ONE HUNDRED SEVENTH CONGRESS

U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

W.J. "BILLY" TAUZIN, LOUISIANA,
CHAIRMAN

June 11, 2001

The Honorable Spencer Abraham
Secretary
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

2001-014228 Jun 12 p 3:11

Dear Secretary Abraham:

I am writing to confirm the invitation for you to testify before the Subcommittee on Energy and Air Quality on Wednesday, June 13, 2001, at 10:00 a.m. in 2123 Rayburn House Office Building. The hearing will focus on the National Energy Policy report of the National Energy Policy Development Group. This is one in a series of hearings on national energy policy.

According to the Energy Information Administration, over the next 20 years, growth in U.S. energy consumption will increasingly outpace energy production, if production continues to grow at the rate of the last 10 years. In May of this year, the Vice President submitted to the President a National Energy Policy report on the causes of, and ways to meet, our Nation's increasing demand for energy. The report identified five goals: modernize conservation, modernize energy infrastructure, increase energy supplies, accelerate environmental protection and improvement, and increase our Nation's energy security. The report recommended numerous regulatory and legislative reforms necessary to meet those goals.

Your testimony should address the Administration's recent proposal of a comprehensive National energy strategy to meet our Nation's increasing energy needs. Your testimony should focus on the Federal government's role in increasing energy supplies and reducing demand, and identify statutory or regulatory provisions which should be reformed concerning these issues. In addition, as Secretary of Energy, your testimony should identify specific actions being undertaken at the Department of Energy to implement the recommendations of the National Energy Policy report.

Following are important details concerning the preparation and presentation of your testimony.

The Form of Your Testimony. You are requested to submit a written statement which may be of any reasonable length and may contain supplemental materials; however, please be aware that the Committee cannot guarantee that supplemental material will be included in the printed hearing record. Your written statement should be typed, double spaced, and should include a one-page summary of the major points you wish to make. You will have an opportunity to present an oral summary of your testimony to the Subcommittee; to ensure sufficient time for Members to ask questions, your oral presentation should be limited to five minutes.

28262

Pursuant to Rule 4(b)(1) of the Rules of the Energy and Commerce Committee (a copy of which is enclosed), I am requesting you to provide 75 copies of your written statement at least two working days in advance of your appearance. This will allow Members and staff the opportunity to review your testimony. On the day of the hearing, please bring an additional 75 copies of your testimony to satisfy the anticipated public interest in this hearing.

Rule 4(b)(1) of the Committee Rules also requires that, if you have the technological capability, you should also submit a copy of your testimony in electronic format, i.e., on a computer disk. The Committee will post your testimony to the Committee Website ("http://www.house.gov/ commerce/welcome.html") after the hearing. This will increase public access to your testimony and reduce the Committee's printing costs. Please be aware that submission of your testimony in electronic form does not relieve you of the obligation to submit the requested number of printed copies of your testimony. Additional guidelines for submission of testimony in electronic format are enclosed.

Please send the electronic and printed copies of your testimony required two working days before the hearing to the attention of the Legislative Clerk for the Committee on Energy and Commerce in 2125 Rayburn House Office Building, Washington, D.C. 20515.

Publication of the Hearing Record. Rule XI, clause 2(e)(1)(A) of the Rules of the House requires the Committee to keep a written record of committee hearings which is a substantially verbatim account of remarks made during the proceedings, subject only to technical, grammatical, and typographical corrections. Your testimony, the transcript of the hearing, and any other material that the Subcommittee agrees to include in the hearing record (subject to space limitations) will be printed as a record of the hearing. You will receive a copy of the printed hearing record when it becomes available, usually 30 to 60 days after the date of the hearing.

If you have any questions concerning any aspect of your testimony, please contact Jason Bentley of the Energy and Commerce Committee staff at (202) 226-2424.

Sincerely,

Joe Barton
Chairman
Subcommittee on Energy and Air Quality

Enclosures: (1) Electronic Format Guidelines
(2) Rules for the Committee on Energy and Commerce

28263

014144

Dear Spencer Abraham,

I am a seventeen-year-old young future voter. I am also from the wonderful state of California, and I am fully aware that you realize that we are in a major power crisis. I realize that you are trying to all that can be done to help and that you must find cheaper and safer solutions to this ever growing problem, but I beg to differ. Safety and cutting down on pollution is, in my opinion, is the least of our problems for the moment. If we do not solve this problem now I am afraid that this beautiful state will be visible only in the sunlight. Some plans that you and your administration might consider could be:

-Continue plans on more drilling.

