

**SECOND IN SERIES ON EFFECT OF FEDERAL TAX  
LAWS ON THE PRODUCTION, SUPPLY, AND  
CONSERVATION OF ENERGY**

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**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON SELECT REVENUE MEASURES  
OF THE  
COMMITTEE ON WAYS AND MEANS  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

—————  
JUNE 12, 2001  
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**Serial No. 107-27**

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# CONTENTS

---

Advisory of June 5, 2001, announcing the hearing .....	Page 2
--	-----------

## WITNESSES

Camp, Hon. Dave, a Representative in Congress from the State of Michigan ...	10
Capito, Hon. Shelley Moore, a Representative in Congress from the State of West Virginia .....	72
Collins, Hon. Mac, a Representative in Congress from the State of Georgia .....	28
Cunningham, Hon. Randy "Duke," a Representative in Congress from the State of California .....	18
Dunn, Hon. Jennifer, a Representative in Congress from the State of Washington .....	24
Engel, Hon. Eliot L., a Representative in Congress from the State of New York .....	67
Filner, Hon. Bob, a Representative in Congress from the State of California ...	49
Gephardt, Hon. Richard A., a Representative in Congress from the State of Missouri, and House Democratic Leader .....	36
Inslee, Hon. Jay, a Representative in Congress from the State of Washington .	60
Issa, Hon. Darrell E., a Representative in Congress from the State of California .....	76
Johnson, Hon. Nancy L. Johnson, a Representative in Congress from the State of Connecticut .....	7
Lewis, Hon. Ron, a Representative in Congress from the State of Kentucky ....	33
Markey, Hon. Edward J., a Representative in Congress from the State of Massachusetts .....	22
McDermott, Hon. Jim, a Representative in Congress from the State of Washington .....	76
Moore, Hon. Dennis, a Representative in Congress from the State of Kansas ..	64
Nussle, Hon. Jim, a Representative in Congress from the State of Iowa .....	13
Sandlin, Hon. Max, a Representative in Congress from the State of Texas .....	52
Stenholm, Hon. Charles W., a Representative in Congress from the State of Texas .....	40
Terry, Hon. Lee, a Representative in Congress from the State of Nebraska .....	70
Weller, Hon. Jerry, a Representative in Congress from the State of Illinois .....	31

## SUBMISSIONS FOR THE RECORD

U.S. Department of the Treasury, Office of Tax Policy, statement and attachments .....	88
<hr style="width: 10%; margin: auto;"/>	
American Soybean Association, statement .....	102
Davis, Hon. Susan A., a Representative in Congress from the State of California, statement .....	103
Frost, Hon. Martin, a Representative in Congress from the State of Texas, statement .....	107
Herger, Hon. Wally, a Representative in Congress from the State of California, statements .....	108
Itron Inc., Spokane, WA, LeRoy Nosbaum, letter and attachment .....	112
Langevin, Hon. James R., a Representative in Congress from the State of Rhode Island, statement .....	120
McInnis, Hon. Scott, a Representative in Congress from the State of Colorado, statement .....	121
Udall, Hon. Mark, a Representative in Congress from the State of Colorado, statement .....	122
Watkins, Hon. Wes, a Representative in Congress from the State of Oklahoma, statement .....	123
Whitfield, Hon. Ed, a Representative in Congress from the State of Kentucky, statement .....	124



**SECOND IN SERIES ON EFFECT OF FEDERAL  
TAX LAWS ON THE PRODUCTION, SUPPLY,  
AND CONSERVATION OF ENERGY**

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**TUESDAY, JUNE 12, 2001**

HOUSE OF REPRESENTATIVES,  
COMMITTEE ON WAYS AND MEANS,  
SUBCOMMITTEE ON SELECT REVENUE MEASURES,  
*Washington, DC.*

The Subcommittee met, pursuant to notice, at 2:06 p.m., in room 1100 Longworth House Office Building, Hon. Jim McCrery, (Chairman of the Subcommittee) presiding.

[The advisory announcing the hearing follows:]

# ADVISORY

FROM THE COMMITTEE ON WAYS AND MEANS

## Subcommittee on Select Revenue Measures

FOR IMMEDIATE RELEASE

June 5, 2001

No. SRM-2

CONTACT: (202) 226-5911

### McCrery Announces Second in a Series of Hearings on the Effect of Federal Tax Laws on the Production, Supply and Conservation of Energy

Congressman Jim McCrery (R-LA), Chairman, Subcommittee on Select Revenue Measures of the Committee on Ways and Means, today announced that the Subcommittee will hold a second hearing on the effect of Federal tax laws on the production, supply and conservation of energy. **The hearing will take place on Tuesday, June 12, 2001, in the main Committee hearing room, 1100 Longworth House Office Building, beginning at 2:00 p.m.**

Oral testimony at this hearing will be from Members of Congress only. However, any individual or organization not scheduled for an oral appearance may submit a written statement for consideration by the Committee and for inclusion in the printed record of the hearing.

