640 of electric energy and it is the best source for base-load  
1641 power production. And we need investment in new technology to  
1642 see to it that we continue to have that reliable base load  
1643 for our electric economy for the coming years.

1644 Mr. COSTELLO. I thank all of the panelists and thank you,  
1645 Mr. Chairman.

1646 Chairman BARTLETT. Thank you very much. I just wanted to  
1647 make one quick observation in response to Ms. Abend's  
1648 frequent references to the efficacy of efficiency. During the  
1649 Carter years, we were using, each decade, as much energy--as  
1650 much oil as had been used in all of previous history.  
1651 Efficiency has changed that relationship so much. What that  
1652 means is, of course, that when you have used half of all the  
1653 oil in the world, you have only 10 years remaining if each  
1654 decade you have used as much as has been used in all of  
1655 previous history. We have now changed that, and it is due  
1656 primarily to efficiency.

1657 Worldwide now, we have now changed that dynamic, so that  
1658 when we have used about half of all the oil in the world--and  
1659 that is about now as we speak, by the way--or a few minutes  
1660 ago or a few minutes in the future or years in the future or

1661 | whatever--but when we reach that point, we will have about 30  
1662 | years of oil remaining in the world. And that is all due to  
1663 | efficiency. So, you know, I am a big supporter of efficiency.  
1664 | We can do--we can live just as well and just as comfortably  
1665 | and be a whole lot more efficient, and we have demonstrated  
1666 | we can do that.

1667 |       And just thinking about the problem--in California, they  
1668 | have now reduced their use by 11 percent. That is probably  
1669 | mostly conservation rather than efficiency, but I don't know  
1670 | how you tell the difference between conservation and  
1671 | efficiency. You end up using less and you either are more  
1672 | efficient in the way you use it or you just do without and  
1673 | end up using less.

1674 |       But we really need to focus on all of these aspects if we  
1675 | are going to be successful in the future. And I think that  
1676 | renewables are too little appreciated and too little  
1677 | supported, and particularly renewables from agriculture. We  
1678 | have an enormous opportunity to get more energy from  
1679 | agriculture, and I would hope that we would focus on that.

1680 |       Let me ask other members of our Committee here if they  
1681 | have additional questions to the panelists.

1682 |       Mr. SMITH. Mr. Chairman, thank you. One short question,  
1683 | maybe in terms to Ms. Abend. If--in the existing environment,  
1684 | if there was no additional tax credits, if there was no  
1685 | additional federal money, how much higher do you think energy

1686 | prices would have to be for the private sector to come in and  
1687 | build wind or solar generating--additional wind or  
1688 | solar-generating capacity?

1689 |       Ms. ABEND. I think that wind and solar technologies--it  
1690 | is a matter of building these programs on a-large enough  
1691 | scale so that they can be cost competitive. Like I said--

1692 |       Mr. SMITH. Why doesn't the--

1693 |       Ms. ABEND. Like I said, wind energy actually is already--

1694 |       Mr. SMITH. Why doesn't the private sector do it now?

1695 |       Ms. ABEND. Well, one thing to think about is that energy  
1696 | efficiency--or renewable energy programs, rather, aren't  
1697 | receiving the same subsidies as fossil fuels and nuclear  
1698 | power have received historically. So there really isn't that  
1699 | level playing field there. Also, fossil fuel and  
1700 | energy--fossil fuel and nuclear energy are mature industries  
1701 | that are already--you know, have enough money to fund their  
1702 | own research. That is why the argument here is not that we  
1703 | don't want cleaner coal, but that--

1704 |       Mr. SMITH. No. No. But still--

1705 |       Ms. ABEND. --the coal industry should fund their  
1706 | research--

1707 |       Mr. SMITH. --back to my question. Again, for the private  
1708 | sector to do it, then they have got to have some assurance  
1709 | that they can make a profit. And if they--if energy prices  
1710 | were doubled--and I appreciate there is a significant

1711 variation of energy prices across the country--but if energy  
1712 prices were doubled, would the private sector be billed more  
1713 generating capacity through water or solar or wind?

1714 Ms. ABEND. I don't know what the threshold point is in  
1715 terms of the price of energy and increasing-renewable  
1716 energies, but we can't necessarily control that factor as  
1717 well as we control how much funding that we provide for these  
1718 renewable energy sources in order to give them that boost,  
1719 and, at the very least, take away the funding from the older,  
1720 more mature industries and create that more level playing  
1721 field.

1722 Mr. SMITH. Mr. Kripowicz.

1723 Mr. KRIPOWICZ. I am sorry. I don't know what that price  
1724 would be except I would--

1725 Mr. SMITH. I guess maybe the question is, if the price of  
1726 energy went up as much nationally as it has in California, as  
1727 a percentage increase, where would the--where would the  
1728 private sector--how would the private sector move to generate  
1729 energy?

1730 Mr. KRIPOWICZ. The private sector would still build the  
1731 cheapest thing available, so they would end up still building  
1732 natural gas plants and coal plants and nuclear energy--

1733 Mr. SMITH. But here again--

1734 Mr. KRIPOWICZ. --and then possibly, renewable, if it is  
1735 more expensive. Now, wind is a category that it fits in

1736 generically--

1737 Mr. SMITH. Natural gas has almost tripled in the last  
1738 year. I--

1739 Mr. KRIPOWICZ. It is about doubled now. The price is  
1740 about \$4 compared to--it was down below \$2--about a  
1741 year-and-a-half ago.

1742 Mr. SMITH. Well, I mean, that is part of the question. In  
1743 terms of--and I appreciate the fact that we can subsidize  
1744 some of the industries that might give them an advantage over  
1745 the other sectors, but in the long run, it can't be a  
1746 continuous government subsidy to generate electricity.  
1747 Consumers are ultimately going to have to pay the price that  
1748 motivates that kind of generation as we increase our usage  
1749 and the customers are ultimately going to have to pay to  
1750 assure that the environment is safeguarded in that  
1751 generation. Thank you, Mr. Chairman.

1752 Chairman BARTLETT. Thank you. Mr. Kripowicz, you have  
1753 recommended a \$2 billion proposed spending on clean coal  
1754 technology over the next 10 years.

1755 Mr. KRIPOWICZ. The President has. Yes, sir. ~~As of~~

1756 Chairman BARTLETT. The President. For this year, you have  
1757 asked for 150 million. You are not going to ask for all the  
1758 rest of it next year. Are you?

1759 Mr. KRIPOWICZ. ~~I~~no, sir. We are right now in the  
1760 process of constructing a 10-year program to review it with



1761 | the Administration.

1762 | Chairman BARTLETT. Could you, for the record, provide  
1763 | that information for us so that we, in our planning, can look  
1764 | ahead to--

1765 | Mr. KRIPOWICZ. Whenever we have that information, we will  
1766 | make it available to the Committee. Yes, sir.

1767 | Chairman BARTLETT. Thank you very much. I had said  
1768 | earlier that I was going to invite members of the Panel to  
1769 | pose questions to other members of the Panel if the members  
1770 | of--on the Committee here have not asked those questions. Are  
1771 | there comments made by other members of the Panel that need  
1772 | additional elucidation that pose a question from you? I would  
1773 | like to give you this opportunity now to pose such questions  
1774 | for the record or for answer here if they are short.

1775 | Ms. ABEND. I would like to ask Mr. Yamagata--you talked  
1776 | about improving efficiency at coal-fired power plants and  
1777 | carbon dioxide pollution. If that is an option, then I would  
1778 | like to know whether you support--whether you support  
1779 | legislation like S.60, which would--the Clean Air Act. Do you  
1780 | think that you be able to meet the standards of the Clean Air  
1781 | Act?

1782 | Mr. YAMAGATA. I know that the safe harbor provision that  
1783 | was applied in the first draft that has been introduced of  
1784 | S.60, which is legislation that has been introduced on the  
1785 | Senate side by Senators Byrd, McConnell, and, as Ms. Abend

COMMITTEE: HOUSE SCIENCE  
SUBCOMMITTEE ON ENERGY

DATE: JUNE 12, 2001

WITNESS: ROBERT S. KRIPOWICZ  
PAGE 81, LINES 1762-1766

INSERT FOR THE RECORD

Clean Coal 10-Year Review

The Clean Coal Power Initiative (CCPI) is a key component of the National Energy Policy that will address advanced technology on coal-fired power plants. The CCPI represents a planned government investment of \$2 billion over 10 years in a cooperative, cost-shared program with industry to demonstrate emerging technologies in coal-based power generation and to accelerate their deployment commercially. It is anticipated that the program would be implemented through a series of competitive solicitations. A review to determine the scope and content of the program will be conducted later this year. When the review is completed, the results will be provided to the Committee.

1786 | said, I believe 23 other senators. And a provision in that  
1787 | bill was with reference to those plants, particularly  
1788 | advanced coal technology plants, to have a safe harbor from  
1789 | provisions of the Clean Air Act. What I can say is that the  
1790 | concerns that have been expressed by the environmental  
1791 | community and others are in the process of being considered  
1792 | and also that provision is being redrafted. How it is being  
1793 | redrafted, I don't know.

1794 |       But it wasn't an intent to skirt the provisions of the  
1795 | Clean Air Act. It was an intent to say, we may have some  
1796 | difficulties, as we do new technology, that is going to run  
1797 | up against requirements in the Clean Air Act and that we need  
1798 | to try and take away that uncertainty for a period of time so  
1799 | that someone will, or that developers will, in fact, go  
1800 | forward with those technologies. There was never an intent to  
1801 | simply place the Clean Air Act on hold for the life of those  
1802 | facilities.

1803 |       Chairman BARTLETT. Thank you very much. I would just like  
1804 | to note, Ms. Abend, that not only am I a supporter of  
1805 | renewables, I am a user of photovoltaic and for a number of  
1806 | years now and very familiar with that technology and very  
1807 | encouraged about its future. Once made and in place, you have  
1808 | about 30 years absolutely trouble-free and totally  
1809 | pollution-free performance from photovoltaics. And I would  
1810 | like to see them a much bigger part of our electric

1811 generation.

1812 By the way, another big advantage is that they are, by  
1813 definition, distributed--they are disbursed a little here and  
1814 a little there so that we do away with a lot of line losses.  
1815 When you have big power plants sending power for a long  
1816 distance, that is a lot of line loss. Which is, by the way,  
1817 the reason that Saudi Arabia was--and I suspect they may  
1818 still be--the world's largest purchaser of solar cells with  
1819 all of that oil. And the reason is, they have small  
1820 communities widely separated and building a big power plant  
1821 with all the line losses doesn't make any sense for them. So  
1822 they sell the oil to us and buy from us the solar cells. It  
1823 just makes a whole lot more sense for them. And that  
1824 distributed production generation will pay big benefits in  
1825 this country from reduced line losses also.

1826 Let me now thank this Panel and excuse them. And Mr.  
1827 Kripowicz will stay with us because he has given his opening  
1828 statement for the next Panel, but he is a participant also in  
1829 that next Panel. Thank you very much for your testimony.

1830 --members of our second Panel. In addition to Mr.  
1831 Kripowicz, who is staying on from our first Panel. We have  
1832 Mr. Lazenby.

1833 Unidentified SPEAKER. Ms.

1834 Chairman BARTLETT. Ms. Oh. I am sorry. Ms. Lazenby. GiGi,  
1835 the queen of the strippers, is with us today. And Mr. Cuneo,

1836 Vice President and Chief Information Officer of Equiva  
1837 Services, LLC, Houston, Texas. And he is here on behalf of  
1838 the American Petroleum Institute. Dr. Craig Van Kirk,  
1839 Professor of Petroleum Engineering and Head of the Department  
1840 of Petroleum Engineering, Colorado School of Mines, Golden,  
1841 Colorado; and Alan Huffman, Manager of Seismic Imaging  
1842 Technology Center, Conoco, Incorporated, Houston, Tex. . .  
1843 Thank you very much for joining us. And Mr. Kripowicz has  
1844 already given his testimony in the prior panel. So we will  
1845 turn now to GiGi.

1846 STATEMENT OF VIRGINIA B. LAZENBY, CHAIRMAN AND CEO, BRETAGNE,  
1847 GP, NASHVILLE, TENNESSEE, ON BEHALF OF THE INDEPENDENT  
1848 PETROLEUM ASSOCIATION OF AMERICA

1849 Ms. LAZENBY. Good morning, Chairman Bartlett, members of  
1850 the Subcommittee. My name is Virginia Lazenby and I am the  
1851 Chairman of Bretagne, an oil and gas-producing company in  
1852 Kentucky. I am pleased to be here today on behalf of the  
1853 Independent Petroleum Association of America and the National  
1854 Stripper Well Association. We represent 5,000 oil and natural  
1855 gas producers in 35 states. IPAA and NSWA welcome the  
1856 opportunity to testify on the important role we believe oil  
1857 and natural gas research and development programs play in the  
1858 advancement of a viable, sustainable national energy policy.

1859 IPAA's membership constitutes both large and small  
1860 independents contributing 50 to 65 percent, respectively, of  
1861 domestic petroleum and natural gas production in the lower 48  
1862 states, and we employ 336,000 people. My company produces  
1863 from high--from low volume, high cost stripper or marginal  
1864 wells and we employ 36 employees and have a payroll of  
1865 approximately \$850,000 annually.

1866 The report issued on May 17 by Vice President Cheney's  
1867 Task Force on National Energy Policy Development, addressed  
1868 both the Nation's short and long term energy needs. The  
1869 report cites the Energy Information Administration estimate  
1870 that by the year 2020, the United States will need about 50

1871 | percent more natural gas and 1/3 more oil to meet growing  
1872 | demand. I am sorry--to meet growing demand.

1873 |         Meeting this formidable set of challenges will be  
1874 | complicated by events in the recent past. The damage to the  
1875 | industry from extremely low oil and natural-gas prices in '98  
1876 | and '99 is affecting supply today and will continue to do so  
1877 | until the industry has a chance to recover. It will take time  
1878 | to build new drilling rigs and provide the skilled services  
1879 | that are necessary to rejuvenate the industry.

1880 |         Research and development, in many instances, are the last  
1881 | to receive support. Ironically, it is the strides made within  
1882 | the R&D community in recent years through programs such as  
1883 | those administered to the Department of Energy's Office of  
1884 | Fuel--of Fossil Energy that can be critical to many  
1885 | producers' economic survival. The current price of oil is  
1886 | helpful, but price alone does not save fields. Technology was  
1887 | and is a necessity.

1888 |         Many exploration and production R&D advancements are  
1889 | documented in the Department of Energy's report,  
1890 | ''Environmental Benefits of Advanced Oil and Gas Exploration  
1891 | and Production Technology.'' Quoting from the report, ''In  
1892 | the past 3 decades, the petroleum industry has transformed  
1893 | itself into a high-technology industry. Ongoing advances in  
1894 | E&P productivity are essential if producers are to keep pace  
1895 | with steadily growing demands for oil and gas. Progressively

1896 cleaner, less intrusive, and more efficient technology will  
1897 be instrumental in enhancing environmental protection in the  
1898 future.''

1899 According to the National Energy Report, anywhere from 30  
1900 to 70 percent of the oil and 10 to 20 percent of natural gas  
1901 is not recovered in initial field development. Enhanced oil  
1902 recovery projects could add about 60 billion barrels of oil  
1903 nationwide through the use of existing fields.

1904 My company has utilized nitrogen huff-and-puff process to  
1905 increase production from a mature Appalachian oil field and  
1906 we have increased production from 100 barrels of oil per day  
1907 to 500 barrels of oil per day. And, Mr. Chairman, we have  
1908 recovered, in our project, 240,000 barrels from this field  
1909 and we expect to get an additional million--a total of  
1910 1,700,000 barrels. That is 4.5 percent of the oil in place.

1911 Bretagne developed and owns the patent on this process,  
1912 but we need more refinements in technology to keep costs  
1913 down. And to that end, Bretagne has partnered with Penn  
1914 State, through the Stripper Well Consortium, in the  
1915 development of a chamber lift technology to produce  
1916 stripper--to--for producing stripper wells that requires no  
1917 expensive pump jack and significantly less electricity, which  
1918 goes to the point of conservation that you discussed earlier.  
1919 The Stripper Well Consortium is an industry-driven  
1920 organization that receives base funding and guidance from the



1921 | Department of Energy's Office of Fuel--of Fossil  
1922 | Energy--excuse me--and the New York State Energy Research and  
1923 | Development Authority. By pooling financial and human  
1924 | resources, the Stripper Well Consortium can economically  
1925 | develop technologies that would extend the life and  
1926 | production of the Nation's stripper wells.

1927 |       Programs such as the Petroleum Technology Transfer  
1928 | Council, a joint public-private partnership between the  
1929 | entire independent producing community and the Department of  
1930 | Energy, and the Stripper Well Consortium, provide badly  
1931 | needed research and development capital.

1932 |       For the foreseeable future, the Nation will be dependent  
1933 | on fossil fuels. Petroleum and natural gas currently account  
1934 | for approximately 65 percent of the Nation's energy supply  
1935 | and will continue to be the significant energy source. The  
1936 | development of any domestic energy policy must recognize this  
1937 | reality. Oil and natural gas research and development holds  
1938 | the key to the maximum utilization of the Nation's energy  
1939 | resource base in a manner that represents as few  
1940 | environmental consequences as possible. Technology can help  
1941 | us get there and the public-private projects sponsored by the  
1942 | industry and the Department of Energy are an excellent way to  
1943 | encourage the development of the technology our Nation needs  
1944 | to develop a viable, sustainable energy future. Thank you.

1945 |       [Statement of Ms. Lazenby follows:]

1946 \*\*\*\*\* INSERT 8 \*\*\*\*\*

1947

Chairman BARTLETT. Thank you very much. Mr. Cuneo.

1948 STATEMENT OF PAUL CUNEO, VICE PRESIDENT AND CHIEF INFORMATION  
1949 OFFICER, EQUIVA SERVICES, LLC, HOUSTON, TEXAS, ON BEHALF OF  
1950 THE AMERICAN PETROLEUM INSTITUTE

1951 Mr. CUNEO. Mr. Chairman, thank you for inviting me to  
1952 testify today on the remarkable technological developments  
1953 that have been made over the past several years in the  
1954 downstream sector of the petroleum industry. I am testifying  
1955 today on behalf of the American Petroleum Institute, a  
1956 national trade association whose members are engaged in all  
1957 aspects of the petroleum industry, including exploration,  
1958 production, refining, distribution, and marketing.

1959 Americans depend on our industry to keep the U.S. economy  
1960 moving as never before. In our expanding economy, we provide  
1961 hundreds of products made from petroleum in volumes that  
1962 would not be possible if we were not for developing new  
1963 technologies that have made our industry more productive,  
1964 more efficient, and more economically viable.

1965 Mr. Chairman, I would like to focus on three areas of  
1966 technology advancements with my testimony today. First in the  
1967 area of refineries, then pipelines, and then in fuel for  
1968 vehicles of the future.

1969 In the areas of refining, as you know, demand for  
1970 gasoline this year is at record levels. To meet it,  
1971 refineries have been running all out, around 97 percent of  
1972 capacity. Just a few years ago, this feat would have been

1973 | difficult, if not impossible, but development of new  
1974 | computerized process control and online optimization  
1975 | technologies make it possible for refineries to run harder  
1976 | and make more products than at any other time in our history  
1977 | while improving safety and environmental performance.

1978 |         In 1981, just 2 decades ago, there were 315 refineries in  
1979 | the United States. Today, that number is 155. Two decades  
1980 | ago, we produced 6.4 million barrels a day of gasoline and  
1981 | today we are producing 8.5 million barrels a day of gasoline  
1982 | to meet the American public's demand. And we continue to  
1983 | produce additional products, such as <sup>jet</sup>~~gas~~ fuel, heating oil,  
1984 | diesel fuel, and other much-needed products which fuel not  
1985 | only our transportation sector, but our chemical industry as  
1986 | well.

1987 |         The industry has had to invent new refining processes to  
1988 | meet current and future product specifications and to meet  
1989 | environmental regulations. One example of that is the  
1990 | industry has developed successfully a catalytic distillation  
1991 | process to commercialize and produce MTBE. And you also use  
1992 | this technology in order to reduce sulfur in gasoline to make  
1993 | the future low-sulfur gasoline required by environmental  
1994 | regulations. Another example are flue-gas scrubbing processes  
1995 | which have been applied to catalytic cracking units that  
1996 | reduce SOx and particulate emissions while enabling our  
1997 | existing plants to process a wider variety of feed stocks.

1998           Petroleum refining is one of the most energy-intensive of  
1999 our manufacturing processes in America. And, yet, today, many  
2000 refineries are running and have seen their own energy  
2001 consumption drop by 30 percent. Still, there is more  
2002 opportunity and more activities to be undertaken to reduce  
2003 energy consumption in the refining sector, and greenhouse gas  
2004 emissions as well.

2005           One goal in improving technology is to take advantage of  
2006 the byproducts produced in the refining processes and ensure  
2007 that they are fully upgraded and converted through our modern  
2008 clean-burning gasoline and diesel fuels. The refining  
2009 industry has been a real example of using byproducts from  
2010 refineries to produce excess steam and hydrogen and even  
2011 energy--in many cases, electrical energy.

2012           Those of us in the refining industry take pride in a  
2013 holistic approach to the future. And by that, I mean we  
2014 consider the environmental benefits side by side with  
2015 decisions on increasing capacity and improving efficiencies.

2016           New technologies have been developed to monitor so-called  
2017 fugitive emissions from refinery valves, pumps, compressors,  
2018 and other critical areas. A refinery worker will soon be able  
2019 to walk around with a portable device based on an infrared  
2020 laser and an imaging system to pinpoint unwanted hydrocarbon  
2021 emissions and correct the leaks.

2022           Information technology is enabling refiners to develop



2048 Instantaneous communications along hundreds of miles of  
2049 pipeline keep a variety of fuels flowing smoothly and permit  
2050 an instant shutdown should a break in the line occur. The  
2051 reaction is so <sup>fast</sup> ~~fast~~ that little liquid escapes before the  
2052 flow is stopped. Information travels by satellite, microwave,  
2053 and fiber optic wiring to centralized control centers.