-More investments in solar, wind, and other renewable energy technologies to bring them to market faster.

-Fix, clean, and upgrade the already existing power plants, instead of building new ones to reduce the cost of construction.

-Increased production from the existing oil and gas fields, including research on the best way to transport natural gas from existing drilling sites in Alaska's Prudhoe Bay.

-Invest in coal-burning and maybe even nuclear power plants.

I realize that I may be too young to know what is going on but I know for a fact that we are in trouble and that this problem will not go away without sacrifices, so please take some of my advise seriously so that we can take care of this problem quickly.

Sincerely,

Suvar Lenguyen.

28264

MEETING/REQUEST/INVITATION FORM

OFFICE OF SCHEDULING AND ADVANCE

DATE RECEIVED: 6/11/01

EVENT DATE: 6/13/01 EVENT DATES:

EVENT TYPE: meeting

EVENT LOCATION: DC

ORGANIZATION/INDIVIDUAL: CMS Energy - CEO Bill McCarmic

EVENT CONTACT: Dave Hengebier

CONTACT PHONE: 202/293-5794 FAX:

EVENT DESCRIPTION: Mr. Bill McCarmic wishes to meet with S-1 on Wednesday, June 13th, in DC. (He is not available between 12:15 + 2pm) Says he is a friend of S-1.

MESSAGE TAKEN BY: Robyn TIME:

28265

HEARING ON THE PRESIDENT'S NATIONAL ENERGY POLICY:

CLEAN COAL TECHNOLOGY AND OIL AND GAS R&D

Tuesday, June 12, 2001

House of Representatives,

Subcommittee on Energy

Committee on Science

Washington, D.C.

Committee Hearings

of the

U.S. HOUSE OF REPRESENTATIVES

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HEARING ON THE PRESIDENT'S NATIONAL ENERGY POLICY:

CLEAN COAL TECHNOLOGY AND OIL AND GAS R&D

Tuesday, June 12, 2001

House of Representatives,

Subcommittee on Energy

Committee on Science

Washington, D.C.

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

Chairman BARTLETT. Let me call our Subcommittee hearing to order. Is Ms. Abend in the room? We are anticipating a fifth witness and hoping that she was in the room. Today we will hear from two Panels of witnesses who will discuss how we may potentially use clean coal technologies and petroleum and natural gas research and development to help meet our increasing demand for energy. Fossil fuel provides over 80 percent of the energy consumed in this country today and is likely to increase in significance as our growing population and economy produce ever greater demands on these ultimately finite energy resources.

This hearing is part of a House-wide effort and, in fact, a Hill-wide effort to consider the President's National Energy Policy. Vice President Cheney chaired the NEP, National Energy Policy task force, and I believe he did a very creditable job. It is our job in Congress to dissect the report, provide a critical review of his findings, and suggest approaches to implement its provisions where appropriate. The Energy Subcommittee of the House Science Committee has jurisdiction over all nondefense energy research and development and we take this responsibility very seriously.

In previous hearings before this Subcommittee, we heard testimony about the accelerating consumption of our finite fossil energy reserves and the environmental effects stemming

from their use. We have also considered testimony about the potential for renewable energy and whether nuclear power can help fill the gap. I am convinced that we must immediately adopt conservation and energy efficiency measures to help extend the lifetime of fossil resources and reduce emissions. We must also rapidly phase in renewable forms of energy.

Yet, even with the transition to alternative energy sources, fossil fuels will continue to be an essential part of our energy mix for the next 20 or 30 years and perhaps beyond. The correlation between economic prosperity and readily available energy is well documented. We use more energy than ever before, but our way of life has become less energy intensive. Technology, innovation, efficiency, and conservation have brought us to the point where we can be more productive with the energy we use. This is certainly an excellent trend.

Unfortunately, we are also reaching a point where the easy and inexpensive fossil fuels are being consumed and we will have to transition towards more difficult-to-extract and costly fossil fuels. We Americans are also demanding cleaner air, so some sources of fossil fuels, such as coal, that are abundant and cheap, are shunned in favor of cleaner burning natural gas, which, though currently abundant, is also finite and increasingly costly.

The question before us today is, can technology derived

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

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

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

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

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

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

[Statement of Mr. Bartlett follows:]

********** INSERT 1 **********

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

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

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

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

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

[The statement follows:]

********** COMMITTEE INSERT **********

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Perhaps, equally important, the Clean Coal Program has

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[Statement of Mr. Kripowicz follows:]

********** INSERT 2A **********

[The information follows:]

********** INSERT 2 **********

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

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

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

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