#### BACKGROUND:

The Internal Revenue Code provides several incentives for the domestic production of oil and gas including: (1) expensing of certain exploration and development costs, (2) depletion rules, and (3) a tax credit for enhanced oil recovery costs. The tax code provides incentives for the production of electricity from certain renewable resources, including wind and closed-loop biomass facilities, and the acquisition of equipment that uses solar or geothermal energy. The tax code also encourages energy conservation by allowing taxpayers to exclude from income the value of certain energy conservation measures provided by a utility company to consumers and by providing a credit for qualified electric vehicles.

In announcing the hearing, Chairman McCrery stated: "With Americans facing rising energy costs, it is important for Congress to examine new ways to increase domestic energy production and to promote conservation. Over 30 energy related tax bills have been introduced in the 107<sup>th</sup> Congress, and I am pleased to offer this venue for Members of Congress to testify about their proposals."

#### FOCUS OF THE HEARING:

The hearing will focus on Member proposals to increase domestic production of traditional and renewable energy resources, to facilitate the distribution of energy resources, and to promote conservation measures.

#### DETAILS FOR SUBMISSION OF WRITTEN COMMENTS:

Any person or organization wishing to submit a written statement for the printed record of the hearing should *submit six (6) single-spaced copies of their statement, along with an IBM compatible 3.5-inch diskette in WordPerfect or MS Word format, with their name, address, and hearing date noted on a label*, by the close of business, Tuesday, June 19, 2001 to Allison Giles, Chief of Staff, Committee on Ways and Means, U.S. House of Representatives, 1102 Longworth House Office Building,

Washington, D.C. 20515. If those filing written statements wish to have their statements distributed to the press and interested public at the hearing, they may deliver 200 additional copies for this purpose to the Subcommittee on Select Revenue Measures office, room 1135 Longworth House Office Building, by close of business the day before the hearing.

#### **FORMATTING REQUIREMENTS:**

Each statement presented for printing to the Committee by a witness, any written statement or exhibit submitted for the printed record or any written comments in response to a request for written comments must conform to the guidelines listed below. Any statement or exhibit not in compliance with these guidelines will not be printed, but will be maintained in the Committee files for review and use by the Committee.

1. All statements and any accompanying exhibits for printing must be submitted on an IBM compatible 3.5-inch diskette in WordPerfect or MS Word format, typed in single space and may not exceed a total of 10 pages including attachments. **Witnesses are advised that the Committee will rely on electronic submissions for printing the official hearing record.**

2. Copies of whole documents submitted as exhibit material will not be accepted for printing. Instead, exhibit material should be referenced and quoted or paraphrased. All exhibit material not meeting these specifications will be maintained in the Committee files for review and use by the Committee.

3. A witness appearing at a public hearing, or submitting a statement for the record of a public hearing, or submitting written comments in response to a published request for comments by the Committee, must include on his statement or submission a list of all clients, persons, or organizations on whose behalf the witness appears.

4. A supplemental sheet must accompany each statement listing the name, company, address, telephone and fax numbers where the witness or the designated representative may be reached. This supplemental sheet will not be included in the printed record.

The above restrictions and limitations apply only to material being submitted for printing. Statements and exhibits or supplementary material submitted solely for distribution to the Members, the press, and the public during the course of a public hearing may be submitted in other forms.

Note: All Committee advisories and news releases are available on the World Wide Web at "<http://waysandmeans.house.gov>."

The Committee seeks to make its facilities accessible to persons with disabilities. If you are in need of special accommodations, please call 202-225-1721 or 202-226-3411 TTD/TTY in advance of the event (four business days notice is requested). Questions with regard to special accommodation needs in general (including availability of Committee materials in alternative formats) may be directed to the Committee as noted above.

---

Chairman MCCRERY. The hearing will come to order. Good afternoon, everyone. This hearing continues the Select Revenue Measures Subcommittee's inquiry into ways the Tax Code can promote a stable and secure supply of energy. Our first hearing last month examined proposals in the President's budget as well as expiring provisions in the Tax Code, such as section 29 tax credits for producing fuel from unconventional sources and the section 45, credit for renewable energy.

Tomorrow our third hearing will involve testimony from interest groups and business groups on other proposals. Today's hearing will give the panel an opportunity to hear from nearly two dozen of our colleagues on the House of Representatives. The fact that so many of our colleagues from across the political spectrum have taken the time to be with us today demonstrates the importance of developing a comprehensive national energy policy. I am particu-

larly pleased so many of our colleagues from the west, particularly California, will share their experiences and perspectives.