2054 Smart pigs, computerized sensors that look like giant  
2055 rubber bullets, travel through pipelines to detect thinning  
2056 caused by corrosion and construction gouges that could, in  
2057 turn, eventually mean a broken line. The most advanced kind  
2058 of smart pigs contain ultrasonic sensors that identify the  
2059 tiniest of cracks, dents, and gouges on the interior of the  
2060 pipeline. Some of these devices can even change size  
2061 permitting them to move through different-sized pipelines and  
2062 past gate valves.

2063 When we look to the future for fuels and advanced vehicle  
2064 technologies, we believe that ultimately one of the most  
2065 significant parts of this story will be a new chapter on fuel  
2066 cells. No one is certain what the fuels and cars of the  
2067 future are going to look like, but a pattern is emerging. Our  
2068 children and grandchildren will be driving vehicles that are  
2069 safer, cleaner, and more efficient than any in history. In  
2070 the next 5 to 15 years, they will probably be powered by an  
2071 internal combustion engine that is much cleaner and more  
2072 efficient today, and long term by fuel cells. Either



2073 | propulsion system will use an advanced, ultra-clean gasoline  
2074 | provided by the U.S. refining industry.

2075 |       Mr. Chairman, what I have offered here today has been a  
2076 | taste of the many fast-moving technological developments in  
2077 | our industry. There are two thoughts that I would like to  
2078 | leave with you. First, new technologies will continue to  
2079 | allow our industry to be more productive and efficient, while  
2080 | at the same time improving our environmental performance.  
2081 | And, second, that industry and government should cooperate in  
2082 | research in these areas. Thank you for inviting me here  
2083 | today.

2084 |       [Statement of Mr. Cuneo follows:]

2085 | \*\*\*\*\* INSERT 9 \*\*\*\*\*

2086 Chairman BARTLETT. Thank you very much. Mr. Van Kirk.

2087 STATEMENT OF DR. CRAIG W. VAN KIRK, PROFESSOR OF PETROLEUM  
2088 ENGINEERING AND HEAD OF DEPARTMENT OF PETROLEUM ENGINEERING,  
2089 COLORADO SCHOOL OF MINES, GOLDEN, COLORADO

2090 Mr. VAN KIRK. Is that about the right distance for the  
2091 microphone? Thank you very much for the invitation to come  
2092 here today to be of some assistance. My name is Craig Van  
2093 Kirk. I am a Professor and Head of the Petroleum Engineering  
2094 Department at the Colorado School of Mines and have been for  
2095 21 years.

2096 Just last week, Monday and Tuesday, I was in Houston for  
2097 a first-of-a-kind, invitation-only meeting of international,  
2098 American oil companies and American universities and  
2099 international universities also and a representative of the  
2100 Department of Energy. And we met for 2 days to discuss  
2101 today's and near-term and long-term research needs of the oil  
2102 industry, upstream, exploration and production. The oil  
2103 companies and the service companies shared their needs with  
2104 us representing the universities and we shared our needs and  
2105 our capabilities and our areas of interest and expertise with  
2106 them. As I say, this was the first time a meeting called for  
2107 this particular kind of venue and we had an excellent  
2108 conversation and plan to meet again in October to further  
2109 these discussions and have some more concrete plans.

2110 Imagine our abilities in the petroleum industry and  
2111 petroleum engineering, in particular. We can drill seven

2112 miles into the earth. We can drill in one to two miles deep  
2113 oceans around the earth. We produce products for the benefit  
2114 of society and have for many, many decades, all over the  
2115 world. And not just energy. I appreciate that the major  
2116 concern of today's discussions are energy, but petroleum and  
2117 crude oil and natural gas production go into the manufacture  
2118 of many things in this room--the paints, the--probably the  
2119 curtains, the carpet, the plastic cups, the containers for  
2120 the water we are drinking. These things are made from the  
2121 production of petroleum. Sometimes people ask if we are going  
2122 to run out of petroleum soon or stop producing soon. No. The  
2123 world will need plastics and materials made from petroleum  
2124 for hundreds of years. We will continue to produce for  
2125 hundreds of years for those reasons.

2126 Now, some people think that the petroleum industry is not  
2127 very high-tech because all they see are big pieces of  
2128 equipment--offshore drilling platforms or drilling rigs or  
2129 pumping units. Well, as a matter of fact, the high-tech level  
2130 of development in the petroleum industry and application is  
2131 extremely high. And I have included some examples in the  
2132 written testimony that I submitted to you earlier, and I will  
2133 just repeat a few right now.

2134 For example, in the area of seismic investigations into  
2135 the earth's surface, we can see down several miles into the  
2136 earth and we can create three-dimensional images of what the

2137 earth's subsurface looks like. And this helps us find new  
2138 resources of oil and gas, new reservoirs. And when we do the  
2139 3-D seismic, three-dimensional seismic, over a period of  
2140 time, we get a time-lapse photograph, if you like, to see  
2141 where fluids are moving. We call this 4-D, the fourth  
2142 dimension being time. So we can watch fluids moving around  
2143 underground, whether it be a shallow movement or a great  
2144 depth, a mile or two or three miles deep. We can watch fluids  
2145 move and we can distinguish between types of fluids. This 4-D  
2146 visualization is a major new endeavor.

2147 Also, horizontal drilling. We can drill directionally  
2148 from one surface location seven miles laterally, seven miles  
2149 in another direction. So we can cover an area of 14 miles  
2150 from one location. Now, this is not routine and we don't do  
2151 this every day. But directional drilling, to drill several  
2152 thousand feet or several miles in different directions, to  
2153 exploit a very large reservoir from a very small footprint,  
2154 this is a new development that continues to improve with our  
2155 research.

2156 Now, the fact is that oil and gas do not exist  
2157 underground in big open pools or rooms like this room. They  
2158 exist in the pores, small pores of rocks. But at several  
2159 thousand psi, fluids can flow quite well. Now, based on our  
2160 technical developments and research and experience through  
2161 the years--is that a buzzer I need to be concerned about? And

2162 | even with--is this daily?

2163 | Chairman BARTLETT. Excuse me. The buzzer going off is  
2164 | simply informing you that we aren't doing anything on the  
2165 | Floor.

2166 | Mr. VAN KIRK. Will the lights go out if there is no signs  
2167 | of intelligent life in here? Is that an automatic switch? We  
2168 | have been producing oil for more than 100 years and  
2169 | unfortunately we can recover today only approximately 1/3 on  
2170 | average, and we have 2/3 of oil left in the ground. Enhanced  
2171 | oil recovery, cooperative efforts with industry,  
2172 | universities, and the government, have been essential to us  
2173 | in the past and continue to be essential to us in the future.

2174 | And, in fact, I would say, based on my experience and  
2175 | working with industry for all these years and government  
2176 | representatives, that the support for oil and gas exploration  
2177 | and production research should be increased, not decreased at  
2178 | this time. I thank you very much for the opportunity to serve  
2179 | you today, and I will be happy to answer any questions.

2180 | [Statement of Mr. Van Kirk follows:]

2181 | \*\*\*\*\* INSERT 10 \*\*\*\*\*

2182

Chairman BARTLETT. Thank you very much. Mr. Huffman.

2183 | STATEMENT OF ALAN R. HUFFMAN, MANAGER, SEISMIC IMAGING  
2184 | TECHNOLOGY CENTER, CONOCO, INC., HOUSTON, TEXAS

2185 |       Mr. HUFFMAN. Thank you, Mr. Chairman, and good morning to  
2186 | you and the members of the Committee. I would like to thank  
2187 | you for the opportunity to testify today as a concerned  
2188 | technology leader in the petroleum industry. The United  
2189 | States faces a significant challenge over the next 10 years  
2190 | in the area of safe and environmentally sustainable energy  
2191 | development. The recent power problems in California and  
2192 | other parts of the United States, along with the simultaneous  
2193 | critical supply and infrastructure problems in the  
2194 | electricity, gas, and oil markets, indicate that the Nation  
2195 | is entering a period of sustained energy challenges that  
2196 | could cause serious damage to the national and global  
2197 | economies if significant steps are not taken soon to address  
2198 | the problem.

2199 |       During the 1960s, the United States demonstrated the  
2200 | vision, courage, and commitment that was required to put a  
2201 | man on the moon. This effort took significant resources and a  
2202 | coordinated effort from all of the stakeholders in space  
2203 | exploration to assure success. As we enter the new  
2204 | millennium, our Nation faces an energy challenge that is much  
2205 | greater than space in the level of technology that is  
2206 | required for success. It is my belief that this crisis  
2207 | requires a technology effort of similar scope and scale to



2208 | what America committed to winning the space race.

2209 |       During the next few minutes, I would like to enroll you  
2210 | in a new vision for a national technology program that will  
2211 | allow government to work closely and collaboratively with  
2212 | industry and academia to help solve our national energy  
2213 | crisis. This program will focus on the development,  
2214 | deployment, and commercialization of innovative technologies  
2215 | that will increase domestic energy supplies, reduce domestic  
2216 | energy costs to the consumers, and will be revenue positive  
2217 | to the Federal Government.

2218 |       I propose that the Congress, as part of the National  
2219 | Energy Plan, authorize the creation and funding of a national  
2220 | energy technology effort which, for illustrative purposes, I  
2221 | have called the United States Energy Center, or USEC. USEC  
2222 | will act as the catalyst for the next generation of  
2223 | innovative energy solutions that are required to achieve a  
2224 | secure energy future for the United States. The Center will  
2225 | be the focal point for industry collaboration with government  
2226 | and academia and will bridge the gap between research and  
2227 | development of new technologies and the commercial world by  
2228 | focusing on the development, first field deployment, and  
2229 | commercialization of major energy technologies.

2230 |       USEC should be established using a model similar to the  
2231 | Joint Oceanographic Institutions, which manages the ocean  
2232 | drilling program. The Center should be overseen by an

2233 | expanded interagency working group that includes  
2234 | representatives from the key agencies with an interest in  
2235 | safe and environmentally sustainable energy supplies,  
2236 | including the DOE, Minerals Management Service, NSF, the  
2237 | United States Geological Survey, NOAA, NASA, EPA, the Naval  
2238 | Research Lab, and the Coast Guard. The oversight mechanism  
2239 | should be through an Advisory Board consisting of the federal  
2240 | stakeholders and the Center corporate, and academic and NGO  
2241 | members.

2242 |         The Center should be closely aligned with the DOE Gas and  
2243 | Oil Technology Partnership Program at the National Labs to  
2244 | assure maximum leveraging and transfer of technology from DOE  
2245 | to USEC programs. Close coordination with other federal  
2246 | science programs should also be encouraged to achieve  
2247 | economies of scope and scale where possible. Center programs  
2248 | should provide timely information to regulatory agencies,  
2249 | including the MMS and EPA so that new regulations can be  
2250 | developed using the latest technical information and input  
2251 | from all stakeholders.

2252 |         The first major program undertaken by USEC should be a  
2253 | technology effort called the Offshore Technology Program. In  
2254 | contrast to many petroleum regions of the United States, the  
2255 | deep water and ultra-deep water Gulf of Mexico hold very  
2256 | large reserves of oil and gas that should be included as a  
2257 | critical component of a future comprehensive U.S. energy

2258 strategy. One way to stem the decline in U.S. oil and gas  
2259 production is to begin a massive development of the reserves  
2260 contained in the deep water environment. This development  
2261 would produce an increase in domestic production similar to  
2262 when the North Slope of Alaska was brought on line in the  
2263 1970s and '80s.

2264 One of the great challenges facing the industry is how to  
2265 execute such an aggressive deep water development campaign  
2266 when many of the technologies required for the effort are  
2267 still in their infancy. The scale of operations in deep water  
2268 is so massive that no single operator can afford to spend the  
2269 money required and take the risks involved without support  
2270 and risk sharing from other stakeholders in deep water.  
2271 Individual technology development and field trial costs for  
2272 some of the technologies can exceed \$100 million, which is  
2273 clearly out of the reach of even the largest operators. This  
2274 type of massive development challenge lends itself very well  
2275 to a cooperative effort by government and industry.

2276 The Office of Natural Gas and Petroleum Technology of DOE  
2277 has been working with industry and academia to formulate a  
2278 technology strategy to accelerate deep water development in  
2279 the Gulf of Mexico. This strategy, called the Offshore  
2280 Technology Roadmap, or OSTR, was assembled through a closely  
2281 coordinated partnership with the DOE labs, the MMS, the  
2282 operating, service, and engineering companies, and academia.

2283 The <sup>OTP</sup>~~OST~~ implements the OSTR by lowering critical technology  
2284 barriers, enabling deep water developments to proceed at a  
2285 faster pace, and allowing development of many smaller fields  
2286 in deep water that are not commercial today.

2287 The potential of this program is very significant and  
2288 could provide several million barrels per day of incremental  
2289 production in future years. OTP's key components would  
2290 include a high-intensity design competition for the next  
2291 generation of ultra deep water facilities that will allow  
2292 dramatic cost reductions in deep water operations, component  
2293 technology programs for those technologies that will allow  
2294 major cost reductions in specific operational areas and  
2295 development programs that will integrate the expertise of the  
2296 industry, academia, and the U.S. National Labs.

2297 I recommend that the Congress appropriate a minimum of \$25  
2298 million in funding for 2002 to support the Center operations  
2299 and first year of the OTP. With industry-matching funds of 25  
2300 million, this would result in full funding of \$50 million for  
2301 the first year of the program. Preliminary economic models  
2302 indicate that a properly funded and managed OTP effort will  
2303 be revenue positive to the Federal Government with  
2304 approximately 3.5 billion in new revenue generated in the  
2305 first 10 years of the effort.

2306 These budget amounts should be put in perspective with  
2307 the energy needs of the United States. The initial 25 million

2308 | in 2002 federal funding for the Center and OTP would be  
2309 | equivalent to purchasing one million barrels of crude oil for  
2310 | the strategic petroleum reserve at \$25 a barrel. This is  
2311 | equal, as was mentioned earlier, to about one hour of oil  
2312 | consumption in the United States. If the program is  
2313 | successful, the increase in deep water production after a few  
2314 | years, would provide this same benefit in 1 day at  
2315 | significantly reduced cost to the consumer.

2316 |       The U.S. Energy Center has been structured to be a  
2317 | win-win for all parties that will address the Nation's energy  
2318 | needs while reducing energy costs and generating incremental  
2319 | revenue for the taxpayers through the rapid deployment of new  
2320 | technologies. All of the details of the Center and OTP  
2321 | concepts, structure, and funding requirements are described  
2322 | in the USEC business overview that was provided to you along  
2323 | with my written testimony. Work is currently underway to  
2324 | enroll the entire energy industry in the USEC vision, and we  
2325 | will keep you informed as this support grows.

2326 |       I encourage the Committee to vigorously support this  
2327 | exciting new concept as part of the comprehensive national  
2328 | energy strategy. Thank you for you attention, and I would be  
2329 | happy to answer any questions.

2330 |       [Statement of Mr. Huffman follows:]

2331 | \*\*\*\*\* INSERT 11 \*\*\*\*\*



2332 [The information follows:]

2333 \*\*\*\*\* INSERT 11A \*\*\*\*\*

2334 Chairman BARTLETT. Thank you very much. I want to thank  
2335 all of the witnesses for their testimony. And let me turn now  
2336 to Mr. Costello for his questions and comments.

2337 Mr. COSTELLO. Mr. Chairman, thank you. Mr. Huffman, let  
2338 me follow up on your testimony. Did I hear you correct that  
2339 you are recommending 25 million the first year?

2340 Mr. HUFFMAN. The minimum requirement that I proposed in  
2341 the testimony is 25 million. Ultimately, as I said in the  
2342 statement, this will require significantly larger amounts of  
2343 money, not as much as the Space Program cost, but significant  
2344 amounts of money that would have to be matched by industry  
2345 and government working together to solve the problems that we  
2346 face in deep water on the technology side of our business.

2347 Mr. COSTELLO. And five is for the Center and 20 is for  
2348 the program. Is that correct?

2349 Mr. HUFFMAN. That would be for the first year. Yes.

2350 Mr. COSTELLO. And how do you see, looking down the road,  
2351 10 years--a 10-year plan? How much would you expect the  
2352 Congress to appropriate over a 10-year period?

2353 Mr. HUFFMAN. If you look in the last page of the summary,  
2354 the business overview that I have provided to you, there is  
2355 actually a graph. The assumption in that economic model is  
2356 that the program would ramp up to \$250 million a year of  
2357 federal funding in the 4th year and then would stay stable at  
2358 that level through the 10-year first phase of the program.



2359 | And there are obviously different models that you can run,  
2360 | but that model is revenue-positive to the Federal Government  
2361 | over the lifetime of the program, including the tax credits  
2362 | that would be taken for R&D, the revenues from royalties, and  
2363 | not including the trickle-down effects from the income taxes  
2364 | and other industrial impacts of a large program like this.

2365 |       Mr. COSTELLO. Let me ask you to direct your attention to  
2366 | the deep water Gulf of Mexico. I know that little work has  
2367 | been done there. But, one, what do we know about the  
2368 | potential for oil and gas production from the deep water in  
2369 | the Gulf at this time?

2370 |       Mr. HUFFMAN. Based on the numbers that we have from our  
2371 | current exploration and production in the Gulf, it is  
2372 | probably one of the most prolific remaining frontiers within  
2373 | the United States for future production of oil and gas. There  
2374 | are, to my knowledge, no other areas that are currently being  
2375 | explored and developed that contain the scale of potential  
2376 | that the deep water contains.

2377 |       Mr. COSTELLO. And what might that scale of potential be?  
2378 | Do we have any idea?

2379 |       Mr. HUFFMAN. In terms of production, it could be several  
2380 | million barrels a day of additional production over a 10 or  
2381 | 20-year lifetime. So a fairly significant total reserve base  
2382 | exists out there yet to be developed.

2383 |       Mr. COSTELLO. And what is that potential reserve

2384 base--how did we determine that? What is that based upon?

2385 Mr. HUFFMAN. That is based on the industry projections.

2386 And I can get you some detailed information on that later if

2387 you would like to see some more actual numbers. I didn't

2388 bring those with me today.

2389 Mr. COSTELLO. Dr. Van Kirk, you mentioned in your

2390 testimony about the technology advances in the '60s and '70s,

2391 and that today's supplies of oil and natural gas would not be

2392 here today had it not been for the development of those

2393 technologies. And I just wonder how much of those technology

2394 advances were attributed to government oil and gas research

2395 versus the private sector?

2396 Mr. VAN KIRK. I cannot quantify the distribution, whether

2397 it be 50 percent--I can't do that and I don't think anybody

2398 can, but it has been significant. Department of Energy

2399 participation with us in our researches on university

2400 campuses and with private industry almost always are

2401 partnerships among three or four of our groups--government,

2402 industry, and universities, and academia. And the funding is

2403 shared also. Usually, there is a requirement for cost sharing

2404 on the university's part and with private industry.

2405 Government's participation and contributing some funding

2406 is--has been essential and crucial and useful. And also the

2407 government participation guarantees distribution of the

2408 results on a broad basis to everyone in the country.

2409 Mr. COSTELLO. I wonder if--and I realize you have--you  
2410 said you cannot give a definitive answer. But did you  
2411 have--is it 50/50, more than 50/50? Or, Mr. Kripowicz, would  
2412 you know, during that period of time?

2413 Mr. KRIPOWICZ. I would agree with Mr. Van Kirk. It would  
2414 be very difficult to align the percentages. Industry, in  
2415 general, spends ~~a~~ you know <sup>in</sup> what they count as R&D, a  
2416 considerable amount more than the government does, but the  
2417 government focuses on high-risk areas. And so, over time, the  
2418 government research has more bang for the dollar than you  
2419 would think because it looks at high-risk things that the  
2420 industry might not look at immediately, and the industry  
2421 picks it up and spends a great deal more money bringing that  
2422 technology to market.

2423 Mr. VAN KIRK. Mr. Costello, may I--

2424 Mr. COSTELLO. Please.

2425 Mr. VAN KIRK. --proceed? Thank you. I hadn't thought of  
2426 it this way before, but it occurs to me that if you are  
2427 asking for a distribution, and we cannot quantify it, I think  
2428 it is similar to considering an athletic team, a team sport,  
2429 where the team is successful, and then to try to distribute  
2430 the success among the team players. You can't do it just by  
2431 how many points are scored or how much money somebody put in.

2432 Mr. COSTELLO. I wish I could explain that to my  
2433 constituents back home. They don't look at it that way. But

2434 | let me ask a question about the oil companies--and it is my  
2435 | understanding that their R&D commitment has been reduced in  
2436 | the past few years. And I wonder if I might ask anyone who  
2437 | would like to answer the question why that has been. I am  
2438 | sure there are several obvious reasons, but I wonder if you  
2439 | would begin, Dr. Van Kirk.

2440 |         Mr. VAN KIRK. Well, I am speaking on my perspective from  
2441 | the university standpoint and my close association with  
2442 | professionals in industry also--our professional societies  
2443 | and meetings and conferences. Over the past 15 years, there  
2444 | has been quite a consolidation in our industry. Depressed  
2445 | prices, 10, 15 years ago, consolidations, mergers, and the  
2446 | oil industry reducing its own internal research and  
2447 | development activities and evolving and migrating into a  
2448 | newer relationship with universities and the government and  
2449 | the DOE doing research and service companies also--major oil  
2450 | field service companies, doing joint-team research. So there  
2451 | has been an evolution in recent years. And, as a matter of  
2452 | fact, last week in our meeting in Houston, we talked about  
2453 | continuing that evolution even further.

2454 |         Mr. COSTELLO. Mr. Huffman.

2455 |         Mr. HUFFMAN. Well, that is the job that I do inside my  
2456 | company, is running a technology organization. And, yes, you  
2457 | are correct in the general statement that over the last, say,  
2458 | 10 to 15 years, the total amount of money spent by industry

2459 | has dropped significantly. That has been partly, as Dr. Van  
2460 | Kirk said, to the long period of low energy prices and the  
2461 | resulting low return on capital that the industry was able to  
2462 | achieve in that environment.

2463 |         The second thing that has occurred is the consolidations,  
2464 | as Dr. Van Kirk mentioned. And if you look at the industry  
2465 | research laboratories, some of the finest labs in the  
2466 | industry are now gone. Two of them, Amoco and Arco's research  
2467 | labs, for example. And those were legendary laboratories. And  
2468 | it is unfortunate that we have seen that happen, but that is  
2469 | what happens when you do consolidate. The R&D spending in the  
2470 | last year or so, as prices have gone up, has actually begun  
2471 | to increase again. But, as you can imagine, after 15 years of  
2472 | poor returns, the industry is hesitant to rapidly begin  
2473 | investing large amounts of money until we are sure that the  
2474 | return on capital employed is going to be sufficiently high  
2475 | enough to warrant those R&D expenditures.