While consumers across the country are fighting higher energy prices, especially at the gas pump, Californians continue to be at risk for rolling blackouts, and the situation may get worse as we head into the hot summer months and energy consumption spikes upward. Several of the witnesses will discuss policies included in the recommendations of the National Energy Policy Development Group, which was chaired by Vice President Cheney. I look forward to this testimony to better understand proposals relating to issues such as clean cars and landfill gases.

It is impossible to overstate the complexities of energy production and distribution. The members testifying before us today will provide a wealth of ideas and experiences as to how the Tax Code can help us better meet our energy needs. As the Committee contemplates elements of an energy tax bill, their perspectives will be particularly helpful. As we review the testimony and consider which proposals represent good tax policy and should be included in any energy package considered by the Committee, I believe we must keep four principles in mind.

First, an imbalanced approach will not help us secure a stable supply of energy. Recognizing patterns of human behavior, no known technology or inducements will allow us to conserve our way out of this problem. That is especially true of proposals which cap prices and therefore insulate consumers from the true costs of greater consumption. Likewise, despite the vast untapped oil and gas reserves, increased production alone won't insure supply keeps up with demand. Alternative and renewable fuels can help close the gap, but alone are not enough.

Simply put, conservation, production and renewable and alternative fuels must all be part of our efforts to reduce our dependency on foreign oil. Second, we must address bottlenecks in the distribution chain. An adequate supply is only valuable if it can be efficiently distributed to where it is needed when it is needed.

Third, the free market still works best. government intervention frequently misses the mark. For example, it seems clear that the Midwest is experiencing spikes in motor fuel prices because of the myriad of special blend fuels which must be refined. Regulation of the market should be the last resort, not our first option. And fourth, we must balance any enhanced production with environmental concerns. If we are to explore and produce in new areas, we should do so in a manner which is sensitive to the surroundings. Now, these principles are flexible, because I believe meeting our energy needs in the long term require ideology to yield to pragmatism. Nevertheless, I believe these four principles will serve us as useful guideposts as we examine the proposals offered by our colleagues today and by other interested parties in our hearing tomorrow.

[The opening statement of Chairman McCrery follows:]

**Opening Statement of the Hon. Jim McCrery, a Representative in Congress from the State of Louisiana, and Chairman, Subcommittee on Select Revenue Measures**

The hearing will come to order. I ask our guests to please be seated.

Good afternoon. This hearing continues the Select Revenue Measures Subcommittee's inquiry into ways the tax code can promote a stable and secure supply of energy.

Our first hearing last month examined proposals in the President's budget as well as expiring provisions of the tax code, such as Section 29 tax credits for producing fuel from unconventional sources and the Section 45 credit for renewable energy.

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Today's hearing will give the panel an opportunity to hear from nearly two dozen of our colleagues in the House of Representatives.

The fact so many of our colleagues from across the political spectrum have taken the time to be with us today demonstrates the importance of developing a comprehensive national energy policy.

I am particularly pleased so many of our colleagues from the west, particularly California, will share their experiences and perspectives. While consumers across the country are fighting higher energy prices, especially at the gas pump, Californians continue to be at risk for rolling black-outs, and the situation is expected to worsen as we head into the hot summer months and energy consumption spikes upward.

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We have a long and distinguished list of Members, and I welcome them all. Before introducing our first witnesses, let me yield to my friend from New York for any opening statement he may have.

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Chairman MCCRERY. We have a long and distinguished list of Members, and I welcome them all. Before introducing our first witnesses, let me yield to my friend from New York, for any opening statement he may have. Mr. McNulty.

Mr. McNULTY. Thank you, Mr. Chairman. I am pleased to join with you and the other Committee Members today and our pro-

grams to discuss tax incentives for the production, supply and conservation of energy in our country. Since the beginning of the 107th Congress, there have been over 30 energy-related tax bills introduced and referred to the Committee on Ways and Means. These bills would provide tax incentives for increased production of oil and gas, to encourage energy efficiency and conservation measures, to improve the electricity infrastructure, to facilitate the development of alternative fuel sources, to expand the use of solar, wind, biomass and fuel cell technology, and to prevent excess profits by electricity-generating facilities.

As we proceed with the Subcommittee's hearings and markup of energy tax legislation later this month, it is important that consideration be given to how best to pay for additional tax relief. With the short-term surpluses already used up and the unclear budget situation in the longer term, it is critical that this Committee not take action which would invade the Social Security and Medicare trust funds. To the extent needed, I would suggest that we work together to develop revenue offsets to pay for energy tax reform bills adopted by the Committee in order to enact fiscally responsible reforms.