2476 |         The other issue, and in particular to what I spoke of in  
2477 | deep water, is the risk issue. And I think this is one of the  
2478 | reasons that the deep water is an attractive area for us in  
2479 | getting government support and co-funding with industry, is  
2480 | that is a very risky environment.

2481 |         Now, some of you may recall the recent incident in  
2482 | Brazil, where the P-36 semi-submersible rig, at Roncador  
2483 | Field sank in the south Atlantic. That incident was of

2484 sufficient magnitude in cost that it would break a smaller  
2485 oil company than Petrobras. The total cost of that incident  
2486 will be somewhere between a half a billion to a billion  
2487 dollars against Petrobras' bottom line.

2488         So we have to balance both the risk of our research, but  
2489 I believe we are increasing the spending in the industry  
2490 right now. I know our company is. We have seen significant  
2491 increases in R&D expenditures in the last 2 years. So that is  
2492 a positive trend that we are starting to see.

2493         Mr. COSTELLO. Thank you. Mr. Cuneo, I wonder if you were  
2494 setting the priorities for fossil--the Fossil Energy Program  
2495 at DOE what your priorities would be.

2496         Mr. CUNEO. When we look at the downstream business, we  
2497 would say that the first priority is on pre-competitive  
2498 technologies. We are working with DOE in the area of  
2499 industries of the future to try and get some pre-competitive  
2500 work done in a number of areas. Those would include behavior  
2501 of materials, novel approaches for removing contaminants from  
2502 crude oil, such as metals, sulfur, nitrogen. Our basic  
2503 position is that we would like to see DOE very actively  
2504 involved with the pre-competitive work and then we believe  
2505 that industry funding is adequate to take that to  
2506 commercialization.

2507         When we look at this whole question, we also go beyond  
2508 DOE. I was President of the Coordinating Research Council,

2509 | which is joint between the auto and the oils, and we find  
2510 | needs within EPA to step up funding for environmental models,  
2511 | such as air shed modeling and things like that. In the past  
2512 | few years, our joint consortium has funded some very basic  
2513 | research that, in my mind, was done mostly by universities,  
2514 | but would have been appropriate to have the public fund. Such  
2515 | as the behavior of aromatic components in the atmosphere,  
2516 | behavior of alkenes, behavior of alkanes. And we do a lot of  
2517 | work to validate models as they come out. And I would think  
2518 | that that ought to be a priority for EPA as they think about  
2519 | their funding to step up what they do to contribute to this  
2520 | broad area for society.

2521 |         Mr. COSTELLO. A final question and then a comment, I  
2522 | guess, for the panelists, other than Mr. Kripowicz. The  
2523 | President has been criticized in his Administration for his  
2524 | energy proposal, that it is too heavy on oil and not enough  
2525 | in the area of alternative fuels. And I wonder if the four of  
2526 | you might want to comment. If you agree with the criticism  
2527 | that the Administration has received, that it is too heavy on  
2528 | oil and not looking at alternative fuels. Whoever would like  
2529 | to take a stab at that.

2530 |         Mr. CUNEO. I would like to take a quick stab at part of  
2531 | that. I think in a lot of areas what that criticism ignores  
2532 | is the economic realities. The fact of life is that the  
2533 | American public wants to pay a relatively low price for

2534 energy. And when we look at some of the alternative  
2535 technologies--and I was enjoying the discussion about--that  
2536 we had in the previous Panel around solar investment. When  
2537 solar becomes the most economic choice for the investor to  
2538 put their money to get a return, that is when we will see a  
2539 lot more wind power. Until that time, what you will see is  
2540 using available, relatively clean fuels, like natural gas.  
2541 And so I think there is a lot of technology already developed  
2542 in the alternative fuel area, but in general, most of the  
2543 alternative fuels require public subsidy to get them  
2544 commercial. And in many cases, that can go on for decades.

2545 Mr. COSTELLO. Ms. Lazenby, any other comments?

2546 Ms. LAZENBY. I would just like to say that I think that  
2547 in the realm of enhanced oil recovery that the Administration  
2548 has made a strong point that we should increase that. And I  
2549 think that is a--that the footprint for that energy is  
2550 already there and the technology that the Department of  
2551 Energy can help us with would be very beneficial. And I think  
2552 the Administration recognizes that we need additional fossil  
2553 fuel energy and that we also need to focus on renewables. But  
2554 I don't think he has overemphasized it in any way. It is  
2555 going to be there. It is a large part of our energy base. And  
2556 to ignore it, and to ignore how we can improve it, both in an  
2557 environmental way, is--would be the wrong thing to do. So I  
2558 think he is doing the right thing and I think working on



2559 renewables is--should be--also be funded, but we can't ignore  
2560 the facts.

2561 Mr. COSTELLO. Any--Mr. Huffman.

2562 Mr. HUFFMAN. Well, I guess I would add to that that the  
2563 challenge that we face right now is that we have  
2564 under-invested in our energy infrastructure and supply for  
2565 most of the last 20 years. And part of that is because energy  
2566 prices have been cheap. There has been less incentive. And we  
2567 must find a balance that includes oil and gas, coal, all  
2568 forms of electrical generation, including alternative fuels.  
2569 And we must grow our energy base in all of those areas,  
2570 keeping the proper balance with the environmental concerns,  
2571 to supply the energy that the Nation needs. And that is not  
2572 going to be a trivial exercise and it is going to require a  
2573 national effort and all the stakeholders in energy are going  
2574 to have to work together to achieve that. And that is  
2575 something that has always been a challenge, but I think we  
2576 have to overcome that challenge if we want to have a stable  
2577 economy and society in the future.

2578 Mr. VAN KIRK. I agree. And, furthermore, just speaking of  
2579 enhanced oil recovery, many, many years ago, we started  
2580 injecting fluids into reservoirs to increase recovery--water,  
2581 gases, steam, chemicals, thick viscous polymers, to increase  
2582 oil recovery. And one of the newer techniques that has been  
2583 researched and developed and proven in recent years is CO2

2584 injection--carbon dioxide injection for enhanced oil  
2585 recovery.

2586 Ms. LAZENBY. We are doing that right now.

2587 Mr. VAN KIRK. And we would love to have more CO2 to put  
2588 into the ground underground for improving the recovery and  
2589 perhaps sequestering the CO2 underground.

2590 Mr. COSTELLO. Mr. Chairman, I thank you and I thank our  
2591 witnesses. For the record, I would like to state that our  
2592 colleague on this Subcommittee, Congresswoman Sheila Jackson  
2593 Lee, wanted to be here today. She is a member of this  
2594 Subcommittee, but as most of you probably know, about half of  
2595 her district is under water. So she is at home trying to help  
2596 her constituents. But she did call and wanted us to let you  
2597 know that she is sorry that she could not be with us today.  
2598 Mr. Chairman, thank you.

2599 Chairman BARTLETT. Thank you very much. Ms. Lazenby, you  
2600 mentioned that enhanced recovery could produce 60 billion  
2601 barrels more oil. Was that just in this country?

2602 Ms. LAZENBY. Yes. There--yes. There are about 350 billion  
2603 barrels of oil in place that have not been recovered from  
2604 existing wells. And you--the 60 billion is the percentage  
2605 that we think is attainable within--with enhanced oil  
2606 recovery techniques that are either in place now or could be  
2607 developed with additional research and development. And it  
2608 has been proven--I think we just heard this morning about a

2609 | project in California, and I have just told about mine--we  
2610 | can do it. And it is out of existing wells. And, for example,  
2611 | we are putting CO2 in addition to nitrogen into our wells now  
2612 | and we have already gotten good response from CO2 and  
2613 | nitrogen in our wells. So that is one place to put the  
2614 | nitrogen--I mean, the CO2 also.

2615 |         So there are a lot of positive benefits to taking the  
2616 | resource base that exist in existing wells that have already  
2617 | been drilled, that are already there, that are now producing  
2618 | approximately--both oil and gas, approximately 1/3 of our oil  
2619 | and oil equivalent needs in this country. And with just a  
2620 | little bit of extra R&D we can really keep the--keep a good  
2621 | source of energy coming.

2622 |         Chairman BARTLETT. These are big numbers and it is useful  
2623 | to put them in perspective so that you can get some idea of  
2624 | what they mean. In terms of oil consumption, at present use  
2625 | rates, and we ought to preface every statement relative to  
2626 | use at present use rates, because use rates are going up  
2627 | and--but at present use rates, that is about a 2 years'  
2628 | supply for this country. And so that is a meaningful amount  
2629 | of oil.

2630 |         Mr. VAN KIRK. Mr. Chairman--

2631 |         Chairman BARTLETT. Some of you mentioned the  
2632 | petrochemical industry. Mr. Cuneo, you mentioned that, and,  
2633 | Dr. Van Kirk, you mentioned that also.

2634 Mr. VAN KIRK. I think you might have misquoted some  
2635 numbers. If you are talking about 60 billion.

2636 Chairman BARTLETT. Yeah. That is about a 2 years' supply.

2637 Mr. VAN KIRK. No. We consume about 2 billion in crude oil  
2638 per year--or we produce about 2 billion barrels per year--we  
2639 produce. We consume--

2640 Chairman BARTLETT. Oh. I am talking about our  
2641 consumption.

2642 Mr. VAN KIRK. We consume--

2643 Chairman BARTLETT. We consume about 20 million barrels a  
2644 day; the world about 80. If you multiply that by roughly 400  
2645 days in a year, you are somewhere in the neighborhood of 30  
2646 billion barrels a year and 60 billion--

2647 Ms. LAZENBY. He means for the country.

2648 Chairman BARTLETT. Oh. Okay. You are right. But that is  
2649 world supply.

2650 Ms. LAZENBY. World supply. Right.

2651 Chairman BARTLETT. Yeah. We are a fourth--that is 8 years  
2652 for us and--

2653 Mr. VAN KIRK. Right.

2654 Chairman BARTLETT. Thank you for correcting.

2655 Mr. VAN KIRK. You are welcome.

2656 Chairman BARTLETT. That is 8 years for us and 2 years for  
2657 the world. Thank you.

2658 Mr. VAN KIRK. You are welcome.

2659 Chairman BARTLETT. Okay. Thank you. Thank you. Two of you  
2660 mentioned petrochemical industry. I think there is too little  
2661 appreciation of how important oil and natural gas are in this  
2662 petrochemical industry, which is very large, as you have  
2663 pointed out. We live in a plastic world. Our clothes, our  
2664 automobiles, much of our automobiles, the television in front  
2665 of you there, the plastic cups here, the containers for the  
2666 water, the laminate on top of the desk here--these are all  
2667 made from oil. What will we do when natural gas and oil are  
2668 in really short supply, essentially gone? Could we make these  
2669 things from agricultural products? Mr. Cuneo.

2670 Mr. CUNEO. I would like to respond that, Mr. Chairman.  
2671 There is technology today to make all of the products from  
2672 what we call syn-gas, which is a mixture of carbon monoxide  
2673 and hydrogen. Syn-gas can be made from coal. And, in fact,  
2674 coal gasification does that before it converts it to  
2675 electrical generation. That technology of being able to make  
2676 these building blocks is commercial today. We have been  
2677 producing detergents from syn-gas for years. We have been  
2678 producing other components from syn-gas. So what we really  
2679 need is--it is more expensive, obviously, in terms of total  
2680 capital and operating costs to do it that way versus using  
2681 the building blocks which occur in petroleum. But the  
2682 technology is available today to continue to produce our  
2683 chemical building blocks through the syn-gas and

2684 Fisher-Tropsh type technology.

2685 Chairman BARTLETT. Another byproduct--another product  
2686 made from this is nitrogen fertilizer. Today, essentially all  
2687 of the nitrogen fertilizer is made from natural gas. Before  
2688 we learn how to mimic what nature does in a summer  
2689 thunderstorm, we got our nitrogen fertilizer from the  
2690 barnyard or from guano, from bat caves and islands where  
2691 birds have nested for thousands of years. So the food we eat  
2692 is, in a very real sense, petroleum and gas that powered the  
2693 farm machinery that produced it and produced the nitrogen  
2694 fertilizer. And, by the way, without nitrogen fertilizer,  
2695 productivity of food and fiber would be drastically,  
2696 drastically reduced. In a very real sense, natural gas,  
2697 particularly, and oil, secondarily, aren't they really too  
2698 good to burn?

2699 Mr. CUNEO. In many ways that is true. On the other hand,  
2700 there is nothing that provides the economic transportation  
2701 fuel for the country with the mobility that people want,  
2702 especially in vehicle systems, than petroleum. It is the most  
2703 cost-effective out there today. And when you look at the  
2704 overall theme that I think this Panel and the previous Panel  
2705 had, this country needs a good mix of energy sources,  
2706 including things like coal for stationary power generation.  
2707 We have a large installed capital base in the power plant.  
2708 But just imagine trying to translate that to petroleum fuels

2709 | or fuels to fuel a vehicle. It is--

2710 | Chairman BARTLETT. Let me ask the Panel a question. Is  
2711 | there general agreement--we had a hearing several weeks ago  
2712 | on the available fossil fuel resources in the world. And  
2713 | there was general consensus that there is about a thousand  
2714 | giga-barrels of oil remaining in the world. That maybe if you  
2715 | are wildly optimistic about recovery that you might get  
2716 | almost that much more by recovery. But that thousand  
2717 | giga-barrels is not forever. That translates to roughly 30  
2718 | years of use at present use rates. And if you factor in  
2719 | increased use rates, maybe that which we will find, maybe the  
2720 | enhanced recovery will give us enough to make up for the  
2721 | increased use rates.

2722 | The point I am trying to make is that we should--and I am  
2723 | trying to think of an analogy that really explains it. It is  
2724 | true that these fossil fuels are very cheap today. But those  
2725 | that are of high quality, gas, particularly, and oil, there  
2726 | is roughly 30 years remaining in the world. Just because they  
2727 | are cheap today, does that mean we should use them all today  
2728 | and let our kids and our grandkids worry about tomorrow?  
2729 | Certainly, they are cheap. But this is a finite resource that  
2730 | we need to husband and I don't see us addressing that  
2731 | consideration hardly at all in our energy policy.

2732 | A better way of looking at the energy policy is that it  
2733 | is a giant hide-and-go-seek game. That God knew how

2734 | profligate we would be in the use of fossil fuels, so he hid  
2735 | a very large amount out there and our only challenge is to go  
2736 | find where he hid it. I think that a rational national energy  
2737 | policy needs to reflect the fact that these high-quality,  
2738 | readily available, cheap fossil fuels are not going to be  
2739 | there forever and we need to consider that in our national  
2740 | policy. Do you agree?

2741 |       Mr. VAN KIRK. Certainly, it has to be--certainly, it has  
2742 | to be considered and forecasts have to be made naturally.  
2743 | And, certainly, we don't want to leave our children and  
2744 | grandchildren to suffer because of what we have done and  
2745 | wasted. Excuse me. But as was mentioned a few minutes ago,  
2746 | hydrocarbons--we humans have a lot of hydrocarbons in our  
2747 | bodies. Coal, oil, gas, trees, plants, animals--it is a very  
2748 | common substance on earth. And scientifically, we can  
2749 | make--we can convert one to the other and back and forth in  
2750 | the laboratory and in the field. Most of these  
2751 | transformations are not profitable and they are not useful.  
2752 | But some time in the future it may be that the price of a  
2753 | particular resource might be such that competition from other  
2754 | possibilities becomes profitable and reasonable and takes  
2755 | over. I see oil and gas being produced for another few  
2756 | hundred years, but not to fuel transportation. Something else  
2757 | will fuel transportation and we will enjoy oil and gas to  
2758 | make medicines and plastics, artificial things, synthetic



2759 | things, as we have talked about earlier today.

2760 | Chairman BARTLETT. But at the rate of their consumption  
2761 | today, we need to have a policy which husbands them or they  
2762 | won't be available for the next 2 or 300 years as a feed  
2763 | stock for the industries that mentioned.

2764 | Mr. VAN KIRK. I think the policy needs to be balance and  
2765 | forecasting realistic futures.

2766 | Chairman BARTLETT. How good a job are we doing at using  
2767 | byproducts? The better we do of using byproducts, the lower  
2768 | the cost of the ultimate fuel will be and the kinder we will  
2769 | be to our environment. Do we have an aggressive program to  
2770 | develop uses for these byproducts?

2771 | Mr. HUFFMAN. I guess I will try and speak to that, Mr.  
2772 | Chairman. Our company, for example, has developed a carbon  
2773 | fiber technology that uses what we call the bottom of the  
2774 | barrel, the pitch that comes out of the refining process. And  
2775 | many other companies are pursuing similar technologies that  
2776 | will use the parts of the barrel of oil that in the past have  
2777 | considered debris or waste. We are seeing, as was mentioned  
2778 | earlier, gas-to-liquids technology, which allows us to  
2779 | actually separate in the Fisher-Tropsh process some of the  
2780 | impurities and byproducts and separate them into quantities  
2781 | that can be sold and delivered to markets.

2782 | So we are seeing the industry move in the direction of  
2783 | modifying the hydrocarbon molecule and utilizing all the

2784 | parts of that molecule as efficiently as possible. And I  
2785 | think we will continue to see that trend in the next 20 or 30  
2786 | years, hopefully to the point where we are not burning  
2787 | gasoline in cars anymore and we are seeing other types of  
2788 | fuels that are by products of the hydrocarbon molecule. And  
2789 | we are using the carbon for certain things, such as carbon  
2790 | fibers, and composite materials. And I think that would be a  
2791 | very wise use in the long term.

2792 | - The challenge we face, as you pointed out in the first  
2793 | Panel, is, how do you make that transformation quickly  
2794 | without disrupting the economy. And I think that is the  
2795 | balance that we have to keep in making those kind of  
2796 | transformations, working with government and industry  
2797 | together.

2798 | Chairman BARTLETT. Mr. Huffman, I would like to comment  
2799 | briefly on your suggestion for the USE Center, the U.S.  
2800 | Energy Center. We have been concentrating here in these two  
2801 | hearings this morning--these two Panels this morning, on the  
2802 | availability internationally of gas and oil and somewhat on  
2803 | the availability here in this country. I would like to point  
2804 | to another dimension that makes your U.S. Energy Center even  
2805 | more needed. We have 2 percent of the known reserves of oil  
2806 | in the world. We consume 25 percent of the world's oil. This  
2807 | is clearly a prescription for disaster. At the time of the  
2808 | Arab Oil Embargo when we, in effect, went screaming into the

2809 | night because of the problems that we were facing. We  
2810 | imported 35 percent of our oil. Today, we import 56 or more  
2811 | percent of our oil. From a national security viewpoint, we  
2812 | desperately need the kind of a center that you point to.

2813 |         And freeing ourselves from our dependence on these  
2814 | high-quality fossil fuels, gas and oil, isn't just an  
2815 | economic consideration. It is a national security  
2816 | consideration. We cannot afford to be held hostage by the  
2817 | rest of the world because we produce so little of the oil  
2818 | that we use in this country. With only 2 percent of the known  
2819 | reserves in this country, we clearly face a very uncertain  
2820 | energy future. And I would concur with you that we need the  
2821 | equivalent of the national effort that we put into putting a  
2822 | man on the moon.

2823 |         By the way, there are 200-and-some industries in Maryland  
2824 | alone that wouldn't be there if it weren't for the spin-off  
2825 | that came to that. No longer does government push the  
2826 | envelope. We now are buying most of the stuff we put in our  
2827 | space and our military equipment, we are buying it what we  
2828 | call COTS, commercial-off-the-shelf. And I would like to see  
2829 | an effort equivalent to putting a man on the moon to do  
2830 | something about energy. We face a very uncertain energy  
2831 | future worldwide. And particularly in this country, with  
2832 | having only 2 percent of the known reserves of oil, we face a  
2833 | very, very uncertain energy future that impacts our national

2834 security. And I think that should be reason enough to justify  
2835 a center of that magnitude.

2836 Let me recognize my colleague if he has additional  
2837 questions or comments.

2838 Mr. COSTELLO. Mr. Chairman, I do not. I thank the  
2839 witnesses for being here today and I thank you for calling  
2840 the hearing.

2841 Chairman BARTLETT. I want to thank the witnesses. Thank  
2842 you very much for your testimony. This has been a productive  
2843 hearing, I think. And we will now be in adjournment.

2844 [Whereupon, at 12:55 p.m., the Subcommittee was adjourned.]

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GAY H. FRIEDMANN

021452

Dear Fran,

It was great to see you in your  
new role. The idea of a security task  
force is good & we looking forward to  
working with you all. Enclosed are a  
couple of INCAA's energy policy packets.  
We do not yet mention pipeline

28969

safety in these materials. We will  
forward the study on pyrene ingestion  
toxicity & potential carcinogenicity as  
soon as it is available.

Sincerely,  
Gay



Department of Energy  
Washington, DC 20585

SEP 19 2001

Mr. Ron Bailey, Jr.  
PRM Energy Systems, Inc.  
504 Windamere Terrace  
Hot Springs, Arkansas 71913

Dear Mr. Bailey:

Thank you for your letter of June 21, 2001 to Vice President Dick Cheney, regarding your concern with information printed in the National Energy Policy. Your letter has been forwarded to me for a response. My office oversees research in the development of a number of renewable energy technologies, including the conversion of biomass resources for power generation.

We recognize your exception to the characterization of the FERCO gasifier technology contained in the National Energy Policy Report. We have also been concerned that, in the process of preparing this important and anxiously awaited energy strategy document, clarifying language was inadvertently deleted. The passage would more correctly have read: "...the world's first medium-Btu biomass gasification system for electricity production." We appreciate the very valuable contribution that your company and your technology are making to the energy mix in the United States and the world. Your continuing efforts to market and improve the PRM technology, as you point out in your letter, provide important economic development and environmental benefits. Please rest assured that the FERCO gasifier project, which has been the subject of Congressionally-directed funding for the past several years, is held to specific performance metrics which it has successfully met in the course of attracting substantial private investment.

Please accept our apologies for this unfortunate editorial mishap. We wish you and your company every success and hope, perhaps one day, to participate with you in a project.