The testimony we will receive today from our distinguished colleagues will be most valuable in analyzing pending energy tax legislation. I look forward to this testimony and welcome each of you. I am especially interested in the discussion of H.R. 1275, the bill I have joined Congresswoman Johnson in sponsoring to provide tax incentives for the use of fuel cells in creating electricity. Our legislation would encourage clean and chemical-free technology on the commercial market by providing a \$1,000 per kilowatt tax credit to a purchaser of a stationary fuel cell system. A fuel cell provides electricity and heat to a non-combustion electrochemical process, thereby making it the cleanest of any electricity-generating device. The bill applies to residential and commercial consumers and allows for a variety of input, fuels applications and system sizes. The credit would be available for 5 years, at which point fuel cell manufacturers should be able to produce a product at market entry costs.

This bipartisan bill would provide a great step forward from an energy policy standpoint and a low-cost, meaningful, short-term tax incentive for new space-age industry.

Mr. Chairman, thank you for including H.R. 1275 within the scope of today's hearing. I look forward to further bipartisan discussions on how we might proceed in enacting energy tax legislation—legislative reforms. Thank you, Mr. Chairman.

[The opening statement of Mr. McNulty follows:]

**Opening Statement of the Hon. Michael R. McNulty, a Representative in Congress from the State of New York**

Mr. Chairman, I am pleased to join with you today to discuss tax incentives for the production, supply and conservation of energy in our country.

Since the beginning of the 107th Congress, there have been over 30 energy-related tax bills introduced and referred to the Ways and Means Committee. These bills would provide tax incentives for the increased production of oil and gas, to encourage energy efficiency and conservation measures, to improve the electricity infrastructure, to facilitate the development of alternative fuel sources, to expand the use of solar, wind, biomass, and fuel-cell technology, and to prevent excess profits by electricity generating facilities.

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Mr. Chairman, thank you for including H.R. 1275 within the scope of today's hearing. I look forward to further bipartisan discussions on how we might proceed in enacting energy tax legislative reforms.

Chairman MCCREY. Thank you, Mr. McNulty. And now, our first panel is already seated. There is a fourth member of the panel who is not here yet, but if Mr. McDermott shows up, staff will put him at the stand. We will hear from him—

Mr. MCNULTY. Mr. Chairman, I have been advised that Jim has been delayed, and he will be here around 4:00. So if I could ask permission if he would be included in one of the other panels, I would appreciate that.

Chairman MCCREY. Sure. That would be fine. So we will proceed with the first panel, and first, to address the Subcommittee is the chairwoman of the Health Subcommittee and a welcome guest before this Subcommittee. Mrs. Nancy Johnson from Connecticut, Mrs. Johnson.

**STATEMENT OF THE HON. NANCY L. JOHNSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CONNECTICUT**

Mrs. JOHNSON. Thank you very much, Mr. Chairman. It is indeed a pleasure to be before you and Mr. McNulty on this Subcommittee on such an extremely important matter. I think we are all conscious, those of us on the Ways and Means Committee, that the Tax Code presently is a significant component of what national energy policy we have, and so it is very important to review what it does and what it might do in the future. And I am pleased that you are undertaking that task, and I encourage you to look not only at how it can increase the supply of energy in our Nation, but how it can diversify that supply and also how it can encourage conservation as well. I am skipping through my testimony. So sorry I stumbled there. But it is just such a powerful factor in steering development, that we can ill-afford to not use it correctly at this particular time.

So in an effort to promote clean and efficient alternative energy sources, I have joined with Mr. McNulty, as he mentioned, introducing legislation to promote the use of fuel cells, which remove the hydrogen from fossil fuels to create energy with virtually no pollutants. They function like a battery, fuse battery, except fuel cells do not require recharging and are far more efficient than a combustion engine or power plant. The President's national critical technology panel included fuel cells as one of the 22 technologies essential for the United States to develop and achieve economic progress and maintain national security.

Our legislation, H.R. 1275, proposes a fuel cell tax credit for 5 years to create a market incentive for this revolutionary technology, which is reliable, will provide economic and environmental advantages to traditional fuel sources. The bill will accelerate commercialization of this technology by providing \$1,000-per-kilowatt credit for efficient stationary fuel cell systems. Stationary fuel cell systems are capable of running 24 hours a day, 7 days a week for 5 years, with only routine maintenance. And they are currently in operation today. As a distributed generation technology, fuel cells address the immediate source for secure, efficient clean energy supplies, while reducing grid demand and increasing grid flexibility.

First used by NASA in the space program—and I might say they were, early in their lives, developed through Federal grants for research, so they are a technology that has long been looked favorably on by the Federal Government, and Federal dollar had a real place in their development. They are now in hospitals, schools, military installations and manufacturing facilities and may be available for homeowners by the end of the year. Although these early products have proven energy efficient and environmentally advantageous, help at accelerating their volume production is essential in realizing low—the low prices they need to be able to be sold at for consumers to realize their full benefits.

So this is really about marketizing a technology that is already well developed that needs to go into higher volume production so the individual units will cost more and also so that the resources will be there to apply this to ever smaller technologies. There are cars in the market now that get 50 miles to the gallon, because they are a combination of fuel cells and electricity. The President has recommended tax incentives for that kind of automobile.

There are also—as we speak, there is one producer who is working on a car that is just a fuel cell that will get 500 miles to the gallon. So there has to be a way of driving this market more aggressively in order to allow the volume production that will bring prices down, make these stable producers and provide the revenue for further research.

So I just urge you to take full cognizance of the promise of this technology as you move forward. I also want to mention that I am a strong supporter of H.R. 1863 introduced by my colleague, Dave Camp, but will not go through that portion of my testimony, since he will speak to this bill more eloquently than could I. But I believe what he is trying to do in that bill, to reuse resources that we are producing day in and day out at every landfill in New England—and of course, New England has very dense landfill problems—is something we need not only to do from the point of view of energy

production, but the—from the point of view of conservation and developing a reuse mentality that in the long run will be very fruitful for America's economy, as well as for our way of life. Thank you. [The prepared statement of Mrs. Johnson follows:]

**Statement of the Hon. Nancy L. Johnson, a Representative in Congress  
from the State of Connecticut**

Mr. Chairman and Members of the Subcommittee, thank you for holding this important energy hearing. I firmly believe that a national energy policy must include promotion of alternatives to traditional energy sources. Doing so will reduce our reliance on imported oil, give consumers greater choice, stabilize energy prices, and benefit the environment at the same time.

Last year, we saw fuel prices go through the roof. This winter we saw excessively high oil and natural gas prices and this summer's gas prices are near record highs. Plain and simple, the reason our constituents find themselves faced with out-of-control heating oil and fuel prices is because our nation has no long-term energy policy.

In an effort to promote clean and efficient alternative energy sources, I have joined with Ranking Member McNulty in introducing legislation to promote the use of fuel cells which remove the hydrogen from fossil fuels to create energy with virtually no pollutants. They function much like a battery except fuel cells do not require recharging and are far more efficient than a combustion engine or power plant. The President's National Critical Technology Panel included fuel cells as one of the 22 technologies essential for the U.S. to develop to achieve economic progress and maintain national security.

Our legislation, H.R. 1275, proposes a fuel cell tax credit for five years to create a market incentive for this revolutionary technology, which is reliable and will provide economic and environmental advantages to traditional fuel sources. The bill will accelerate commercialization of this technology by providing a \$1,000 per kilowatt credit for efficient, stationary fuel cell systems.

Stationary fuel cells capable of running 24 hours a day, seven days a week for five years with only routine maintenance are currently in operation today. As a distributed generation technology, fuel cells address the immediate need for secure, efficient, clean energy supplies, while reducing grid demand and increasing grid flexibility.

First used by NASA in the space program, they are now in hospitals, schools, military installations, and manufacturing facilities and may be available for homeowners by the end of this year. Although these early products have proven energy efficiency and environmental advantages, help in accelerating volume production is essential in realizing lower prices for consumers and the full benefits of fuel cells.

I am also a strong supporter and cosponsor of H.R. 1863, introduced by our committee colleague Dave Camp to encourage the development of projects that capture landfill gas (LFG) and use it as an alternative energy source. LFG is produced as waste decomposes in landfills that serve our communities. LFG projects capture and use the gas to generate electricity or directly as an alternative fuel.

Through Section 29 of the tax code, approximately 300 landfill gas-to-energy projects nationwide were developed. Unfortunately, this "nonconventional fuel production" credit became unavailable after June 30, 1998 and, since then, no new LFG projects have been planned or constructed.

Mr. Camp's legislation would extend the Section 45 tax credit for wind energy, closed-loop biomass, and poultry waste to LFG projects. It is estimated that an additional 700 landfill gas-to-energy projects could be made economically feasible with such an incentive. Helping to bring these projects online would help the nation save more than 40 million barrels of oil annually. With that kind of potential, we must ensure that we are tapping into LFG, which is available in nearly every community in America.

I was pleased that the President's proposal calls for tax credits for fuel cell vehicles and hybrid vehicles which run on gas and electricity and a tax incentive for LFG projects. I urge the Members of the Subcommittee to also support a tax incentive for stationary fuel cells as you consider the use of the tax code to stimulate more rapid development of a comprehensive energy policy. It is technologies like fuel cells that will help us decrease our dependence on foreign oil, conserve existing oil supplies, and reduce air pollution.

Chairman MCCREY. Thank you, Mrs. Johnson. And second, another member of the Ways and Means Committee, Dave Camp from Michigan. Mr. Camp.