Sincerely,

Donald K. Richardson,  
Director  
Office of Biopower and Hydropower  
Technologies  
Energy Efficiency and Renewable Energy



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28971

OFFICE OF THE VICE PRESIDENT  
WASHINGTON

021611

2001 SEP 21 P 4: 32

September 20, 2001

The Honorable Spencer Abraham  
Secretary of Energy  
1000 Independence Avenue, SW  
Washington, D.C. 20585

Dear Mr. Secretary:

Enclosed are numerous unsolicited proposals and idea papers that we received from citizens from all across the country during the development of the National Energy Policy, and in the months to follow. Many of these individuals and companies have already received correspondence and acknowledgement from the NEPDG and/or the Vice President's office.

What most of these citizens are looking for, however, is for review and consideration of their proposals and ideas by program professionals. In turn, we would appreciate your vetting these proposals out to the appropriate departments within your agency for review. If you would, please have the appropriate staff respond with a direct reply to each of these individuals or companies.

Thank you for your assistance. I know these citizens will greatly appreciate receiving a response from the Department of Energy.

Sincerely

A handwritten signature in black ink, appearing to read "A. D. Lundquist", written over a horizontal line.

Andrew D. Lundquist  
Director, National Energy Policy  
Development Group



The Secretary of Energy  
Washington, DC 20585

2001-020271

September 21, 2001

The Honorable Paul Schell  
Mayor of Seattle  
Seattle, WA 98104-1873

Dear Mayor Schell:

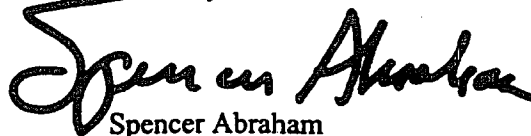
Thank you for your letter to President Bush regarding the National Energy Plan (NEP) and your interest in energy conservation. The NEP, released on May 16, 2001, contained 105 recommendations to improve our energy future. Of those, 54 dealt directly or indirectly with energy efficiency and renewable energy.

This Administration strongly supports energy efficiency as one of the building blocks to a strong energy policy while recognizing the need to increase supply. Adding additional fuel supplies will reduce our dependence on foreign sources and increase our energy independence. An entire chapter of the Plan discusses the importance of savings gained by energy efficiency and outlines a broad scope of activities to improve efficiency throughout the Federal Government and beyond.

We are moving ahead in our efforts to implement many of NEP recommendations. The Office of Energy Efficiency and Renewable Energy (EERE) is in the process of performing a strategic program review to prioritize programs and clarify the linkages of research with real world outcomes. Additionally, EERE held a series of public meetings across the country in June to receive public comments on the objectives of the current energy efficiency and renewable energy research, development, demonstration, and deployment programs and whether these programs are achieving intended objectives. In response, we received comments from approximately 5,000 people and organizations. Our energy efficiency and renewable energy programs will contribute to an improved energy future for our Nation when the above efforts are completed.

If you have any further questions, please contact me or Mr. Dan R. Brouillette, Assistant Secretary for Congressional and Intergovernmental Affairs, at (202) 586-5450.

Sincerely,

  
Spencer Abraham



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**Department of Energy**  
Washington, DC 20585

2001-800058

September 25, 2001

The Honorable Jeff Bingaman  
Chairman  
Committee on Energy and Natural Resources  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

On May 24, 2001, Spencer Abraham, Secretary of Energy, testified, regarding the Administration's National Energy Policy Report.

Enclosed are the answers to seven questions requested by Senator Murkowski. The three remaining answers are being prepared and will be forwarded to you as soon as possible.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Barbara Barnes at (202) 586-6341.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan R. Brouillette".

Dan R. Brouillette  
Assistant Secretary  
Congressional and Intergovernmental Affairs

Enclosures



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28974



**From Senator Murkowski:**

**Alaska Oil and Gas:**

I am pleased to see that the National Energy Policy encourages the development of the 1002 Area of ANWR.

I am also pleased to see the Administration encouraging the development of a natural gas pipeline to bring Alaska natural gas to market in the Lower 48.

FE 1a. ▸ To what extent do these provisions constitute a key portion of your National Energy Policy?

1b. ▸ In your opinion, are financial incentives necessary to develop these resources, or is it simply a matter of access to lands for development and pipeline siting?

The Alaska Natural Gas Transportation Act (ANGTA) directed the President to appoint a Federal Inspector to ensure expedited construction of an Alaska gas pipeline.

The Energy Policy Act of 1992 abolished that position but transferred the Federal Inspector's functions and authorities to the Secretary of Energy. These functions and authorities are the keys to expediting construction of the pipeline.

FE 2. Do you currently have the staff and resources to carry out the function and authorities of the Federal Inspector?

**Energy Efficiency:**

The National Energy Policy indicated that energy efficiency and improved energy conservation should be made a "national priority"

EE 1. How do you as Secretary of Energy plan to translate this "priority" into concrete action?

2. Other than tax incentives for consumer purchase of new energy efficient technology, what policy options exist?

**Fuel Economy/CAFE:**

PO The National Energy Policy deferred on the question of increased CAFE standards for auto fuel economy until the National Academy can finish its review as directed by Congress last year.

1. Are there options to improve auto fuel economy – other than CAFÉ standards – that you will consider?

**Renewable Energy:**

Over just the past five years, we've spent \$1.5 billion on renewable energy R&D and another \$5 billion on tax incentives.

Yet the proportion of renewable energy in our total energy mix has remained the same, around 5%

- EE
1. In your opinion, what is a realistic view of renewables as a portion of our energy mix over the next 10-20 years?
  2. Are there specific applications or sectors in which renewables are more likely to contribute?

As part of the National Energy Policy, you have been directed to carry out a review of all energy efficiency and renewable energy R&D programs – and focus on those that are “performance based”

- EE
1. Does this imply a greater focus on “proof of concept” demonstration projects over basic research?
  2. Are plans under way for such a review and when do you expect such a review might conclude?

**From Senator Dorgan:**

- PMA
1. I have been working closely with DOE and WAPA to increase the amount of renewable power purchased by the federal government. I have understood that the Administration would stand by its commitment to purchase energy from WAPA through a new "green tags" program. This program would solicit 60-70 megawatts of renewable power from anywhere within WAPA's territory for sale to the federal government.

Is the Department still committed to ongoing efforts to purchase and develop such a renewable energy program?

## QUESTIONS FROM SENATOR MURKOWSKI

### Alaska Oil and Gas

Q1a. I am pleased to see that the National Energy Policy encourages the development of the 1002 Area of ANWR. I am also pleased to see the Administration encouraging the development of a natural gas pipeline to bring Alaska natural gas to market in the lower 48. To what extent do these provisions constitute a key portion of your National Energy Policy?

A1a. These provisions are a key portion of the National Energy Policy in meeting our Nation's needs for oil and natural gas. The U.S. Geological Survey 1998 assessment of the greater 1002 area indicates technically recoverable resources ranging from 5.7 to 16 billion barrels of oil, and from 0 to 10 trillion cubic feet of natural gas. Additionally, the U.S. Geological Survey estimated that Northern Alaska has 35 trillion cubic feet of commercially recoverable natural gas. These significant resources are keys to meeting the Nation's energy needs.

Q1b. In your opinion, are financial incentives necessary to develop these resources, or is it simply a matter of access to land for development and pipeline siting?

A1b. The U.S. Geological Survey's 1999 economic analysis of its 1998 assessment of the 1002 Area alone indicates that about half of the technically recoverable oil resources (2.03 to 9.38 billion barrels of oil, and from 1.04 to 3.72 trillion cubic feet of associated natural gas) are economically recoverable at today's prices using today's technology. This indicates that market forces provide adequate financial incentive to develop these resources. However, in addition to this economic assessment, the Department of Energy, in partnership with the industry, is developing advanced technologies that will reduce the costs of recovery and environmental compliance, and increase recovery and environmental protection.

## QUESTIONS FROM SENATOR MURKOWSKI

### Alaska Oil and Gas

- Q2. The Alaskan Natural Gas Transportation Act (ANGTA) directed the President to appoint a Federal Inspector to ensure expedited construction of an Alaskan gas pipeline.

The Energy Policy Act of 1992 abolished that position but transferred the Federal Inspector's functions and authorities to the Secretary of Energy. These functions and authorities are the keys to expediting construction of the pipeline.

Do you currently have the staff and resources to carry out the function and authorities of the Federal Inspector?

- A2. Subsequent to the abolition of the Federal Inspector's Office by the Energy Policy Act of 1992, there has been little activity related to the proposed natural gas pipeline from Alaska's North Slope. In the absence of any activity there are no Department staff or resources assigned to perform the functions of the Federal Inspector's office.

The infrequent requirements for analysis or comment on the Alaskan Natural Gas Transportation System (ANGTS) has been handled by the Office of Fossil Energy and the Office of General Counsel. This same staff has been conducting the initial coordination between our Department and other Federal agencies, as well as consultations between our Department and Canadian government agencies and the State of Alaska in preparation for a possible filing concerning the ANGTS or other North Slope gas project.

Should a filing be made for the ANGTS and it becomes necessary for the Department to exercise the authorities of the Federal Inspector, we would assign qualified staff from other program areas to meet the requirements of carrying out the responsibilities of the Federal Inspector's authority.

## QUESTIONS FROM SENATOR MURKOWSKI

### Energy Efficiency

The National Energy Policy indicated that energy efficiency and improved energy conservation should be made a "national priority."

- Q1. How do you as Secretary of Energy plan to translate this "priority" into concrete action?
- A1. The National Energy Policy will build upon our nation's successful track record and will promote further improvements in the productive and efficient use of energy. Of the 105 recommendations in the Policy, over twenty of these recommendations address energy efficiency, either directly or indirectly. These actions promote conservation in residences, commercial establishments, industrial sites, electrical power plants, and transportation. Implementing these actions will enable us to continue our trend of decreasing energy use per dollar of GDP, while improving our standard of living.
- Q2. Other than tax incentives for consumers purchase of new energy efficient technology, what policy options exist?
- A2. This Policy report uses almost every tool available in order to promote energy conservation. Allow me to provide a few examples from the Policy:

Education: One recommendation directs the EPA Administrator to develop and implement a strategy to increase public awareness of the sizeable savings that energy efficiency offers to homeowners across the country.

**Information:** Another recommendation directs the Secretary of Energy to promote greater efficiency by expanding and extending the application of the Energy Star labeling program.

**Executive Directive:** This recommendation directs the heads of executive departments to take appropriate actions to conserve energy at their facilities.

**Financial Incentives for Industry Utilities:** One recommendation directs the Secretary of Treasury to work with Congress to encourage energy efficiency through Combined Heat and Power projects by shortening their depreciation life.

**Standards:** This recommendation directs the Secretary of Transportation to review and provide recommendations on establishing Corporate Average Fuel Economy Standards for the U.S. automotive industry.

**Federal R&D:** This recommendation directs the Secretary of Energy to review and provide recommendations on the appropriate level of energy efficiency program funding.

## QUESTION FROM SENATOR MURKOWSKI

### Fuel Economy/CAFÉ

The National Energy Policy deferred on the question of increased CAFÉ standards for auto fuel economy until the National Academy can finish its review as directed by Congress last year.

Q1. Are there options to improve auto fuel economy – other than CAFÉ standards – that you will consider?

A1. Yes. The National Energy Policy report indicates that the Department of Transportation should consider, in addition to modified CAFÉ standards, other market-based approaches to increasing the national average fuel economy of new motor vehicles. The Department of Energy is analyzing possible forms of voluntary fuel economy improvement agreements to support the DOT's consideration of a broad range of approaches. In addition, the report calls for the Secretary of Treasury to work with Congress on legislation to increase energy efficiency with a tax credit for fuel-efficient vehicles. The NEPD Group recommended that a temporary, efficiency-based income tax credit be available for purchase of new hybrid or fuel cell vehicles between 2002 and 2007. The Department of Energy will be working closely with both the Treasury and Transportation Departments to implement these recommendations.



## QUESTIONS FROM SENATOR MURKOWSKI

### Renewable Energy

As part of the National Energy Policy, you have been directed to carry out a review of all energy efficiency and renewable energy R&D programs – and focus on those that are “performance based.”

Q1. Does this imply a greater focus on “proof of concept” demonstration projects over basic research?

A1. No. We will be reviewing all programs to determine their performance and potential in terms of delivering benefits to the public. We will reevaluate those programs that have not made progress toward national energy goals. Likewise, we will be redoubling our efforts in those programs that have shown, and continue to show, good performance and potential in contributing to national energy goals. I expect that when the review is complete we will have a range of activities that are performance-based, including both proof of concept projects and basic research programs. This would be consistent with developing a balanced energy technology R&D portfolio that delivers short-term, intermediate, and long-term energy benefits.

Q2. Are plans under way for such a review and when do you expect such a review might conclude?

A2. On May 23, 2001, I announced the schedule for the review of both the energy efficiency programs and the renewable energy and alternative energy programs. The Department has completed its public comment period and is continuing with its Strategic program review of EERE programs. Our review will be completed by September 1.



**Department of Energy**  
Washington, DC 20585

2001-800057

September 25, 2001

The Honorable Jeff Bingaman  
Chairman  
Committee on Energy and Natural Resources  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

On May 24, 2001, Spencer Abraham, Secretary of Energy, testified, regarding the Administration's National Energy Policy Report.

Enclosed are the answers to seven questions requested by Senator Murkowski. The three remaining answers are being prepared and will be forwarded to you as soon as possible.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Barbara Barnes at (202) 586-6341.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan R. Brouillette".

Dan R. Brouillette  
Assistant Secretary  
Congressional and Intergovernmental Affairs

Enclosures



Printed with soy ink on recycled paper

28984

## QUESTIONS FROM SENATOR MURKOWSKI

### Alaska Oil and Gas

Q1a. I am pleased to see that the National Energy Policy encourages the development of the 1002 Area of ANWR. I am also pleased to see the Administration encouraging the development of a natural gas pipeline to bring Alaska natural gas to market in the lower 48. To what extent do these provisions constitute a key portion of your National Energy Policy?

A1a. These provisions are a key portion of the National Energy Policy in meeting our Nation's needs for oil and natural gas. The U.S. Geological Survey 1998 assessment of the greater 1002 area indicates technically recoverable resources ranging from 5.7 to 16 billion barrels of oil, and from 0 to 10 trillion cubic feet of natural gas. Additionally, the U.S. Geological Survey estimated that Northern Alaska has 35 trillion cubic feet of commercially recoverable natural gas. These significant resources are keys to meeting the Nation's energy needs.

Q1b. In your opinion, are financial incentives necessary to develop these resources, or is it simply a matter of access to land for development and pipeline siting?

A1b. The U.S. Geological Survey's 1999 economic analysis of its 1998 assessment of the 1002 Area alone indicates that about half of the technically recoverable oil resources (2.03 to 9.38 billion barrels of oil, and from 1.04 to 3.72 trillion cubic feet of associated natural gas) are economically recoverable at today's prices using today's technology. This indicates that market forces provide adequate financial incentive to develop these resources. However, in addition to this economic assessment, the Department of Energy, in partnership with the industry, is developing advanced technologies that will reduce the costs of recovery and environmental compliance, and increase recovery and environmental protection.

## QUESTIONS FROM SENATOR MURKOWSKI

### Alaska Oil and Gas

- Q2. The Alaskan Natural Gas Transportation Act (ANGTA) directed the President to appoint a Federal Inspector to ensure expedited construction of an Alaskan gas pipeline.

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Q1. How do you as Secretary of Energy plan to translate this "priority" into concrete action?

A1. The National Energy Policy will build upon our nation's successful track record and will promote further improvements in the productive and efficient use of energy. Of the 105 recommendations in the Policy, over twenty of these recommendations address energy efficiency, either directly or indirectly. These actions promote conservation in residences, commercial establishments, industrial sites, electrical power plants, and transportation. Implementing these actions will enable us to continue our trend of decreasing energy use per dollar of GDP, while improving our standard of living.

Q2. Other than tax incentives for consumers purchase of new energy efficient technology, what policy options exist?

A2. This Policy report uses almost every tool available in order to promote energy conservation. Allow me to provide a few examples from the Policy:

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**Department of Energy**  
Washington, DC 20585

September 25, 2001

The Honorable Joe Barton  
Chairman  
Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce  
U.S. House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

Enclosed are the edited transcripts of the June 13, 2001, testimony given by Spencer Abraham, Secretary of Energy, regarding the National Energy Policy Report.

Also enclosed is the insert you requested to complete the hearing record.

If we can be of further assistance, please have your staff contact our Congressional Hearing Coordinator, Barbara Barnes at (202) 586-6341.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan R. Brouillette".

Dan R. Brouillette  
Assistant Secretary  
Congressional and Intergovernmental Affairs



1 RPTS BULKLEY

2 DCMN MAGMER

3 NATIONAL ENERGY POLICY REPORT

4 OF THE NATIONAL ENERGY POLICY

5 DEVELOPMENT GROUP

6 Wednesday, June 13, 2001

7 House of Representatives,

8 Committee on Energy and Commerce,

9 Subcommittee on Energy and Air Quality,

10 Washington, D.C.

11 The subcommittee met, pursuant to call, at 9:59 a.m., in  
12 Room 2123, Rayburn House Office Building, Hon. Joe Barton  
13 [chairman of the subcommittee] presiding.

14 Present: Representatives Barton, Cox, Burr, Whitfield,  
15 Ganske, Shimkus, Wilson, Shadegg, Bryant, Radanovich, Bono,  
16 Walden, Tauzin (Ex Officio), Hall, Sawyer, Wynn, Doyle, John,  
17 Waxman, Markey, McCarthy, Strickland, Barrett, Luther, and  
18 Dingell (Ex Officio).

19 Also Present: Representatives Eshoo and Harman.

1689 Mr. BARTON. Welcome to the subcommittee, Mr. Secretary.  
1690 Your statement is in the record in its entirety. We  
1691 recognize you for such time as you may consume to elaborate  
1692 on it. Welcome to the subcommittee.

1693 STATEMENT OF HON. SPENCER ABRAHAM, SECRETARY, U.S. DEPARTMENT  
1694 OF ENERGY

1695 Secretary ABRAHAM. Mr. Chairman, thank you very much. I  
1696 appreciated the chance today to hear from so many members and  
1697 to get some perspective on their considerations and concerns.  
1698 And I want to thank you for having done, in my judgment, a  
1699 remarkably effective job over the last several months, as we  
1700 have gone through our transition, to work with us at the  
1701 Department. You have actually reached out to me on behalf of  
1702 your committee, on both sides of the aisle really, to set in  
1703 motion practices by which we can work together over the next  
1704 few months to not just address this issue but the other  
1705 issues as well.

1706 And I offer the same comments and appreciation to  
1707 Congressman Tauzin, to Congressman Dingell, and other leaders  
1708 of the committee. Certainly we wish to do our best to make  
1709 it a dialog, to make it a good partnership.

1710 Today I would like to make a brief statement. There were

1711 | so many issues raised during the comments of the various  
1712 | members that I would like to do my best to be responsive when  
1713 | we get to the question period on those issues.

1714 |       What I would like to maybe just do is take a little bit  
1715 | of time today to talk about the challenges we face and to  
1716 | try to briefly summarize how the President with our National  
1717 | Energy Plan proposes to address those challenges in a few days  
1718 | ahead.

1719 |       - Today, America consumes 98 quadrillion British thermal  
1720 | units, or quads as they are called, a year in all forms of  
1721 | energy. Our domestic production is 72 quads, which means  
1722 | that the imbalance between demand and supply is made up with  
1723 | imports.

1724 |       Between now and 2020 our energy demand is projected to  
1725 | rise significantly. If the energy intensity of the United  
1726 | States economy--that is, the amount of energy needed to  
1727 | generate a dollar of GDP--remained constant over those 20  
1728 | years, our demand in the year 2020 would rise from 98 quads  
1729 | per year to 175. Fortunately, we believe that our plan,  
1730 | current policies, and the combined interests of people on all  
1731 | forums and all sides of the policy debate will work together  
1732 | to improve energy efficiency over that period to the point  
1733 | that the actual energy demand in 2020 can be lowered from 175  
1734 | to 127 quads.

1735 |       That means improved energy efficiency can help close much

1736 | of the gap between projected energy demand and projected  
1737 | energy production. And we are committed to doing just that.

1738 |       However, improved energy efficiency alone cannot do the  
1739 | whole job. And for that reason, the United States will need  
1740 | more energy supply. The question is, where do we get that  
1741 | increased supply when over the last decade domestic supply  
1742 | production has remained relatively flat?

1743 |       To address those challenges both in terms of achieving  
1744 | the efficiency gains we need as well as the supply gains we  
1745 | require, our National Energy Plan has adopted an approach  
1746 | that we believe is balanced and comprehensive. As the  
1747 | President said, we are looking for a new harmony among our  
1748 | priorities. So let me just briefly outline the approach for  
1749 | the committee.

1750 |       First, our policy balances the need for increased  
1751 | supplies of energy with the need to modernize our  
1752 | conservation efforts by employing cutting-edge technology to  
1753 | gain the energy efficiencies I have talked about. So, for  
1754 | example, as we call for recommendations to enhance oil and  
1755 | gas recovery from existing and new sources through new  
1756 | technology, we also call for recommendations on corporate  
1757 | average fuel economy standards.

1758 |       Second, our plan calls for diversity in terms of our  
1759 | supply sources. With electricity demand forecast to rise 45  
1760 | percent between now and the year 2020, we estimated

1761 that--that is, the Department of Energy's Energy Information  
1762 Administration estimates the needs for an additional 1300 to  
1763 1900 new power plants in this country. Current policy  
1764 anticipates that over 90 percent of those new plants will be  
1765 fired by natural gas. A number of members of this committee  
1766 already have commented on the potential implications of  
1767 placing so much reliance on a single fuel source. We believe  
1768 energy security dictates a more balanced approach to new  
1769 power generation.

1770 In addition to natural gas, the National Energy Plan  
1771 looks to clean coal generation and nuclear power to give us  
1772 the broad mix of energy-to-energy support and energy security  
1773 from traditional sources. But our plan also balances our  
1774 pressing requirements for the aforementioned traditional  
1775 source of energy with the need for renewable and alternative  
1776 sources such as hydropower, biomass, solar, wind and  
1777 geothermal sources. The plan seeks to increase exploration  
1778 of domestic sources of oil and natural gas, and it also  
1779 recommends tax incentives for the use of certain renewables  
1780 and more focused research on next-generation sources like  
1781 hydrogen and fusion.