**STATEMENT OF THE HON. DAVE CAMP, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. CAMP. Well, thank you, Mr. Chairman. I appreciate the opportunity to be here and to testify about two legislative proposals that I have introduced, one referred to by Chairman Johnson is H.R. 1863, and also H.R. 1864. Both are initiatives that have been highlighted in President Bush's energy recommendations. My first proposal would encourage the collection and utilization of landfill gas as an energy resource. Landfill gas is naturally produced as garbage decomposes and, importantly, is 50 percent methane, a valuable fuel.

This legislation makes a tax credit under section 45 of the Tax Code available to new projects that use gas to generate electricity or to supplement local natural gas supplies. A typical medium-sized landfill can generate enough methane to produce 3 megawatts of electric power, which is enough to serve the electricity of 3,000 homes. The Nation's largest project of this kind is currently generating 50 megawatts of power. Typically these projects are located in urban areas, providing additional benefits as, quote, distributed power sources that help improve the reliability of a regional power supply. Methane gas could also be used directly as a supplement to natural gas for commercial and residential heating and as an industrial boiler fuel. There are currently 300 landfill gas energy projects nationwide which were made economically feasible by the non-conventional fuel production tax credit in section 29. As you know, Mr. Chairman, section 29 became unavailable after June 30th of 1998, and since that cutoff date, no new landfill gas projects have been planned or constructed in our country.

However, the Environmental Protection Agency (EPA) and the landfill gas industry have identified an additional 700 potential new sites where these projects could be constructed, and it is the crux of these potential new landfill projects that I hope this legislation will encourage.

My second proposal is H.R. 1864, the CLEAR Act, which stands for Clean Efficient Automobiles Resulting from Advanced Car Technologies Act. This legislation would provide consumers a tax incentive for purchasing advanced technology and alternative fuel vehicles. These incentives are one of the most positive steps that can be taken today to promote the increase in the fuel economy of new vehicles. With growing concerns about our energy supplies and prices in the United States, we should move quickly to accelerate the introduction of these alternative fuels and advanced technologies into the marketplace. All the major auto makers that sell in the U.S. market have either introduced or have announced plans to introduce vehicles that promise to provide advantages of one type or the other compared to conventional technologies. These new products may have better emissions characteristics, use alternative fuels or may provide significant increases in miles per gallon.

These new and emerging technologies at the present time are more expensive than conventional vehicles, and they must compete with them.

As these technologies gain consumer acceptance and production increases, the cost differential between these vehicles, conventional vehicles, will be reduced or eliminated.

Mr. Chairman, the CLEAR Act would provide tax incentives to help offset the higher cost of these vehicles so that consumers can—the cost to consumers can be held at a competitive level. This legislation provides incentives for a broad spectrum of vehicle and fuel technologies, and that is important, because the choice of the right vehicle and its attributes is best left to the consumer, not to the government decisions or limitations.

This legislation would develop a wide range of advanced technology and alternative fuel, such as fuel cells, hybrids, dedicated alternative fuels and battery and electric—battery electric. The CLEAR Act provides a tax credit of 50 cents per gallon of gasoline, the equivalent for the purchase of alternative fuel at retail. It would also give customers better access to alternative fuel by giving—extending a deduction for the capital costs of installing alternative fueling stations.

Finally, this bill provides tax credits to consumers to purchase alternative fuel in advanced technology vehicles, and to make certain that the tax benefit we provide translates into a corresponding benefit to the environment, we split the tax credit into one part provides a based tax credit for the purchase of vehicles dedicated to the use of alternative fuel or vehicles using advanced technologies. The other part offers a bonus credit based on the vehicle's efficiency and reduction in emissions. These tax credits would sunset within 6 years.

There has been companion legislation introduced in the Senate by Senator Hatch, and I would urge my colleagues on the Subcommittee to take a close look at this proposal. I think it has merit, and, again, Mr. Chairman, I thank you for allowing me the opportunity to testify about these proposals before you. Thank you.

[The prepared statement of Mr. Camp follows:]

**Statement of the Hon. Dave Camp, a Representative in Congress from the State of Michigan**

Mr. Chairman, I appreciate the opportunity to be able to testify before this subcommittee today about two important legislative proposals that I have recently re-introduced. As you know, President Bush recently outlined a comprehensive energy strategy for our nation. The legislation that I have introduced H.R. 1863 and H.R. 1864, the CLEAR Act, are among the initiatives that are highlighted in his recommendations.

My first proposal, HR 1863, would encourage collection and utilization of landfill gas as an energy resource. Landfill gas is naturally produced as garbage decomposes and, importantly, is 50% methane, a valuable fuel. This legislation would make the tax credit under Section 45 of the tax code available to new projects that use the gas to generate electricity or to supplement local natural gas supplies.

A typical medium sized landfill can generate enough methane to produce 3.0 megawatts of electric power, enough to serve the annual electricity needs of 3,000 homes. The nation's largest project of this kind is currently generating 50 megawatts of power. Typically, these landfill gas-to-electricity projects are located in urban areas providing an additional benefit as "distributed" power sources that help improve the reliability of the regional power supply.

The methane gas could also be used *directly* as a supplement to natural gas supplies for commercial and residential heating and as an industrial boiler fuel. More

and more of these “direct-use” projects process the landfill gas so it can be used as a clean alternative vehicle fuel.

There are currently, 300 landfill gas-to-energy projects nationwide which were made economically feasible by the “nonconventional fuel production” tax credit of Section 29. As you know, Mr. Chairman, the Section 29 tax credit became unavailable after June 30, 1998, to encourage construction of new projects. Since that cut-off date, no new landfill gas projects have been planned or constructed in our country. However, the EPA and the landfill gas industry have identified an additional 700 potential new sites where these projects could be constructed.

It is the construction of these potential new landfill gas projects that I hope my legislation will encourage. I believe, our nation should harness the energy resource that are sitting in the backyards of most of our communities rather than allow it to be wasted. These projects can help bring our nation closer to energy self-sufficiency and I would urge the members of this subcommittee to support the provisions of HR 1863.

My second proposal is H.R. 1864, the CLEAR Act which stands for the “Clean Efficient Automobiles Resulting from Advanced Car Technologies Act”. This legislation would provide consumers tax incentives for purchasing advanced technology and alternative fuel vehicles. These incentives are one of the most positive steps that can be taken today to promote increases in the fuel economy of new vehicles. With growing concerns about our energy supplies and prices in the U.S., we should move quickly to accelerate the introduction of these alternative fuels and advanced technologies into the marketplace.

All of the major automakers that sell in the U.S. market have either introduced or have announced plans to introduce vehicles that promise to provide advantages of one type or another compared to conventional, internal combustion engine technologies. Compared to conventional vehicles, these new products may have better emissions characteristics, use alternative fuels or may provide significant increases in the mileage achieved on a gallon of gasoline. Regardless, they utilize new and emerging technologies that—at the present time—are much more expensive than conventional vehicles with which they must compete. As these vehicle technologies gain consumer acceptance and production volumes increase, the cost differential between these vehicles and conventional vehicles will be reduced or eliminated.

So what do we need to do to put consumers in the drivers seat and provide them the ability to choose—and accelerate the demand for—these new technologies? Well, Mr. Chairman, the CLEAR Act would provide tax incentives to help offset the higher costs of these vehicles, so that the cost to consumers can be held at a competitive level. This legislation provides incentives for a broad spectrum of vehicle and fuel technologies. This broad coverage is very important because the choice of the right vehicle and its attributes is best left to the consumer and the marketplace, not government decisions or limitations.

Specifically, my legislation will develop market acceptance of a wide range of advanced technology and alternative fuel vehicles including: Fuel Cells, Hybrids, Dedicated Alternative Fuels and Battery Electric.

The CLEAR Act provides a tax credit of 50 cents per gasoline-gallon equivalent for the purchase of alternative fuel at retail. To give customers better access to alternative fuel, we extend an existing deduction for the capital costs of installing alternative fueling stations. We also provide a 50 percent credit for the installation costs of retail and residential refueling stations.

Finally, we provide tax credits to consumers to purchase alternative fuel and advanced technology vehicles. To make certain that the tax benefit we provide translates into a corresponding benefit to the environment, we split the vehicle tax credit in two. One part provides a base tax credit for the purchase of vehicles dedicated to the use of alternative fuel or vehicles using advanced technologies. The other part offers a bonus credit based on the vehicle’s efficiency and reduction in emissions.

Tax incentives will sunset within 6 years for all applications with the exception of fuel cell vehicles which are extended to 10 years. With minimum development cycles of 2–4 years for new vehicles, incentives are needed now to move existing designs to the market so they can accelerate the process for customer acceptance.

President Bush’s energy report includes recommendations in a number of areas to help address the U.S. energy concerns. Among the recommendations in the transportation sector is the provision of funds for consumer tax incentives for hybrid and fuel cell vehicles. It also highlights the benefits of alternative fuel and battery electric vehicles. I support these recommendations by the president. And my bill goes even further—to provide incentives for other types of new technology now available and under development that might otherwise not get an opportunity to effectively compete. So I urge that we include early in this process an appropriate provision to move such incentives along.