1782 Fourth, our energy plan harmonizes growth in domestic  
1783 energy production with environmental protection. This  
1784 commitment to conservation and environmental protection is  
1785 not an afterthought. It is a commitment woven throughout our

1786 energy policy. Energy production without regard to the  
1787 environment is not an option. For example, in addition to  
1788 recommendations seeking to streamline the permitting process  
1789 for plant sitings as well as building new infrastructure, the  
1790 National Energy Policy also directs the Environmental  
1791 Protection Agency to propose mandatory reduction targets for  
1792 the emission of three major pollutants: sulfur dioxide,  
1793 nitrogen oxides, and mercury from electricity generation.  
1794 - We support this balanced approach with 105 recommended  
1795 actions covering the full range of energy challenges  
1796 confronting this Nation, and indeed the world, from how best  
1797 to enhance renewable sources to oil and natural gas  
1798 development in the Caspian Sea.

1799 The administration can carry out many of these  
1800 recommendations on its own, either through executive orders  
1801 or agency-directed actions. We are moving ahead to implement  
1802 proposals as quickly as possible.

1803 Just days after the release of our National Energy  
1804 Report, the President issued two executive orders directing  
1805 Federal agencies to expedite approval of energy-related  
1806 projects and directing Federal agencies to consider the  
1807 effects of proposed regulations on energy supply distribution  
1808 or use. Moreover, where appropriate, the President is  
1809 directing Federal agencies, including my own, to take a  
1810 variety of actions to improve the way they use energy and to

1811 carry forward critical aspects of this policy. For example,  
1812 I have instructed our Office of Energy Efficiency and  
1813 Renewable Energy to carry out a strategic review of its  
1814 renewable energy research and development programs in light  
1815 of the recommendations contained our National Energy Policy.

1816 Hydropower, geothermal, winds, and other renewables are  
1817 highlighted in our report for the contribution they are  
1818 making and continue to make to energy security. Promising  
1819 next-generation technologies will also play a part in solving  
1820 our energy challenges. Both current and future technologies  
1821 will be a part of our strategic review.

1822 I have asked that the study begin immediately--and it  
1823 has--and to be completed by September 1st. And its finding  
1824 will permit us to recommend appropriate funding levels that  
1825 are performance based and modeled as public-private  
1826 partnerships. Twenty of the report's recommendations,  
1827 however, clearly require direct legislative action, and I  
1828 think we will find more areas for cooperation than  
1829 disagreement.

1830 This committee has a long and proud tradition of passing  
1831 bipartisan energy legislation dating back to the 1970s. I  
1832 look forward to working with the committee to develop energy  
1833 policy legislation consistent with those bipartisan  
1834 traditions.

1835 So I believe that we start with a wide base of agreement.



1836 | From what I have heard today, I would say that the agreement  
1837 | is in wider consensus than I might have anticipated. We all  
1838 | recognize energy is a critical challenge. We all recognize  
1839 | that parts of our energy supply and delivery system need  
1840 | enhancement or modernization. We all recognize that  
1841 | conservation and stewardship must go hand in hand with  
1842 | increasing domestic supply.

1843 |       Naturally, there will not be complete agreement, and the  
1844 | President is strongly committed to the adoption of his  
1845 | recommendations. But I truly believe that we have the basis  
1846 | for working together to meet America's serious energy crisis.

1847 |       Mr. Chairman, I want to thank the members of the  
1848 | committee for the very kind reception I have received here  
1849 | today, and I do look forward to working with every member of  
1850 | the committee as we move forward, both here at the  
1851 | subcommittee and the full committee, to address many issues  
1852 | including the challenges presented here today.

1853 |       [The statement of Secretary Abraham follows:]

1854 | \*\*\*\*\* INSERT 2-1 \*\*\*\*\*

**Statement of the Honorable Spencer Abraham**

**Secretary of Energy**

**before the**

**House Committee on Commerce**

**on National Energy Policy**

**June 13, 2001**

## **Introduction**

**Thank you Mr. Chairman.**

**I appreciate the opportunity to come before this committee today to discuss the President's National Energy Policy, which was developed by the National Energy Policy Development Group under the direction of Vice President Cheney. Before taking your questions, I would like to make a brief opening statement.**

**My statement will outline the scope of the energy challenge we face over the next two decades, summarize the approach the President has determined will best address this challenge, and finally emphasize why I am optimistic that we can find a consensus in this country on policies that promote long-term energy security for our citizens.**

### **America's Energy Challenge 2001-2020**

**Today, America consumes 98 quadrillion British thermal units (or quads) a year in all forms of energy. Our domestic energy production is 72 quads. The imbalance between energy demand and domestic energy production is made up with imports.**

**Between now and 2020, our energy demand is projected to rise significantly.**

**If the energy intensity of the U.S. economy – the amount of energy needed to generate a dollar of Gross Domestic Product – remained constant, our energy demand in 2020 would be 175 quads.**

**However, our plan and current policies are projected to improve energy efficiency to the point that energy demand in 2020 can be lowered from 175 quads to at least 127 quads.**

**That means improved energy efficiency can help close much of the gap between projected energy demand and projected domestic energy production and we are committed to doing just that.**

**However, improved energy efficiency cannot do the whole job. For that reason, the United States will need more energy supply.**

**The question is: where do we get that increased supply when over the past decade domestic supply production has remained relatively flat?**

**Our Balanced Approach**

**To address these challenges, our National Energy Plan has adopted an approach that is balanced and comprehensive. As the President said, we are looking for a new harmony among our priorities.**

**Let me briefly outline this approach for the Committee.**

**First, our policy balances the need for increased supplies of energy with the need to modernize our conservation efforts by employing cutting edge technology.**

**And so, for example, as we call for recommendations to enhance oil and gas recovery from existing and new sources through new technology, we also call for recommendations on Corporate Average Fuel Economy standards.**

**Second, our Plan calls for a diversity in terms of our supply sources.**

**With electricity demand forecast to rise 45 percent by 2020, we estimate the need for an additional 1,300 to 1,900 new power plants in the country.**

**Current policy anticipates that over 90 percent of those new plants will be fired by natural gas.**

**We believe energy security dictates a more balanced approach to new power generation.**

**In addition to natural gas, the National Energy Plan looks to clean coal generation and nuclear power to give us the broad mix of energy needed to meet growing demand and support energy security.**

**Third, our plan balances our pressing requirements for the aforementioned traditional sources of energy with the need for renewable and alternative sources such as hydropower, biomass, solar, wind, and geothermal.**

**The Plan seeks to increase exploration of domestic sources of oil and natural gas. And it also recommends tax incentives for the use of certain renewables and more focused research on next-generation sources like hydrogen, and fusion.**

**Fourth, our energy plan harmonizes growth in domestic energy production with environmental protection.**

**This commitment to conservation and environmental protection is not an afterthought; it is a commitment woven throughout our energy policy.**

**Energy production without regard to the environment is simply not an option.**

**For example, in addition to recommendations seeking to streamline the permitting process for plant sitings as well as building new infrastructure, the National Energy Policy also directs EPA to propose mandatory reduction targets for emission of three major pollutants – sulfur dioxide, nitrogen oxides, and mercury – from electricity generation.**

## **Building Consensus**

**We support this balanced approach with 105 recommended actions, covering the full range of energy challenges confronting this nation -- and indeed the world -- from how best to enhance renewable sources, to oil and natural gas development in the Caspian Sea.**

**The Administration can carry out many of these recommendations on its own, either through executive orders or agency directed actions. We are moving ahead to implement proposals as quickly as possible.**

**Just days after release of our National Energy Report, the President issued two executive orders directing Federal agencies to expedite approval of energy-related projects and directing Federal agencies to consider the effects of proposed regulations on energy supply, distribution, or use.**

**Moreover, where appropriate, the President is directing Federal agencies, including my own, to take a variety of actions to improve the way they use energy and to carry forward critical aspects of his policy.**

**For example, I've instructed our Office of Energy Efficiency and Renewable Energy to carry out a strategic review of its renewable energy research and development programs in light of the recommendations in our National Energy Policy.**

**Hydropower, geothermal, wind, and other renewables are highlighted in our report for the contribution they are making and can continue to make to energy security. Promising next-generation technologies will also play a part in solving our energy challenges. Both current and future technologies will be a part of our**

**strategic review. I've asked that the study be completed by September 1<sup>st</sup>. Its findings will permit us to recommend appropriate funding levels that are performance based and modeled as public-private partnerships.**

**Twenty of the Report's recommendations require legislative action and I think we will find more areas for cooperation than disagreement.**

**This Committee has a long and proud tradition of passing bipartisan energy legislation dating back to the 1970s. I look forward to working with the Committee to develop energy policy legislation consistent with its bipartisan tradition.**

**So, I believe that we start from a wide base of agreement. We all recognize energy as a critical challenge. We all recognize that parts of our energy supply and delivery system need enhancement or modernization. And we all recognize that conservation and stewardship must go hand in hand with increasing domestic supply.**

**Naturally, there will not be complete agreement and the President is strongly committed to the adoption of his recommendations. But I truly believe we have the basis for working together to meet America's serious energy crisis.**

**Thank you, Mr. Chairman. I would be glad to take your questions at this time.**

**END**

1855 Mr. BARTON. We thank you, Mr. Secretary. And again we  
1856 want to welcome you to the committee. The Chair would  
1857 recognize himself for 5 minutes. We are going to allow each  
1858 member one round of 5-minute questions. If there are  
1859 additional questions, we will submit them in writing to the  
1860 Secretary.

1861 As I said in my opening statement, Mr. Secretary, think  
1862 you have got the toughest job in the Cabinet, and I really  
1863 mean that. But my first question is really more of a  
1864 personal nature. Have there been any pleasant surprises as  
1865 Secretary of Energy?

1866 Secretary ABRAHAM. Well, I have to confess, Mr.  
1867 Chairman, the most pleasant surprise has been the sort of  
1868 bipartisan sympathy with which I have been treated. Both on  
1869 the Senate side and here today, I have enjoyed both the  
1870 welcome that I have received to the job and at the same time  
1871 the cautionary notes from both sides of the aisle, from  
1872 friends on both sides of the aisle, telling me how much they  
1873 sympathize with my plight. But for the fact I was previously  
1874 unemployed, I suspect I might share that viewpoint.

1875 But obviously the job is a very challenging one but,  
1876 fortunately, I am very happy to report that a number of the  
1877 appointees, the nominees of the President to major positions,  
1878 have now achieved confirmation and another group is moving  
1879 towards that point, and I think as we get our full complement



1880 | of office positions filled that will obviously make my job  
1881 | perhaps a little easier.

1882 |       Mr. BARTON. Well, let me ask you a little tougher  
1883 | question, then. You are a former Senator from the great  
1884 | State of Michigan. You are very aware that CAFE is not a  
1885 | place you eat in a restaurant, it is Corporate Average Fuel  
1886 | Economy, a fairly controversial issue in your home State.  
1887 | The President and the Vice President and you have come out  
1888 | strongly for conservation. Your proposal as it stands would  
1889 | shave 48 quads of energy from the projected increase in  
1890 | demand if we did nothing in terms of conservation.

1391 |       Do you have any thoughts that you would care to share  
1892 | with the subcommittee on what a reasonable balanced increase  
1893 | in corporate average fuel economy standards might be that  
1894 | this subcommittee should consider legislatively?

1895 |       Secretary ABRAHAM. Well, our position as reflected in  
1896 | the plan, is to recommend that the Secretary of  
1897 | Transportation, who under statute has responsibility with  
1898 | respect to CAFE standards, makes recommendations and it is in  
1899 | his domain to do so.

1900 |       But let me just say I think--Congressman Dingell isn't  
1901 | here, but ~~obviously~~ <sup>he</sup> and I have worked together on this  
1902 | issue on behalf of our constituents, but ~~we believe~~ <sup>have worked together</sup> on behalf  
1903 | of the American citizenry more broadly, with regard to <sup>CAFE</sup> ~~this~~  
1904 | in recent years. ~~I think that what~~ <sup>we</sup> effected last year in <sup>s</sup>

1905 ~~terms of~~ a compromise in the Senate that called upon the  
1906 National Academy of Sciences to make <sup>CAFE</sup> recommendations by this  
1907 July, in time for this year's considerations of the  
1908 Appropriations Committee. <sup>It</sup> was an appropriate step to have  
1909 taken last year. We acknowledged that in the recommendations  
1910 in the President's report.

1911 I think as you look at the actions taken, without any  
1912 governmental mandates, by the auto industry, you see a move  
1913 in the direction of hybrid vehicles designed to improve fuel  
1914 efficiency. <sup>There are</sup> ~~The~~ two things I would ~~just, I guess,~~ pose to  
1915 Members of Congress--and now maybe I am speaking more because  
1916 of previous roles than I am of my current one. <sup>When one</sup>  
1917 considers ~~whatever~~ might be the ultimate standards to take  
1918 into account, first the issue of safety; and second, the  
1919 issue of the disparity, the potential disparity effect on  
1920 American versus foreign manufacturing of changes. I think we  
1921 need to proceed ahead if we are going to change the fuel  
1922 efficiency standards consistent with those very important  
1923 considerations.

1924 The National Highway transportation Safety Administration  
1925 in the past has indicated that reducing the weight of  
1926 vehicles has a direct correspondence to traffic fatalities.  
1927 Gannett News Service in 1999 did a study <sup>in</sup> which they  
1928 ~~using that data~~ concluded that 46,000 Americans have lost  
1929 their lives as a consequence of changes in the size of

1930 vehicles that came about in efforts to meet CAFE standards.  
1931 I ~~would~~ hope ~~we would~~ any changes would be considered  
1932 against that backdrop. <sup>I</sup> ~~And~~ also recognize that there can be  
1933 advantages that changes in the fuel efficiency standards  
1934 might provide to nondomestic manufacturing, ~~and try to script~~  
1935 Any sort of change that might occur, <sup>must have</sup> ~~so that it has~~ an even,  
1936 rather than an uneven, impact on the various sources of  
1937 manufacturing.

1938 Mr. BARTON. Okay. This last is not a question as much  
1939 as it is a comment, something to think about. Your energy  
1940 policy proposal that the President and the Vice President,  
1941 you and the other Cabinet secretaries have put forward, shows  
1942 in the year 2020 we expect to consume 127 quads of energy  
1943 equivalent in this country. You also show that your  
1944 policies, if enacted, would save 48 quads of energy from what  
1945 the projected demand would be if we didn't have any  
1946 conservation measures. You have a supply side to your policy  
1947 but it is not quantified.

1948 I don't think we want to become totally energy  
1949 independent. I have not heard the President or yourself or  
1950 the Vice President say we should be independent, but I would  
1951 like to work with you and the other administration officials  
1952 to come up with a quantifiable target for supply in terms of  
1953 quad, how much additional quads of oil, natural gas,  
1954 electricity, coal, nuclear. And think as a starting point,

1955 | the fact that you want to save 48 quads. If our supply  
1956 | component were some--it shouldn't be 48 quads increase, but  
1957 | something that gives us a target to shoot for as we go  
1958 | through the process. Would you be willing--.

1959 | Secretary ABRAHAM. Let me point out, first of all, the  
1960 | difference that would be remaining is not 48, it would be 29  
1961 | quads. Let me also say that the gains you just alluded to  
1962 | are ones we believe will happen with these policies, but also  
1963 | with existing policies in place. We would like to go further  
1964 | than that. I hope we can. And we will look forward to  
1965 | working to gaining even further efficiencies.

1966 | At the same time, we chose not to try to specify, to make  
1967 | a guess, to pick fuels of choice or sources. We know what  
1968 | the current projections look like. And as I indicated, right  
1969 | now, absent any changes, almost all of, for example, the  
1970 | electricity generation increase we are likely to achieve over  
1971 | the next 20 years would be natural gas-driven increases. And  
1972 | a number of people have already commented on the potential  
1973 | implications of relying on a single source for most of the  
1974 | increase.

1975 | What we propose is the notion of balance between sources,  
1976 | both traditional as well as renewable, but also between  
1977 | traditional sources, so that electricity, for example--to try  
1978 | and be brief here, the current Energy Office Administration  
1979 | projections from our Department's independent arm is that as

1980 | natural gas would increase, would see a decline in the role  
1981 | of hydropower and nuclear energy in electricity generation  
1982 | over the next 20 years and a very slight increase in the role  
1983 | of renewables.

1984 |       We chose not to try to specifically pick between those  
1985 | different sources, but our view was to try to put in place  
1986 | policies that would not place total dependency on natural gas  
1987 | but would allow nuclear and hydro and renewables to play more  
1988 | robust roles than predicted and projected today.

1989 |       Mr. BARTON. Thank you. I am not trying to put you on  
1990 | the spot. I know the natural gas industry says that they  
1991 | would like to be around 30 TCF in natural gas by the year  
1992 | 2010, 2015. The coal people have some targets in terms of  
1993 | their increase if we can help them on clean coal technology.

1994 |       We don't expect the oil industry to gain supply, t we are  
1995 | hopeful we can we can do steady state. So really looking  
1996 | more at hydroelectric, renewable, and some of the others, and  
1997 | nuclear, to give us some targets. You have a better chance  
1998 | to hit the target if you know what the target is. I mean,  
1999 | every now and then, you just shoot up in the air and you hit  
2000 | something. But most of the time you have got to aim at it.  
2001 | So I just need some help in aiming. I figured you are a  
2002 | pretty good marksman.

2003 |       With that, I would recognize Mr. Markey for 5 minutes.

2004 |       Mr. MARKEY. Thank you, Mr. Chairman very much. I have

2005 | two posters that I would like to show the committee. The  
2006 | first is from a report by the Federal Government. This is  
2007 | the report on January 11th, 2001--from the Report of the  
2008 | Commission to Assess United States National Security Space  
2009 | Management, an organization which was chaired by Secretary  
2010 | Donald Rumsfeld. The figure is credited to the Headquarters  
2011 | Air Force Space Command. It is captioned, "Space Systems  
2012 | Will Transform the Conduct of Future Military Operations."  
2013 | It shows various high-technology systems anticipated being  
2014 | used by the United States, much of which will be coordinated  
2015 | by the Department of Energy in laboratories of Los Alamos and  
2016 | Livermore.

2017 |         The Commission was established by Public Law 106-65, and  
2018 | in the National Defense Authorization Act for Fiscal Year  
2019 | 2000.

2020 |         The second poster that I would like to show you is an air  
2021 | conditioner from the Web page of Goodman Manufacturing. As I  
2022 | mentioned earlier, this already meets the standard that the  
2023 | administration suspended as too onerous. Unlike national  
2024 | missile defense, the technology is virtually off the shelf  
2025 | today. And also, unlike NMD, we know it works because  
2026 | Goodman has already tested it for us in the marketplace.

2027 |         Now, this is something that Federal employees are going  
2028 | to put together. Pretty complex, huh? Technologically  
2029 | sophisticated. This is something the private sector is

2030 | already doing. Now, I would like to believe that the FEC  
2031 | employees are capable of doing this, but I technologically  
2032 | believe it is highly unlikely that we will be shooting down,  
2033 | in a minute and a half, Chinese and Russian missiles heading  
2034 | into our country in the middle of the night anytime soon.

2035 |       On the other hand, Mr. Secretary, your administration has  
2036 | decided to roll back the 30 percent improvement in air  
2037 | conditioners which the Clinton administration had  
2038 | promulgated. Now, that is going to increase over the next 20  
2039 | years the need for 43 additional 300-megawatt plants that  
2040 | will have to be constructed in the United States.

2041 |       Now, I was the author, Mr. Secretary, of the House bill  
2042 | that gave you the authority to promulgate the national apply  
2043 | and efficiency standards. And one of these provisions is a  
2044 | no rollback provision. The reason I built that in was that  
2045 | the Reagan administration had actually flouted earlier laws  
2046 | dealing with this subject. So let me read you the language  
2047 | from the statute. It says: The Secretary may not prescribe  
2048 | any amended standard which increases the maximum allowable  
2049 | energy use or decreases the minimum required energy  
2050 | efficiency of a covered product.

2051 RPTS BULKLEY

2052 DCMN HERZFELD

2053 [12 noon.]

2054 Mr. MARKEY. Here we are talking about air-conditioners.  
2055 Now, in rolling back, Mr. Secretary, the final  
2056 air-conditioning rule adopted by the Clinton administration,  
2057 you are in clear violation of this no rollback provision, and  
2058 you are in violation of that law at the same time that your  
2059 administration is saying that there is an energy crisis in  
2060 our country, and you are also saying that we have a national  
2061 security crisis that is going to call for the abrogation of  
2062 the ABM treaty so that we can deploy this new technology over  
2063 the next 5 to 10 years in the United States that will  
2064 theoretically provide an impermeable, technological  
2065 protection for our country.

2066 Mr. Secretary, are you willing to review your decision to  
2067 abrogate the implementation of the fuel economy standards for  
2068 air conditioners, especially on a day like today where 35  
2069 percent of all electricity in America is heading towards air  
2070 conditioners--in Texas, it is 75 percent of all electricity  
2071 heading towards air conditioners--in order to adopt a  
2072 standard which Goodman Manufacturing has already been able to  
2073 put out there on the marketplace?

2074 Secretary ABRAHAM. Well, as you know, Congressman, there  
2075 were two standards under consideration. In our judgment, the



2076 | standard which the Goodman Company was proposing was one that  
2077 | would not allow for a competitive marketplace to exist. And  
2078 | <sup>I believe</sup> one of the ~~I believe~~ considerations that we are expected to  
2079 | take into account as we evaluate setting these mandated  
2080 | standards is ~~whether or not~~ --not only what the payback  
2081 | periods would be--that is, to the consumer who has to pay  
2082 | more--and I am not sure what the cost of the Goodman product  
2083 | is; I suspect it is considerably greater than other types of  
2084 | models, which has an impact on the pocketbooks of average  
2085 | families--but also whether or not a competitive market will  
2086 | ensue at the end of the process.

2087 |       It was not only our judgment, but also, ~~I think~~ the  
2088 | conclusions reached both by the previous as well as the  
2089 | current Justice Department that there were significant issues  
2090 | with respect to the competitive disadvantages in the  
2091 | marketplace to other manufacturers. This is a case where, in  
2092 | fact, there was a considerable difference between  
2093 | ~~different~~ <sup>of</sup> perspectives as to whether or not such a  
2094 | competitive market would exist.

2095 |       What I would say to you is this. We <sup>were</sup> ~~have been~~ asked when  
2096 | we came into office to review three rules that were, in our  
2097 | judgment, according to our legal counsel, not in a final  
2098 | stage to have triggered the provisions you have just  
2099 | mentioned. We would be glad to share with you the legal  
2100 | considerations that we have followed. But two of the three

2101 we kept in place, and in this case we have suggested that  
2102 instead the rule ought to be a 12 versus a 13-sere air  
2103 conditioner standard, both because it would more effectively  
2104 address this question of market competitiveness and at the  
2105 same time be a little more friendly to the pocketbooks of  
2106 average Americans.

2107 But at the same time, I would note in response to your  
2108 point that in our National Energy Plan, ~~in the~~ in chapter 4  
2109 of the conservation chapter, we have been asked and our  
2110 agency has been directed to seek to expand the standards in  
2111 both products in which we already have assessed and placed  
2112 standards, as well as to expand the number of products that  
2113 we would consider.

2114 Mr. MARKEY. I think the Chairman--.

2115 Secretary ABRAHAM. I take that seriously, and one of the  
2116 priorities for us is to review appliance standards, but to  
2117 determine if additional ones should be considered, as well  
2118 as, if we go forward into the future, whether or not air  
2119 conditioners will fall into this or not. We will see.

2120 Mr. BARTON. You can tell that the Secretary was a former  
2121 Senator. He tends to give us a lot of answer for a short  
2122 question.

2123 Secretary ABRAHAM. Well, it was not meant to be a  
2124 patronizing--.

2125 Mr. BARTON. I didn't say that.

2126 Secretary ABRAHAM. --or filibustering.

2127 Mr. MARKEY. I will just say this, Mr. Secretary.

2128 Mr. BARTON. Briefly, because we have got a lot of  
2129 Members and theoretically only an hour to go.

2130 Mr. MARKEY. In my opinion, Mr. Secretary, we do have an  
2131 electricity crisis in California. It is not a national  
2132 crisis, but there is an electricity crisis in California. We  
2133 need solutions. So far your solutions have been giving us a  
2134 faith-based electricity policy. You will pray for us across  
2135 the country, but not give us specific solutions. There is no  
2136 near-term solution, you say.

2137 But when it comes to where electricity goes, and it is  
2138 primarily at the air conditioners in the summer in most of  
2139 the States in the United States, you have decided not to, in  
2140 fact, impose a tough standard on air conditioners and have  
2141 rolled back, in my opinion illegally, a final rule  
2142 promulgated by the Clinton administration that will make it  
2143 much more difficult for us in the long term to have our  
2144 country solve this electricity situation, and I think it is  
2145 an historic mistake which the administration has made.

2146 Thank you, Mr. Chairman.

2147 Mr. BARTON. Before we go to Mr. Shimkus, just so we have  
2148 the complete record, could you put in the record what the  
2149 current air conditioner efficiency standard is, what the  
2150 Clinton administration proposed, and what the Bush/Cheney

2151 administration has promulgated?

2152 Secretary ABRAHAM. Mr. Chairman, I would be glad to do  
2153 it, and I think people are seeing that we are calling for a  
2154 significant increase, approximately 20 percent, in the  
2155 efficiency of air conditioners. As was noted, if people want  
2156 more efficient air conditioners, today they can go out and  
2157 purchase them, and I think perhaps some will.

2158 Mr. BARTON. But we need the specific numbers.

2159 Secretary ABRAHAM. I will do that, sir.

2160 [The information follows:]

2161 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

**COMMITTEE: HOUSE ENERGY AND COMMERCE**  
**SUBCOMMITTEE: ENERGY AND AIR QUALITY**  
**DATE: June 13, 2001**  
**WITNESS: Secretary Spencer Abraham**  
**PAGES: 96-97 Lines 2161**

**INSERT FOR THE RECORD**

Authority	NAECA <sup>1</sup>		January 22, 2001 Final Rule		July 2001 Proposed Rule	
Product class	Seasonal Energy Efficiency Ratio (SEER)	Heating Seasonal Performance Factor (HSPF)	Seasonal Energy Efficiency Ratio (SEER)	Heating Seasonal Performance Factor (HSPF)	Seasonal Energy Efficiency Ratio (SEER)	Heating Seasonal Performance Factor (HSPF)
Split system air conditioners	10	n/a	13	n/a	12	n/a
Split system heat pumps	10	6.8	13	7.7	12	7.4
Single package air conditioners	9.7	n/a	13	n/a	12	n/a
Single package heat pumps	9.7	6.6	13	7.7	12	7.4
Space constrained products other than through-the-wall	10/9.7 <sup>2</sup>	6.8/6.6 <sup>2</sup>	reserved <sup>3</sup>	reserved <sup>3</sup>	12 <sup>4</sup>	7.4 <sup>3</sup>
Through-the-wall air conditioners and heat pumps: split systems	10 <sup>5</sup>	6.8 <sup>4</sup>	reserved <sup>3</sup>	reserved <sup>3</sup>	10.9	7.1
Through-the-wall air conditioners and heat pumps: single package	9.7 <sup>6</sup>	6.6 <sup>5</sup>	reserved <sup>3</sup>	reserved <sup>3</sup>	10.6	7.0

<sup>1</sup> NAECA, the National Appliance Energy Conservation Act of 1987, Pub. L. 100-12.

<sup>2</sup> Not considered as a separate product class in NAECA, the standards for split system and single package air conditioners and heat pumps apply.

<sup>3</sup> These were space-constrained products, defined in January 22, 2001 notice (66 FR 7196-7197), for which minimum SEER and HSPF values had not been determined. Had the January 22, 2001 rule become effective, SEER and HSPF values would have been determined in a supplemental final rule.

<sup>4</sup> Not considered as a separate class in the July 2001 proposed rule, the standards for split system air conditioners and split system heat pumps apply.

<sup>5</sup> Not considered as a separate product class in NAECA, the standards for split system air conditioners and split system heat pumps apply.

<sup>6</sup> Not considered as a separate product class in NAECA, the standards for single package air conditioners and single package heat pumps apply.

2162 Mr. BARTON. Because my understanding is you have  
2163 supported an increase in the efficiency.

2164 Secretary ABRAHAM. Right. That is correct.

2165 Mr. BARTON. But not as high a number as the outgoing  
2166 Clinton administration proposed. Isn't that correct?

2167 Secretary ABRAHAM. That is right.

2168 Mr. BARTON. The gentleman from Illinois. And we are  
2169 going to try to continue so that we don't shut the hearing  
2170 down. So if you folks want to go vote and then come back,  
2171 that would be appreciated.

2172 Mr. Shimkus for 5 minutes.

2173 Mr. SHIMKUS. Thank you, Mr. Chairman, and the rules--the  
2174 numerous rules and regulations promulgated by the last  
2175 administration as they left off, this is one of those  
2176 last-minute, in the dark of the night, surprise, and you have  
2177 this. So I think it is meritorious to review those.

2178 But what is interesting, this is really an ideological  
2179 debate, because my friend from Massachusetts--I am sorry he  
2180 left, but there are votes--is that the market has already  
2181 responded to higher efficiency standards. The market is what  
2182 we are trying to make sure works. We need to have a  
2183 diversified fuel portfolio so that the market can best choose  
2184 the right fuel for the right use. If you continue to put all  
2185 your eggs in one basket, which we have done over the past 8  
2186 years, which is natural gas, you don't have the flexibility

2187 | for the market to choose the best fuel for the best use, and  
2188 | so that is why I applaud the administration.

2189 |       One of the last-minute rules that this administration did  
2190 | not promulgate, which they had ample opportunity to, was the  
2191 | California waiver. The Clinton administration had a full 18  
2192 | months to make a decision on the California waiver but chose  
2193 | to leave office without taking a position. The last  
2194 | technical submissions from the State of California concerning  
2195 | its petitions were submitted in February 2000, a full 11  
2196 | months before the end of the Clinton administration. I could  
2197 | only assume that the Clinton administration did not  
2198 | see--there was no meritorious position, otherwise it would  
2199 | have been lumped in with all those other last-minute rules  
2200 | and regulations.

2201 |       But it is a great debate, because what it does is it has  
2202 | supposed clean air advocates arguing against clean air, and I  
2203 | know this is kind of an EPA thing, but it is timely, and it  
2204 | has supposed pro-oil individuals against big oil.

2205 |       So, again--but make no mistake, there is one proethanol  
2206 | Member of Congress. There is many of us, but there is one  
2207 | right here supporting ethanol, so I am not trying to, you  
2208 | know, hide my true colors. But the reality is the whole  
2209 | debate is fascinating from the aspect of those who support  
2210 | clean air are talking against ethanol and the oxygen  
2211 | standard, and those who should be siding with big oil

2212 | actually sided against big oil.

2213 |       But I do think, as in my opening comment, having internal  
2214 | ability to refine and have natural resources of fuel helps  
2215 | decrease our alliance on foreign oil, and I think that is  
2216 | very, very important.

2217 |       And I have to respond also to the other comment on the  
2218 | national missile defense. Just because this is one Member of  
2219 | Congress--first of all, it is not designed to shoot down  
2220 | every missile that will be launched from every country at one  
2221 | time. It is designed to be able to knock down a rogue  
2222 | nation, a terrorist missile attack. And this is one Member  
2223 | of Congress who will--I am willing to take that one shot of a  
2224 | bullet hitting a bullet if it means protecting Los Angeles,  
2225 | California, or Chicago, Illinois, or Washington, D.C. I am  
2226 | not going to be the person who says, no, I didn't think that  
2227 | was important enough. I am going to let that go.

2228 |       So to my friends on the left who don't--who doesn't think  
2229 | national security and the ability to defend our people is  
2230 | that important, I would say it is probably the primary role  
2231 | of the Federal Government is to protect its citizens.

2232 |       Now I will go on two issues. I am going to continually  
2233 | focus on the biofuels component of a National Energy Policy.  
2234 | Although in southern Illinois, we do have marginal wells. We  
2235 | have abundant coal reserves. We do have, as I said, the  
2236 | reprocessing uranium facility that is in the deep south in



2237 Metropolis, Illinois, but, of course, ethanol and biodiesel  
2238 have been projects that I have undertaken. And a couple  
2239 years ago we were able to help pass an addition to the Energy  
2240 Policy Conservation Act, which allowed the fuel addition of  
2241 biodiesel to be considered to help decrease our reliance on  
2242 foreign oil.

2243 We have another piece of legislation that has been  
2244 submitted within the last couple of weeks to affect the--and  
2245 it really is through the Transportation Committee, but for  
2246 your information, it does tie in, because any time we use  
2247 biofuels in any percentage, mixture with petroleum-based  
2248 fuels, it decreases our demand for the petroleum-based  
2249 product. That is why ethanol is helpful. That is why  
2250 biodiesel is helpful.

2251 And if it can help clean the air--I would just want to  
2252 put on record, Mr. Secretary, so you know, that we have  
2253 dropped legislation on the Congestion Mitigation Air Quality  
2254 Act, which would allow, you know, credit for fuel usage of a  
2255 renewable fuel additive so that you can get credit for the  
2256 using of biodiesel or ethanol in these highly dense  
2257 transportation corridors that are congested, and there is a  
2258 clean air aspect. There is a renewable fuel aspect and all  
2259 the great things that are involved.

2260 The last thing that I will mention, since I am the only  
2261 one talking, and no one else is around--.

2262 Mr. BARTON. We have Mr. John and Mr. Cox here.

2263 Mr. SHIMKUS. How am I doing on time, Mr. Chairman?

2264 Mr. BARTON. You are 23 seconds over.

2265 Mr. SHIMKUS. Well, then I yield back my time.

2266 Mr. BARTON. All right.

2267 The gentleman from Louisiana is recognized for 5 minutes.

2268 Mr. JOHN. Mr. Secretary, thank you very much for coming.

2269 Being from Louisiana, which is a producing State, I really

2270 understand the industry as a whole and how it impacts from an

2271 economic standpoint, and as from being a Member of Congress

2272 for the last 6 years, I understand it on the national level

2273 and its importance to our security, to our national security

2274 and other things.

2275 I seem to try to put it into very easy-to-understand

2276 components that all make up an energy policy, and, number

2277 one, I think you have to find it. Number two, you have to

2278 refine it. And number three, you have to transport it. And

2279 each one of those components, as simple as they may seem, is

2280 a very critical component of delivering an energy policy that

2281 I think all of America wants.

2282 And I would like to focus just a little bit on the

2283 transport part of my analogy. Now, it is my understanding

2284 that in California, we can--the pipelines that lead to the

2285 border can deliver a lot more natural gas, but once they get

2286 to the border, they get choked out, and--from that situation

2287 | other complications happen.

2288 | I would like to focus in on your transport part of the  
2289 | policy and how do you envision delivering, whether it is  
2290 | pipelines for natural gas that fuel electricity power plants  
2291 | or transmission lines that, without them, you really have a  
2292 | bottleneck and a problem. And I think that is a very  
2293 | important part of the whole energy debate. Some people in  
2294 | America seem to maybe focus on the production side, and it is  
2295 | high profile and Federal lands, other things that seem to be  
2296 | politically, you know, very--that sit on a powder keg. But I  
2297 | think transportation of whether it is electricity, gas or  
2298 | crude is very important. Could you hit on that, please?

2299 | Secretary ABRAHAM. Well, just ~~as first~~<sup>g</sup> a broad  
2300 | statement, I would just say that we have devoted an entire  
2301 | chapter of the energy plan to the infrastructure challenges  
2302 | we confront, for a good reason, which is that ~~even~~<sup>g</sup> if we  
2303 | increase supply, or even <sup>Just</sup> ~~if we just can~~<sup>g</sup> maintain current  
2304 | supply levels, if we have lack of capacity to deliver the  
2305 | supply, as you have indicated we have--.

2306 | Mr. JOHN. That is my point exactly.

2307 | Secretary ABRAHAM. --it affects price. It obviously  
2308 | affects shortage issues as well.

2309 | ~~We are in the~~<sup>I</sup> In the plan we are making a number of  
2310 | recommendations. With regard to the pipelines, the President  
2311 | ~~calls for~~<sup>g</sup> directs Federal agencies on an interagency basis

2312 | to try to work together for the purposes of designing and  
2313 | developing recommendations to expedite the permit process  
2314 | that is involved in pipeline siting.

2315 |       He also has encouraged FERC to consider improvement in  
2316 | the regulatory process which governs the approval of these  
2317 | interstate systems. And we also endorse Senator McCain's  
2318 | legislation with regard to pipeline safety.

2319 |       At the same time, on the transmission side, we have a  
2320 | number of recommendations which play a fairly active role in  
2321 | <sup>development</sup> ~~developing~~, because ~~I think~~ with regard to electricity  
2322 | transmission, we face a greater challenge, and that challenge  
2323 | comes about because of the fact that there is no Federal  
2324 | authority to site electricity transmission. We <sup>have</sup> ~~had~~ that  
2325 | capacity with respect to oil pipeline, natural gas pipeline  
2326 | at the Federal level. We do not have that power with respect  
2327 | to electricity.

2328 |       What we have in this country is an electricity  
2329 | transmission system that was largely constructed at a time  
2330 | when a local power plant serviced its community. It was not  
2331 | developed for long-haul transmission. It was not developed  
2332 | for a national energy or electricity market. As we have  
2333 | strived for more competition in the marketplace of  
2334 | electricity, we have done so primarily with regard to price  
2335 | control issues. And California has obviously had one type of  
2336 | experience, Pennsylvania another.

2337 But even as we deregulate on the price side, we still  
2338 have the challenge if there isn't a sufficient number of  
2339 sellers available or buyers or vice versa, and so what we are  
2340 talking about, and actually interestingly it was, I think,  
2341 well stated by Congressman Sawyer's remarks--in his remarks,  
2342 of the notion of moving towards a national highway system for  
2343 electricity.

2344 What we propose is several steps to get there: Step  
2345 number 1, an analysis by my Department to try to determine  
2346 where we need more transmission, where we need more  
2347 interconnectivity.

2348 Second, a process that would involve encouraging the FERC  
2349 to develop a rate structure system that would encourage,  
2350 through rates, the construction of the additional  
2351 transmission.

2352 Third, for us to consider the benefits of a national  
2353 grid. That is for the Department to make a review of that  
2354 and recommendations.

2355 Also looking at the Federal facility, such as the  
2356 Bonneville, BPA Administration to determine whether they  
2357 need--and somebody--I think Congressman Walden asked about  
2358 this-- whether we need to expand their debt availability so  
2359 they can participate in construction.

2360 But finally, of asking for us to develop legislation that  
2361 would provide the Federal Government with an eminent domain

2362 | power to address situations that might arise where we need  
2363 | interconnectivity.

2364 |       And there certainly have been many examples in recent  
2365 | years where the--where we are talking about interstate  
2366 | situations where somebody just won't take the action. The  
2367 | authority lies at the State and local level. If a community  
2368 | or a State decides it will not site <sup>g</sup> a transmission, it may  
2369 | make a problem far more acute.

2370 |       We have cities in this country that are limited in terms  
2371 | of how much electricity they can import, considerably  
2372 | constrained in that regard, such as New York. We have  
2373 | States, because of their nature, some--for example, Florida,  
2374 | because of being a peninsula--where we have similar kinds of  
2375 | limits in terms of importation. And within States or within  
2376 | regions, we have these. And I don't see--at least it  
2377 | wouldn't be my vision that the Federal Government, <sup>once</sup> with <sub>^</sub>  
2378 | having identified these problem areas, immediately launch  
2379 | through an imminent domain power, siting program.

2380 |       Rather, I would hope we could ~~develop~~ <sup>working</sup> together  
2381 | to develop legislation that once we identify these, we bring  
2382 | them to the attention of the appropriate regulators at the  
2383 | State and local level; that we work with FERC to perhaps  
2384 | provide a rate structure that encourages transmission  
2385 | development, <sup>But that</sup> <sub>^</sub> <sup>should</sup> be at least a last resort option  
2386 | available to us at the Federal level to make sure that we

2387 | don't have the kinds of challenges that some parts of the  
2388 | country confront, of being in situation where they literally  
2389 | can't import anymore generation where they need it most.

2390 |       Mr. JOHN. First, let me encourage you to research and  
2391 | study the national electric highway grid. I think it is  
2392 | meritorious. I think that there is some substantial reason  
2393 | to go about that. When you look--when you are looking at the  
2394 | economy today and all these e-businesses that are popping up  
2395 | everywhere, you are not sure where they are, and it really  
2396 | doesn't matter. And I think that same mindset may overlap on  
2397 | electricity. If it can be generated somewhere, does it  
2398 | matter where it comes from if it is going to plug into a  
2399 | grid, into a national highway grid?

2400 |       Secretary ABRAHAM. Well, if I could just say--and I know  
2401 | I may be a little bit over here, but if I could just add one  
2402 | other point. In addition, <sup>it would</sup> ~~to~~ helping ~~us~~ us--if we were to  
2403 | resolve these bottlenecks and so on, helping ~~us~~ us deal with  
2404 | opening ~~maybe~~ a more competitive system, ~~and~~ in addition to  
2405 | helping us address situations where there might be an  
2406 | electricity shortage in one area and a surplus in another  
2407 | that right now can't be used to address the shortage.

2408 |       And also I think it could open the way ultimately for us  
2409 | to address the NIMBY problem, which was referred to by  
2410 | Congressman Radanovich, ~~which is that~~ <sup>Right</sup> ~~Right~~ now the  
2411 | reluctance of a community to have any new generation can

2412 | create a situation with literally--you know, they have a  
2413 | problem there, but they have no option because they can't  
2414 | import any more electricity. There are communities that  
2415 | would like to increase the amount of generation they have,  
2416 | places perhaps where they already are a source, but if there  
2417 | is not enough transmission to get any additional electricity  
2418 | from there to a more grid-intensive area, they don't have  
2419 | that option.

2420 |         Mr. JOHN. Well, being from Louisiana, I could sure  
2421 | understand that mentality, that we will drill as much as you  
2422 | want down at our end. We understand the jobs that are  
2423 | created.

2424 |         Finally, let me briefly say that I look forward to  
2425 | working with you as we embark upon this issue. In my eyes, I  
2426 | do not believe that there is a more important issue facing  
2427 | this Congress, and it is not going to be solved this year or  
2428 | next year. There is no silver bullet. It is a myriad of  
2429 | things that have to be addressed in one package. I think it  
2430 | is a threat to our economy. It is a threat to our  
2431 | prosperity. I think it is a threat to our informational  
2432 | security. And it is something that we need to work on.

2433 |         Being cochairman of the Blue Dogs, we have recognized  
2434 | that, and we have activated an energy task force, cochaired  
2435 | by our colleague Ralph Hall on the committee and also Max  
2436 | Sandlin, and we are putting together principles of an energy



2437 | policy. And we are going to invite you to one of our  
2438 | meetings. I think we will play a very important role in  
2439 | this, because it is a very important issue, and I look  
2440 | forward to working with you and thank you for being here.

2441 |       Mr. WHITFIELD. [Presiding.] Mr. Secretary, I also want  
2442 | to welcome you to our panel this morning, and I was not here  
2443 | for the opening statements, but we are delighted that you are  
2444 | here. And I particularly am pleased that this administration  
2445 | is placing emphasis on all fuel sources, particularly the  
2446 | emphasis you are placing on clean coal technology, as well as  
2447 | expanding the use of nuclear fuels.

2448 |       I would like to talk to you--ask a few questions just on  
2449 | a few parochial issues as well. As you may know, I represent  
2450 | the Paducah gaseous diffusion plant, and I was pleased that  
2451 | the administration in its budget had requested \$18 million in  
2452 | a supplemental appropriation for environmental cleanup at the  
2453 | Paducah plant. And I know that you can't speak for what will  
2454 | happen here on the Hill, but it is my understanding that at  
2455 | least in your view, that the entire \$18 million was to  
2456 | be set aside for the Paducah cleanup. Is that correct?

2457 |       Secretary ABRAHAM. Yes. That is my understanding.

2458 |       Mr. WHITFIELD. And then on another issue, I really  
2459 | appreciate the Department's continued efforts to move ahead  
2460 | with the DUF6 conversion plants at both Paducah and at  
2461 | Paducah--I mean, at Paducah and at Portsmouth. Those plants

2462 | and the construction are very important obviously in trying  
2463 | to convert the depleted uranium hexafluoride into a more  
2464 | stable product.

2465 |       My understanding, the bids were submitted in March, and  
2466 | it was our hope that an award would be made no later than  
2467 | August. However, it is my understanding most recent  
2468 | estimates indicate that the DOE will not award the contract  
2469 | until about October. Is that your understanding at this  
2470 | point?

2471 |       Secretary ABRAHAM. I would have to check to see if there  
2472 | is any updated information. I honestly can't tell you a  
2473 | date, but I know that our offices work with yours, and I  
2474 | suspect the information you have just indicated is something  
2475 | that reflects the most recent estimates on our part.

2476 |       Mr. WHITFIELD. Okay. Good.

2477 |       Also, I, along with Congressman Strickland of Portsmouth,  
2478 | had written a letter to you regarding the pension benefits  
2479 | for the employees at the--for contract employees at both  
2480 | Paducah and Portsmouth. Recently, the pension benefits for  
2481 | the contract employees at Oak Ridge had been increased  
2482 | significantly, and we have not been able to determine how  
2483 | those benefits would be increased, but the benefits at the  
2484 | Paducah and Portsmouth facilities would not have been  
2485 | increased, particularly with the large surplus in the pension  
2486 | fund. And I have talked to your staff some actually this

2187 | morning, and I know that they are going to be working on  
2488 | that. And I just wanted to say to you that it is a very  
2489 | important issue, and we appreciate you all taking the time to  
2490 | look into that and get back with us.

2491 |         Secretary ABRAHAM. Well, we will, and I just would like  
2492 | to acknowledge the work you have done. We have worked with  
2493 | Congressman Strickland as well, as you have indicated he  
2494 | did in his opening statement, to try to address some of these  
2495 | issues within our complex. Obviously some of the employees  
2496 | are involved that work directly with the Department, but most  
2497 | don't. And we are trying to be responsive to their concerns,  
2498 | as expressed through you, and we will continue to work with  
2499 | you to accomplish that.

2500 |         Mr. WHITFIELD. Thank you.

2501 |         At the time USEC was privatized, they became the  
2502 | exclusive executive agent for the--implementing the Russian  
2503 | HEU agreement, and at this time the National Security Council  
2504 | is reviewing that entire agreement, and I know that you will  
2505 | be having input into that. And I would just like to make the  
2506 | comment that I think that you, SEC, has done a very good job  
2507 | as the agent for that agreement, and I--it is my hope that  
2508 | they would be able to maintain the exclusive agency  
2509 | responsibility in that. And I know that that is an ongoing  
2510 | process, and I simply just wanted to express my views on  
2511 | that. And, of course, as we move toward--I am assuming that

2512 | it is your view that we do need to always have a domestic  
2513 | capability to enrich uranium in the U.S. Do you agree with  
2514 | that?

2515 | Secretary ABRAHAM. Well, Congressman, one of the things  
2516 | which we are trying to evaluate in the early days of the new  
2517 | administration is precisely what general policies we are  
2518 | going to outline in these areas.

2519 | As you indicated, there is a national security review  
2520 | going on that embraces both the specific issues that relate  
2521 | to the USEC role and, more broadly, the HEU agreement as it  
2522 | pertains to nonproliferation, but also as to the national  
2523 | security implications both with regard to domestic production  
2524 | capabilities, as well as the capacity to import on a  
2525 | long-term basis. So that is all part of the review, and  
2526 | those are definitely considerations that will be taken into  
2527 | account.

2528 | Mr. WHITFIELD. Okay. Well, Mr. Secretary, I know that  
2529 | everyone on this committee does look forward to working with  
2530 | you as we try to solve this energy crisis in America and to  
2531 | utilize all fuels available to us. And I see that my time  
2532 | has about expired.

2533 | So has Mr. Waxman--okay. I will recognize Mr. Waxman of  
2534 | California for 5 minutes.

2535 | Mr. WAXMAN. Thank you very much, Mr. Chairman, and Mr.  
2536 | Secretary. I am pleased to have you here before us.

2537 | We want to work together with this administration, but  
2538 | the proposal that we have seen on energy just is so puzzling  
2539 | to me, because you would not get a tighter standard to make  
2540 | motor vehicles more cost-efficient, to get more fuel use more  
2541 | effectively with cars. You wouldn't get as tight a standard  
2542 | on air conditioning, which, if we had the standard that the  
2543 | last administration proposed, would have resulted in 43 fewer  
2544 | power plants from having to be built. We are not going to  
2545 | get other areas of conservation. But instead we are being  
2546 | told, well, we will just have to start drilling in the  
2547 | national Alaska wilderness area, open up all Federal lands.

2548 | We are getting some kinds of sources of energy that are  
2549 | being favored. We are getting a subsidy for coal. At the  
2550 | same time the administration is proposing a cutback on funds  
2551 | for renewables. And there is a 30 percent cut in the  
2552 | conservation fund, which is a fund that can be used to make  
2553 | greater efficiency use of electricity and other energy. So  
2554 | it is very troubling.

2555 | On the one hand, we are being told there is a crisis, let  
2556 | us drill, let's produce more energy, let us open up our  
2557 | natural resources. We are in a crisis so we need more  
2558 | supply. And yet we don't have the effective ways to use our  
2559 | energy more efficiently and to conserve.

2560 | How do you answer that?

2561 | Secretary ABRAHAM. Let me try to go through all of

2562 | those, if we can. First of all, let us just talk about  
2563 | energy efficiency and conservation. There is a major  
2564 | component of this proposal, an entire chapter devoted to  
2565 | recommendations in that area. It ranges from--on the one  
2566 | hand, to call for the expansion of combined heat and power  
2567 | program systems.

2568 |       Mr. WAXMAN. Well, let me ask you about motor vehicles.  
2569 | That is one of the major sources of use of energy. You said  
2570 | in answer to a previous question that the proposal of this  
2571 | administration is to study tighter fuel efficiency standards.  
2572 | Yet the standards were adopted in the 1970s and implemented  
2573 | in the 1980s, and we are now in the 21st century. Don't we  
2574 | need tighter standards right now to put in place for future  
2575 | motor vehicles, particularly those SUVs?

2576 |       Secretary ABRAHAM. I would note a couple things. First  
2577 | of all, we already have legislation in place that puts the  
2578 | Secretary of Transportation in charge of making these  
2579 | determinations, and I believe that is really what we have now  
2580 | urged happen. But just remember, of course, over the last  
2581 | several years, there has been a moratorium on funding to, in  
2582 | fact, make any changes with respect to--.

2583 |       Mr. WAXMAN. Well, that is a moratorium the Republicans  
2584 | in the Congress supported--.

2585 |       Secretary ABRAHAM. And it is also a moratorium that we  
2586 | do not call for in this plan. And indeed, I believe that the

2587 House--.

2588 Mr. WAXMAN. Well, because your plan--.

2589 Secretary ABRAHAM. --appropriations subcommittee just  
2590 this week has lifted that moratorium.

2591 Mr. WAXMAN. I know there is no need for a moratorium,  
2592 that the administration's proposal is to simply send it out  
2593 for further study by the National Academy of Sciences.

2594 Secretary ABRAHAM. No. That isn't the case,  
2595 Congressman. I think that, quite the contrary, we envision  
2596 in this moving forward on CAFE taking into account three  
2597 factors that I think are important. One, the study which was  
2598 a bipartisan compromise worked out last year to have the  
2599 National Academy of Sciences--and I believe in a few weeks  
2600 they will have their study completed--give us some  
2601 recommendations that should be incorporated into the  
2602 consideration and taking into account safety as well as  
2603 potentially disparate impact on manufacturing.

2604 If 46,000 Americans have died as a result of mandated  
2605 CAFE standards over the last 20 years, we ought to be looking  
2606 forward in terms of changing standards to make sure that we  
2607 do so in a fashion that doesn't--.

2608 Mr. WAXMAN. People have died because of CAFE standards?

2609 Secretary ABRAHAM. That is exactly right.

2610 Mr. WAXMAN. How is that happening?

2611 Secretary ABRAHAM. Because we--.

2612 Mr. WAXMAN. We have got more cars efficient now than  
2613 they used to be.

2614 Secretary ABRAHAM. They may be more efficient with  
2615 respect to fuel, it doesn't necessarily mean they are safer.  
2616 And the problem, I think, that the National Highway  
2617 Transportation--.

2618 Mr. WAXMAN. You are no longer the Senator from Michigan.  
2619 You are the Secretary of Energy. That argument never stood  
2620 the test of--.

2621 Secretary ABRAHAM. I am equally interested in the safety  
2622 of Americans in this job, and what I would say is that the  
2623 National Highway Transportation Safety Commission has, in  
2624 fact, found a direct correlation between the weight of  
2625 vehicles and traffic fatalities that have ensued. It is not  
2626 my numbers. It is the numbers of NHTSC. It is the  
2627 calculation done by Gannett News Service, taking into account  
2628 the data provided.

2629 Now, the issue isn't whether or not we should improve  
2630 CAFE standards. The question is can we do so without any  
2631 resultant increase in the unsafety of vehicles. And I--.

2632 Mr. WAXMAN. Well, Ford is talking about a vehicle, an  
2633 SUV, in 3 years that will get 40 miles to the gallon. Do you  
2634 think they are going to make one that is less safe than the  
2635 SUVs on the road today?

2636 Secretary ABRAHAM. I am confident they won't. And they



2637 | didn't need a government fuel efficiency standard to make it.  
2638 | The question is whether or not--what we are calling for is  
2639 | for the process to move ahead with the Secretary of  
2640 | Transportation, who has responsibility under the standards  
2641 | and the statutes in place today to make a decision.

2642 | Mr. WAXMAN. My only point is Ford says they have the  
2643 | technology. They can do it. That doesn't mean they'll do  
2644 | it. And it seems to me if we want it done, and we want to  
2645 | get the automobile industry to act, we have got to set in  
2646 | place the requirements for them and push them to do it. That  
2647 | is how we got them to move forward on safety, on fuel  
2648 | emissions from automobiles that pollute the air, on greater  
2649 | efficiency. And what I see is this administration telling  
2650 | the automobile industry, don't worry about efficiency  
2651 | standards. We are going to send it to the National Academy  
2652 | of Sciences and study it for a couple more years.

2653 | Secretary ABRAHAM. Actually, that is wrong, Congressman.  
2654 | The Congress last year in a compromise on a bipartisan basis  
2655 | sent it to the National Academy of Sciences. Their study is  
2656 | due in a matter of weeks, and when it is done, it will be  
2657 | incorporated in the Transportation Department's statutorily  
2658 | required fuel efficiency determination process.

2659 | Mr. BARTON. Okay. The gentleman's time has expired.  
2660 | The gentleman from Ohio Mr. Sawyer is recognized for 5  
2661 | minutes.

2662 Mr. SAWYER. Thank you very much, Mr. Chairman.

2663 Mr. Secretary, welcome again. I understand that in your  
2664 answer to Congressman John, that you discussed in some degree  
2665 or other the problems with transmission constraints and the  
2666 need to put a more modern ratemaking structure in place to  
2667 deal with transmission as a freestanding business enterprise,  
2668 and you mentioned Federal siting authority. I am not going  
2669 to ask you to elaborate on that at this point, but I will be  
2670 interested in looking at your response to Congressman John.

2671 Let me ask you, though, the whole question of RTO  
2672 formation is proceeding today with large numbers of  
2673 investor-owned utilities working to comply with the FERC  
2674 Order 2000. Do you think that we should allow utilities to  
2675 continue in their current progress toward RTO formations in  
2676 the free market, or in the interest of avoiding the kinds of  
2677 constraints that we have seen, formed in some places in the  
2678 country, does there need to be a government role in mandating  
2679 formation in identified places or forcing utilities to divest  
2680 of transmission--.

2681 Secretary ABRAHAM. One of the recommendations in  
2682 ~~our~~ the President's plan ~~in fact, the whole~~ as I pointed  
2683 out to Congressman John, the whole chapter is devoted to the  
2684 serious infrastructure problems that you identified in large  
2685 measure in your opening statement. And within there ~~is both~~  
2686 a call for trying to address the reliability issues ~~with and~~

2687 The problem that I see in the brief period of time I have  
2688 been in this job is while we have a variety of, I think, 10  
2689 regional reliability associations or councils, we  
2690 ~~don't~~ there is no teeth in there. There is no authority at  
2691 FERC to enforce reliability measures so that people have  
2692 some, shall we say, latitude in terms of how they behave. ~~At~~  
2693 ~~the same time~~ so we envision presenting legislation that  
2694 would move in the direction of a national reliability council  
2695 with real enforcement capabilities as one leg of the puzzle  
2696 or the stool.

2697 Second, we don't make a specific recommendation towards a  
2698 mandatory RTO approach. However, I in a letter to FERC,  
2699 I encouraged with respect to western RTO, the inclusion of the  
2700 Bonneville Power Administration because we felt there would  
2701 be a benefit from having that process in the Western States.  
2702 And we see that as a promising way to address some of these  
2703 transmission issues.

2704 One of the most important assignments I have received as  
2705 part of the National Energy Plan is the ~~required~~ ~~or the~~  
2706 requirement by the end of this year for us to make a national  
2707 assessment of where bottlenecks exist, to where  
2708 interconnectivity is required to try to address the national  
2709 highway system you suggested in your comments. How we get  
2710 from that completed project to the building and constructing  
2711 of that is, I think, dependent on, one, a rate structure that

2712 | incentivizes construction on the one hand and the ability, at  
2713 | least as a matter of last resort, if not otherwise, of the  
2714 | Federal Government to play a role in siting where we have an  
2715 | unwillingness on the part of State and local officials to do  
2716 | so.

2717 |       My hope is once we identify problem areas, perhaps that  
2718 | will bring some focus on them and cause regulators to make  
2719 | those decisions. But we believe that there needs to be  
2720 | ultimately a Federal role, if necessary.

2721 |       Mr. SAWYER. Thank you very much.

2722 |       Thank you, Mr. Chairman.

2723 |       Mr. BARTON. The gentlelady from Missouri is recognized  
2724 | for 5 minutes.

2725 |       Ms. MCCARTHY. Thank you very much, Mr. Chairman, and  
2726 | thank you, Mr. Secretary. I know in my opening statement,  
2727 | opening remarks, I posed some thoughts to you, which I am  
2728 | happy to have you get back to me on, budget items.

2729 |       I want to pursue in this 5-minute window issues that Mr.  
2730 | Whitfield and Mr. Barton both raised, and that is with regard  
2731 | to the study, that strategic review, that is to be completed  
2732 | September 1st. And in your remarks you talk about how  
2733 | important it is to maintaining energy security with regard to  
2734 | current and future technologies. I couldn't agree with you  
2735 | more.

2736 |       But I want to have you elaborate a little bit on what you

2737 | will do following that study, even though we don't  
2738 | necessarily know fully what we will find in the study. But I  
2739 | am concerned because in the budget process, which we are  
2740 | underway with here in the Congress, there are some cuts being  
2741 | made, in particular to the National Renewable Energy Lab in  
2742 | Colorado. It is managed by Midwest Research Institute in my  
2743 | district, and I have spoken to the director at length about  
2744 | this, because I believe very much in our energy labs and what  
2745 | they are trying to accomplish and that they are, in fact, key  
2746 | to our future energy security. But the cuts--the lab itself  
2747 | is going to receive about a million dollars increase in  
2748 | equipment, maintenance and repairs, but the research  
2749 | activities are said to take about 195- to 199 million cut in  
2750 | 2001 and another 140 million in 2002.

2751 | Will your strategic review be looking at the consequences  
2752 | of those cuts? And what I think personally is that they are  
2753 | very untimely, given the commitment we all seem to share in a  
2754 | bipartisan way here today for, you know, energy security,  
2755 | next-generation technologies, you know, elaborating on what  
2756 | those technologies mean.

2757 | You and I both know if you set research back for 3 years  
2758 | or more, you can't just recoup when you finally find some  
2759 | more money. You can't--you just can't pick them up where you  
2760 | left them, and we are--at least in this lab I am familiar  
2761 | with--so close to the technologies that we need--we need to

2762 use, we need to export, we need for economic development and  
2763 energy security and national security. I really think it  
2764 would be impossible to resume in the future, and it would be  
2765 a huge loss for us right now.

2766 So this report that is to be completed by September 1,  
2767 based on your review of it, will you then rethink some of the  
2768 budget items that have not been addressed, you know, and make  
2769 recommendations to the appropriators?

2770 Secretary ABRAHAM. Mr. Chairman, if I might ask, this is  
2771 an issue brought up by so many Members, I would like to just  
2772 kind of give a very comprehensive <sup>response</sup> - I will do it as quickly as  
2773 I can--~~response, but it does~~--there were so many components  
2774 with respect to the renewable energy budget.

2775 Our budget, if you eliminate congressionally directed  
2776 projects in the renewable energy area from last year's  
2777 budget, is about \$60 million less than had been in the 2001  
2778 final level of appropriations.

2779 The time frame in which we developed this budget was  
2780 almost immediate with respect to our arrival in office, and  
2781 it was not a budget that we had the ability to draw  
2782 conclusions from the National Energy Plan development,  
2783 because the budget had to be completed by February 27th, and  
2784 all the details by April the 9th, and the energy plan wasn't  
2785 finished until May the 17th. As a consequence, it put us in  
2786 a somewhat difficult position within a variety of the budget

2787 categories to try to establish priorities.

2788       What we decided to do in this area was to try to identify  
2789 programs where we saw a clear need for maintaining level  
2790 funding from previous years, and we did that with respect to  
2791 hydrogen, with respect to superconductivity, with respect to  
2792 other areas within the renewable budget, and to retain the  
2793 core competencies, although at a reduced level, of ~~the~~ <sup>several</sup>  
2794 other areas, pending guidance from the National Energy Plan,  
2795 which we have now received.

2796       If you will look at the National Energy Plan, it gives me  
2797 explicit authority to begin immediately working on a review  
2798 of both the renewables areas, as well as some of the other  
2799 areas in the fossil energy that are somewhat combined for the  
2800 purposes of making new budgetary recommendations.

2801       Now, the study that I have mentioned actually has two  
2802 phases to it. The first phase has begun. In fact, our newly  
2803 installed Assistant Secretary for Energy Efficiency and  
2804 Renewable Energy, David Garman, is already on the road,  
2805 having public hearings <sup>on</sup> ~~at~~ a regional basis. The first phase  
2806 of the study will be done on July the 10th, and the purpose  
2807 of having phase 1 was to put us in a position to make  
2808 recommendations that would apply to the 2002 budget levels.  
2809 The final project will be completed on September 1st, and I  
2810 would envision that providing us with guidance as we work  
2811 into the 2003 budget that will be forthcoming ~~obviously~~

2812 ~~essentially~~ next year, although that process within the  
2813 executive branch is already under way.

2814 I would note for the record, though, that one thing about  
2815 renewable energy that I hope we can all work together to take  
2816 into account is that a lot of the research in some of the  
2817 major areas, particularly wind, geothermal and solar, is very  
2818 mature. Our Department has spent--we have calculated almost  
2819 \$6 billion in current dollar terms over the last 20 years on  
2820 research in these areas, and yet today the contribution to  
2821 America's total energy supply in those three areas is less  
2822 than 1 percent. And, in fact, when our Energy Information  
2823 Administration was asked to estimate what the contribution  
2824 level would be in 20 years down the road, it was only a  
2825 little bit more than 1 percent. Now, I don't think any of us  
2826 want that to be the case.

2827 It seems to me the challenge we have is not only on the  
2828 research side, but also on the implementation side, and one  
2829 of the things I have also asked our division, our Energy  
2830 Efficiency/Renewable Energy Division, to do is to look at and  
2831 give us recommendations which will have to assure us of steps  
2832 that ought to be taken to translate into <sup>using</sup> ~~use~~ technologies  
2833 that have already been largely invested in.

2834 In the budget we have some--or rather in the energy plan,  
2835 we have some recommendations with respect to tax incentives.  
2836 For example, expanding the solar energy tax credit to



2837 residential as well as commercial applications; an expansion  
2838 also with respect to biomass; and some others, fuel cell  
2839 vehicles.

2840 But I think there are other factors involved as well. We  
2841 have some siting problems that are regulatory in nature  
2842 rather than research-related with regard to, for example,  
2843 wind energy farms, because people may not want to have that  
2844 in some particular part of their State or community. We  
2845 have, I think, some problems with respect to the uncertainty  
2846 of some of these tax incentives that have been only put in  
2847 place in the past for a short duration, and, therefore, it  
2848 has caused people to not be certain about whether or not  
2849 there is going to be that available in the future.

2850 We have pricing issues that I think need to be addressed.  
2851 For example, when you are using solar energy, there are  
2852 periods when, in fact, you are a net energy generator. You  
2853 are generating more in the heat of the day than you are  
2854 using. If we can incentivize or provide people who might use  
2855 a solar system the opportunity to benefit at those times  
2856 through net metering, which is available in some places, I  
2857 think that can cause an expansion of that particular  
2858 renewable.

2859 And so I think we have got to look at this both on the  
2860 research side, but also on the application side, or else that  
2861 1 percent for those three sources will be the final number,

2862 | and I don't think any of us want that to be.

2863 | Ms. MCCARTHY. Mr. Chairman, since he is addressing his  
2864 | answer to the many Members who had raised the issue, may I  
2865 | pursue briefly?

2866 | Mr. BARTON. You can ask one more question, and then we  
2867 | go to Mr. Dingell, and we will go to Mr. Walden.

2868 | Ms. MCCARTHY. Thank you, Mr. Chairman.

2869 | I thank you, Mr. Secretary, and I do hope that the study  
2870 | provides you with the impetus I think we all feel we need to  
2871 | make these other forms of energy competitive and available.  
2872 | We can look to our European friends for help there as well,  
2873 | since they are ahead of the curve on these matters, having  
2874 | had high energy costs far longer than we have.

2875 | I wanted to comment or ask your thoughts on revisiting  
2876 | the CAFE standards issue that both the Chairman and others  
2877 | have brought up. I am concerned because this committee has  
2878 | taken a look at SUVs and, you know, the danger in them, the  
2879 | design, and perhaps the tire issue. We have taken a good  
2880 | look at that. Are you suggesting there are some--that there  
2881 | are some data available that shows that the deaths due to  
2882 | CAFE standards somehow relate to SUVs, because it was my  
2883 | understanding that SUVs were exempt from those standards?

2884 | And secondly, what is wrong with the Secretary of  
2885 | Transportation and you collaboratively calling on the  
2886 | industry to become more efficient, give them a goal of a mile

2887 | per gallon per year over the next decade and call upon them  
2888 | voluntarily to meet that goal for energy security and  
2889 | national security, and just send a message that this is what  
2890 | the administration would like to see happen, all the while  
2891 | you are pursuing other studies on just what we can  
2892 | accomplish. I would like your thoughts on both, please.

2893 | Secretary ABRAHAM. Let me say with respect to the safety  
2894 | issue, as we address fuel efficiency, I think it is  
2895 | imperative that we also consider safety implications. For  
2896 | those of us who have, you know, looked at these previous  
2897 | studies, what we see is that when fuel efficiency standards  
2898 | ~~cause product~~ came into effect, one of the ways that people  
2899 | met the higher standard--one way that manufacturers can meet  
2900 | a higher standard of fuel efficiency is to make a vehicle  
2901 | lighter.

2902 | Now, if a vehicle is lighter, NHTSA has concluded that  
2903 | there is a correlation to more serious accident  
2904 | ramifications, and so I want to make sure that if we do  
2905 | change CAFE standards, that we take that into account and try  
2906 | to make sure the changes aren't ones that bring about any  
2907 | unique consequences on a safety front.

2908 | In terms of the industry, you know, first, I think we  
2909 | need to execute the already existing statutory requirements  
2910 | that are in place today, which call upon the Secretary of  
2911 | Transportation to on a--I think it is on an annual basis to,

2912 | ~~in fact~~, make recommendations with respect to fuel  
2913 | efficiency. Those have been--~~those have been~~ basically  
2914 | ~~stopped~~ because of the moratorium on funding, but ~~I believe~~  
2915 | ~~that~~ from what I gather, the moratorium is not likely to  
2916 | be--the ban or whatever is not going to be in this year's  
2917 | appropriations. At least it doesn't seem to be at this point  
2918 | on the House side.

2919 | Ms. MCCARTHY. Mr. Secretary, if I might speak from my  
2920 | heart, since I arrived here in 1995, the auto industry has  
2921 | been all over me to support legislation, to deny those CAFE  
2922 | standard changes. I think that it has stopped not because of  
2923 | budget issues, but because of politics, and I think that is  
2924 | why I suggested that you and the Secretary of Transportation  
2925 | call on the industry to be a partner in this instead of  
2926 | trying to politically keep it from happening.

2927 | Secretary ABRAHAM. Well, my point was only that the  
2928 | appropriation process has prevented the Transportation  
2929 | Department from taking the action that is otherwise  
2930 | statutorily called upon. I do believe the point you made  
2931 | with respect--or perhaps it was Congressman Waxman made with  
2932 | regard to industry now moving forward to actually have on the  
2933 | road more fuel-efficient SUVs even sooner than a time frame  
2934 | likely would be mandated is a step in a very positive  
2935 | direction, and I think we would encourage that. And I hope  
2936 | that we will see the entire industry move in that direction,

2937 | but do so in a safe way, do so in a way that doesn't have a  
2938 | disproportionate impact on whether it is American workers'  
2939 | jobs that are also affected.

2940 |       Ms. MCCARTHY. Well, it is probably very appropriate that  
2941 | the President is in Europe this week, because he will see a  
2942 | whole lot of fuel-efficient cars, and perhaps his staff can  
2943 | gather some of the data on the hazards and dangers of those.

2944 |       But, again, thank you, Mr. Chairman, for your indulgence  
2945 | in this time, and I yield back.

2946 |       Mr. BARTON. Thank you.

2947 |       The gentleman from Michigan is recognized for 5 minutes,  
2948 | Mr.---

2949 |       Mr. DINGELL. Mr. Chairman, I thank you for your  
2950 | courtesy.

2951 |       Mr. Secretary, these are friendly questions, and I think  
2952 | they will be susceptible of yes or no answers, and in view of  
2953 | the time limit, I hope you will be able to give me that yes  
2954 | or no.

2955 |       Secretary ABRAHAM. Well, I am very hesitant to say no, I  
2956 | am sure.

2957 |       Mr. DINGELL. In response to my May 14 letter on various  
2958 | waste issues, you attached a chart, indicating the program  
2959 | would experience a funding shortfall in fiscal year 2002. If  
2960 | I read this correctly, I would say that it tells me that you  
2961 | will fall nearly \$6 billion short between fiscal year 2002

2962 | and the repository opening of 2010. Is that correct, Mr.  
2963 | Secretary?

2964 | Secretary ABRAHAM. We believe--I am sorry. I can't  
2965 | answer that issue yes or no. We believe that we will have a  
2966 | funding path towards a 2010 completion, assuming that--.

2967 | Mr. DINGELL. But the chart says you will have a  
2968 | shortfall.

2969 | Secretary ABRAHAM. We are committed--.

2970 | Mr. DINGELL. It is your chart, Mr. Secretary.

2971 | Secretary ABRAHAM. Congressman, we are committed to  
2972 | moving forward to request adequate funding to meet the  
2973 | construction of--.

2974 | Mr. DINGELL. I want to address--.

2975 | Secretary ABRAHAM. --if we, in fact, feel we can make the  
2976 | recommendation.

2977 | Mr. BARTON. Will the gentleman from Michigan yield, and  
2978 | we will give you additional time, because I want to back you  
2979 | up on this.

2980 | Mr. DINGELL. Well, I will be happy to yield to the Chair  
2981 | then.

2982 | Mr. BARTON. Would the Secretary be willing to work in a  
2983 | bipartisan fashion with Congressman Dingell and myself and  
2984 | Mr. Tauzin and others to use a nuclear waste fund for the  
2985 | purpose which it was intended, which would mean in real  
2986 | language that we have to remove that budgetary cap that was

2987 | imposed, I think, 6 or 7 years ago?

2988 | Secretary ABRAHAM. Mr. Chairman and Mr. Dingell--.

2989 | Mr. BARTON. Because that is what Mr. Dingell is getting  
2990 | at. His committee did that in our nuclear waste bill in the  
2991 | last Congress.

2992 | Secretary ABRAHAM. It would be my view that those funds  
2993 | which were contributed by ratepayers through their companies  
2994 | should be used for exactly those purposes.

2995 | Mr. BARTON. Thank you.

2996 | Mr. DINGELL. Now, if we don't do something about this,  
2997 | the administration has to do something like putting it off  
2998 | budget, because there are nearly \$10 billion in unexpended  
2999 | ratepayers' monies that are supposed to be spent for the  
3000 | waste repositories Congress intended. Will you send  
3001 | legislation up to take this waste fund off budget?

3002 | Secretary ABRAHAM. We have begun discussions with the  
3003 | Office of Management and Budget to try to address how this  
3004 | can be done. We actually began those discussions in this  
3005 | year's budget period, but we did not have sufficient time to  
3006 | complete them. But I have been working with Director Daniels  
3007 | to try to move in a direction that would provide some sort of  
3008 | methodology for us to have access to those dollars.

3009 | Mr. DINGELL. You are now being sued for failure to  
3010 | proceed by the electrical utility industry, and it is my  
3011 | personal judgment you will lose all of those lawsuits, Mr.

3012 Secretary. When you lose, what are you going to do?

3013 Secretary ABRAHAM. First, let me just say when the  
3014 Chairman asked me earlier what were the pleasant surprises of  
3015 this new job, he didn't ask what the unpleasant ones were,  
3016 and one of them was that I have been sued more--.

3017 Mr. DINGELL. Your unpleasant surprises are without  
3018 limit.

3019 Mr. BARTON. It was a holdover suit. It is not you  
3020 personally.

3021 Secretary ABRAHAM. For one, I have been sued more than I  
3022 ever had planned to be in my life; and second, I would just  
3023 say that the Ranking Member had warned me about virtually all  
3024 of these matters before I took the job, so I was on notice.

3025 But obviously we believe that as the first step in the  
3026 process, we need to address the issue that pertains to a site  
3027 characterization and recommendation. Whether or not I can  
3028 make that recommendation will be based on sound science. I  
3029 believe if we begin moving forward, if the conclusions that  
3030 we reach after getting the science are that we can make a  
3031 recommendation to the President to seek license--a license to  
3032 go forward with the Nevada site, that that will have a  
3033 profound influence on a number of these issues, including the  
3034 nature of lawsuits in the future.

3035 Mr. DINGELL. Now, Mr. Secretary, I would note that EPA  
3036 has issued standards for protecting public health and the



3037 | environment at Yucca Mountain. If it proves scientifically  
3038 | suitable, can you meet the environmental standards that have  
3039 | been described to you or for you by EPA?

3040 |       Secretary ABRAHAM. Congressman, our--the process that I  
3041 | intend to go through once the site characterization science  
3042 | is presented to me will be aimed at determining not only  
3043 | whether or not to make the recommendation, but whether or  
3044 | not, in fact, we can meet the standards that are set. We  
3045 | accept these as very stringent, tough standards. There is no  
3046 | question that they are. I will certainly make the  
3047 | determination based on my evaluation of those standards  
3048 | against the science that we receive. I believe that it is  
3049 | feasible for us to meet those standards based on at least my  
3050 | preliminary examination of them, but I don't feel I should  
3051 | rush to judgment until I have actually received the site  
3052 | characterization information.

3053 |       Mr. DINGELL. Statutory standards on this point?

3054 |       Secretary ABRAHAM. I am sorry?

3055 |       Mr. DINGELL. Will the Congress have to enact statutory  
3056 | standards on this point because of the inability to meet the  
3057 | standards or to--or to proceed under the standards of the  
3058 | Department because of technical difficulties in doing so?

3059 |       Secretary ABRAHAM. At this point, I mean, there is no  
3060 | question, Congressman, that the standards that EPA has set  
3061 | are ones that go beyond either what the National Academy of

3062 Sciences or the Nuclear Regulatory Commission had established  
3063 or suggested. They are very stringent tests, and certainly  
3064 our capacity to meet them would--I would hope--resolve any  
3065 issues with respect to safety and environmental implications  
3066 of the site.

3067 I don't at this point have a recommendation for  
3068 legislation.

3069 Mr. DINGELL. So you can't answer yes or no.

3070 Now, Mr. Secretary, are you using your authority under  
3071 section 403 of the DOE Reorganization Act to propose a rule  
3072 which FERC would provide relief for--under which price relief  
3073 would be provided for California by FERC?

3074 Secretary ABRAHAM. No.

3075 Mr. DINGELL. No.

3076 Do you plan to send up a comprehensive electric  
3077 restructuring bill?

3078 Secretary ABRAHAM. We have been asked as a part of the  
3079 President's energy plan to do so. The answer is yes. We  
3080 have not begun the actual development of that legislation,  
3081 because it is--one of our goals is to work with the committee  
3082 and with counterparts on the Senate side as we determine the  
3083 approaches that would be receptive here.

3084 Mr. DINGELL. The plan also recommends legislation,  
3085 quote, clarifying Federal and State regulatory jurisdictions.

3086 I would note that consensus on this has proved impossible.

3087 | Can you tell me whether your bill would preempt State  
3088 | jurisdiction on transmission matters if you send such  
3089 | legislation up here?

3090 |         Secretary ABRAHAM. I am not sure that it would be  
3091 | contained in the same legislation that would deal with  
3092 | electricity restructuring, but as I said in the answers to  
3093 | questions from Congressman Sawyer and Congressman John, we  
3094 | believe that there are an enormous number of bottlenecks that  
3095 | exist in this country where transmission siting is  
3096 | desperately needed. We have no Federal authority to do so.  
3097 | I would--our first step in the process is going to be to try  
3098 | to evaluate where exactly the most significant needs exist  
3099 | for either additional transmission or interconnectivity. On  
3100 | the basis of that type of an evaluation, we also hope to  
3101 | present legislation that would, in fact, provide the Federal  
3102 | Government with some eminent domain authority to try to  
3103 | address these problems, although, as I said in my earlier  
3104 | comments, I would hope that would be only in a last resort  
3105 | rather than as a first impression.

3106 |         Mr. DINGELL. Would you give this authority to FERC,  
3107 | which has done an abominable job of implementing current law,  
3108 | or would you vest that authority in someone else?

3109 |         Secretary ABRAHAM. We have not made a determination.

3110 |         Mr. DINGELL. The plan also advocates repealing the  
3111 | Public Utility Holding Company Act of 1935. Would you

3112 | support consideration of this issue as a part of a  
3113 | comprehensive bill, or do you favor PUHCA repeal on a  
3114 | stand-alone basis?

3115 |       Secretary ABRAHAM. We support PUHCA repeal. The  
3116 | President indicated that in his campaign, and it is part of  
3117 | his platform. We have not made a determination as to whether  
3118 | or not to include it in--it would be certainly in the  
3119 | legislation we intend to draft, but I understand that in the  
3120 | Banking Committee of the Senate, it has moved forward as a  
3121 | freestanding vehicle, and I guess it is our intent to try to  
3122 | work with Congress to determine what the most effective way  
3123 | would be to accomplish that objective.

3124 |       Mr. DINGELL. Now, I would note--.

3125 |       Mr. BARTON. This is going to have to be the gentleman's  
3126 | last question.

3127 |       Mr. DINGELL. And I thank you, Mr. Chairman. You have  
3128 | been very courteous, and I appreciate your kindness.

3129 |       I would note that FERC concludes that market power is  
3130 | being exercised or actually abused in California's wholesale  
3131 | markets. Is this a good time to have PUHCA repeal in view of  
3132 | that, because PUHCA has a number of consumer protection  
3133 | provisions in there which apparently need somebody other than  
3134 | FERC to address?

3135 |       Secretary ABRAHAM. Well, we still support the position  
3136 | with respect to PUHCA repeal. I would say that--and would

3137 | note for the record that it is only since February of this  
3138 | year that we have actually addressed the issues of unjust and  
3139 | unreasonable prices in California with calls for refunds that  
3140 | have now totalled some \$124 million to those people who have  
3141 | been forced to pay these unjust and unreasonable rates.

3142 |       I think that--and the administration supports FERC's  
3143 | taking its responsibility seriously to, in fact, call for  
3144 | such refunds, and I would urge them to continue to vigilantly  
3145 | pursue that.

3146 |       Mr. DINGELL. Thank you, Mr. Chairman. I appreciate your  
3147 | patience.

3148 |       Mr. BARTON. Thank you.

3149 |       We are going to recognize Chairman Tauzin. The Chair is  
3150 | going to announce that Mr. Walden, Mr. Doyle, Mr. Luther and  
3151 | Mr. Strickland, have you asked questions yet? All of the  
3152 | Members who are present at 1 p.m. will be given 5 minutes of  
3153 | oral questions. Any Member that arrives after 1 p.m. will  
3154 | put their questions into the record, because the Secretary  
3155 | does have a 1 p.m. appointment. So we are probably going to  
3156 | end up here till about 1:30.

3157 |       With that, Mr. Tauzin, the full committee Chairman, is  
3158 | recognized.

3159 |       Mr. TAUZIN. Thank you, Mr. Chairman.

3160 |       Mr. Secretary, let me first remind you something you may  
3161 | not be aware of. One of the first bills I introduced upon my

3162 entry to this Congress was to repeal PUHCA back in the early  
3163 1980s, and the reason then is still the reason now. It is an  
3164 outdated piece of legislation that inhibits some utility  
3165 companies, and only some utility companies, from making  
3166 efficiency investments that are critical to their consumers,  
3167 and I include in that energy carburetion, which is one of the  
3168 carburetions that serves the utility consumers of a, strict  
3169 who are restricted in their capacity to make necessary  
3170 efficiency investments. We are not living in the 1930s and  
3171 1935, 1940s when that sort of legislation made some sense.  
3172 Today it doesn't make sense in a marketplace of competition,  
3173 and I would encourage the administration to stick with that  
3174 position, and hopefully we can get it done one day.

3175 I want to talk to you a little bit about some of the  
3176 plans we have in the committee and get your thoughts on it.  
3177 First of all, we have focused on the higher-than-necessary  
3178 gasoline prices in our marketplace that consumers are having  
3179 to deal with. And as part of our plans we hope to address  
3180 very early what we consider to be an element of a marketplace  
3181 that is unnecessarily raising gasoline prices for people, and  
3182 that is the extraordinary number of blends and different  
3183 blends and seasonal blends of boutique fuels in our country.  
3184 And we would very much like to introduce and hopefully pass  
3185 legislation somewhat standardizing that process so that if  
3186 SIPs clean air requirements of the various communities do

3187 | require some boutique fuel to help in the air cleanup, that  
3188 | they might--they might have a single or several boutique  
3189 | fuels to choose from, rather than as many grades and  
3190 | varieties, and, secondly, that there might be some easy way  
3191 | to go from winter to summer blends without emptying the tanks  
3192 | one day and having to fill them up the next day and having  
3193 | consumers face empty fuel tanks when they go to the  
3194 | marketplace.

3195 |         Does your Department agree with us that that is an area  
3196 | we ought to address sooner than later?

3197 |         Secretary ABRAHAM. Well, I think it needs to be  
3198 | addressed, and I would note that in the President's plan, the  
3199 | Environmental Protection Agency Administrator has asked to  
3200 | address it. We have talked before about the refinery  
3201 | capacity limitations that we have as a Nation, the fact that  
3202 | no new refinery has been built in 25 years, the last one down  
3203 | in your district.

3204 |         Mr. TAUZIN. You visited it--.

3205 |         Secretary ABRAHAM. Which we visited the other day.

3206 |         Mr. TAUZIN. Thanks for going there.

3207 |         Secretary ABRAHAM. The problems of strained capacity are  
3208 | obviously exacerbated to the extent that refineries have to  
3209 | produce all these, ~~you know~~, multiplicity of fuels. But the  
3210 | problem, of course, is that if you have a problem--which we  
3211 | did in Michigan last summer when a pipeline near Jackson

3212 | burst. A neighbor can't borrow from a neighbor, and a  
3213 | refinery doesn't have the ability to adjust because of these  
3214 | kinds of challenges. So we do support moving--.

3215 |         Mr. TAUZIN. In fact, Daniel Yergen called it the  
3216 | Balkanization of the American fuel marketplace, because when  
3217 | somebody runs short, a pipeline breaks or a refinery is down  
3218 | or a ship has a collision in a harbor, we automatically have  
3219 | shortages and spikes like we saw in Chicago and Milwaukee  
3220 | last year, and that some rationalization of that marketplace  
3221 | would make a lot of sense right now. And we are going to try  
3222 | to do that. We would ask your support in finding the right  
3223 | formula that gets us there.

3224 |         Secretary ABRAHAM. Well, there is no question there is a  
3225 | market liquidity problem.

3226 |         Mr. TAUZIN. The second thing is there has been a lot of  
3227 | political discussion about whether or not this administration  
3228 | and this Congress is going to support a very deep and broad  
3229 | conservation effort as part of the energy package. Obviously  
3230 | you heard the Chairman of the subcommittee announce that we  
3231 | intended to make it one of the very first things we do in  
3232 | this committee. The secretary of natural resources in  
3233 | Louisiana, when asked to comment to the administration on our  
3234 | recommendations to the national policy, led off with  
3235 | conservation, with the argument that every Btu of energy  
3236 | conserved is one you don't have to repeat in production over



3237 | time, and that we ought to move to see as much demand  
3238 | reduction as we can get in a marketplace. Do you concur with  
3239 | that kind of a strategy?

3240 | Secretary ABRAHAM. Yes, I do, and as you and I have  
3241 | spoken, there is the issue of waste as a consequence of some  
3242 | of these reliability issues. ~~Some of the one of the~~  
3243 | ~~reasons~~ <sup>SA</sup> one of the recommendations in our--in our plan has  
3244 | the Department of Energy moving immediately to consider  
3245 | expansion, for instance, in research in areas like  
3246 | superconductivity, where we believe that conservation  
3247 | achievements are most realized.

3248 | Mr. TAUZIN. In fact, we saw that in Detroit. One of the  
3249 | electric companies is now deploying superconductive--so they  
3250 | are here already. We know some of those advances are here.  
3251 | I am going to see a demonstration later today from Sandia  
3252 | Labs on a 3-year project that really facilitates net metering  
3253 | where consumers can put up solar panels and actually sell  
3254 | electricity back to the grid when they are not using it  
3255 | instead of trying to store it in batteries. All of that  
3256 | makes great sense, and our thought is that we ought to move  
3257 | first with a package that literally brings together as many  
3258 | good ideas on demand reduction and assistance to energy  
3259 | supplies through conservation and demand reduction and  
3260 | alternatives as a lead item in the package, and then follow  
3261 | it with what else we have to do in all the other more

3262 | difficult areas to get agreement on nuclear and other fuel  
3263 | production, including hopefully a clean coal technology bill.

3264 |       Again, do you endorse that strategy? Do you feel like  
3265 | you can work with us on that kind of a plan?

3266 |       Secretary ABRAHAM. <sup>It</sup>~~That~~ is for sure that we can, and I  
3267 | would actually say that as a personal matter--I can't speak  
3268 | for the White House on this, I haven't consulted with them,  
3269 | but I think moving forward in the direction you have just  
3270 | outlined as a first step would certainly be a wise course for  
3271 | the committee to follow. There is a lot of common ground--.

3272 |       Mr. BARTON. This will have to be the Chairman's last  
3273 | question.

3274 |       Mr. TAUZIN. I will not have another question. I simply  
3275 | wanted to thank you again. I know this is your first  
3276 | appearance on this side, and we deeply appreciate the time  
3277 | you spent with us, Mr. Secretary. We will spend an awful lot  
3278 | more time together as the months go by.

3279 |       Secretary ABRAHAM. Thank you. I will look forward to  
3280 | being back.

3281 |       Mr. BARTON. I thank the Chairman.

3282 |       The gentleman from Pennsylvania Mr. Doyle is recognized  
3283 | for 5 minutes.

3284 |       Mr. DOYLE. Thank you, Mr. Chairman.

3285 |       Mr. Secretary, welcome. I have several questions. I  
3286 | think what I would like to do is maybe just get them all