The CLEAR Act was introduced in the Senate by Senator Orrin Hatch and enjoys broad support from automobile manufacturers, the environmental community and alternative fuel groups. I urge my colleagues on this subcommittee to look seriously at this proposal and initiate this important step toward greater vehicle and fleet fuel economy. America will be the winner for having provided this opportunity to pull these exciting new technologies into the marketplace more quickly than they might arrive on their own merit. These consumer based tax incentives will put American vehicle owners in the drivers seat by giving them the opportunity to purchase these new advanced technology products.

Again, Mr. Chairman, thank you for allowing me the opportunity to testify today about these proposals. At this time, I would welcome any questions that members of this subcommittee may have.

[The attachments are being retained in the committee files.]

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Chairman MCCREY. Thank you, Mr. Camp. And next we have another Member of the Ways and Means Committee, who we loaned to the Budget Committee to be chairman, and we are honored to have him with us today, Mr. Nussle from Iowa.

**STATEMENT OF THE HON. JIM NUSSLE, A REPRESENTATIVE  
IN CONGRESS FROM THE STATE OF IOWA**

Mr. NUSSLE. Thank you, Mr. Chairman. First, my colleagues that are on the panel with me, I got some pretty good ideas just from listening to their testimony, and I appreciate your leadership in giving us all the opportunity to bring some of these ideas to your attention and to the attention of the rest of the panel. I think it is good to get ideas from a cross-section of the Congress when it comes to solving an issue as important as long-term energy situation facing our country. I would like to amplify in two different areas that I think need amplification within the President's plan and with our concern overall. One is in the area of conservation. I think we can do more in that area. We could strive to do more in the area of conservation.

The second is in the area of renewables. I have three bills—three ideas that I want to bring to your attention. The first one is one that gets the lonely Maytag repairmen that all of us are very familiar with from television commercials. He is pretty lonely. He wants to get into the business of helping us solve the long-term energy crisis that faces us, and I am going to try and help him do that by creating an incentive manufacturers to develop appliances that exceed the current U.S. Department of Energy (DOE) standards. We have introduced a bill which provides a modest, but I believe effective tax credit to appliance manufacturers who are able to produce high efficiency refrigerators and clothes washers that significantly exceed the current DOE standards. The purpose of this tax credit is to accelerate the production of market penetration of leading-edge appliance technologies.

Also it provides that no company can earn more than \$60 million of these tax credits over the 5-year period of the bill. It is tied to the Energy Star Program that the President has already indicated he wants to strengthen. We believe this is a way to strengthen that program. It is also structured so that manufacturers of super-energy efficient clothes washers would be eligible for a \$50 tax credit for each unit they produce that uses 35 percent less energy than this current DOE standard and \$100 tax credit maximum for units

that use 42 percent less energy than the DOE standards. This is what we are trying to do.

You know, the bill has the potential to provide enormous energy and water benefits to the Nation, as well as economic benefits to consumers over the life cycle of a super-efficient appliance. Let me give you an example of what this does. It is estimated that expanding the use of these appliances could save as much as 200 trillion BTUs, which would be the equivalent of taking 2.3 million cars off the road or shutting down six coal-fired plants for just a year. This is not an insignificant amount of energy that we are talking about here.

The amount of water necessary to meet the needs of households that could be saved here would be the equivalent of 2 years for every household in Phoenix or every household for the State of Louisiana for 4 years. I pick that one out of a hat, Mr. Chairman.

Some have advocated that this tax credit should go to consumers, and while that may, on its face, appear to be a good idea, let me give you three reasons why I think it is better to provide this for the manufacturer. One is that you limit the cost of the proposal. It is 2-1/2 times more expensive from a cost standpoint. Mr. McNulty was suggesting we have some concerns about the budget. I am concerned about that as well. This is a way to hold down the cost of a tax credit such as this.

Second, the efficiency converts the incentive into the purchased product so that the incentive is to manufacture more of these, not just on the end that—on the purchase end. And finally, it does simplify the administration of the tax credit. It has bipartisan support in the House. It also has the support of the Alliance for Resource Efficient Appliances. Their Members include the Natural Resources Defense Council, Alliance to Save Energy, the American Council for Efficient Energy Economy, the California Energy Commission, Northwest Power Planning Council. There are many who have been part of the development of this piece of legislation, and I would—I would offer it to you for your—for your opportunity.

The last two involve agricultural products. One goes hand in hand with what both my colleague just suggested, Renewable Energy From Agricultural Products Act. It creates incentives to produce energy from biodiesel, methane has been discussed, for manure waste product collection, allows for soy diesel and for switch grass use from CRP lands. So that is one I would suggest you should take a look at. It is good not only for the environment and for ag products, but it is good for energy.

And then finally, it wouldn't be—my testimony wouldn't be complete if I also didn't provide you with some good ideas with regard to ethanol use. I have what is called the Ethanol Energy Promotion Act, which provides some assistance to small ethanol cooperatives, and, you know, it is not just an Iowa issue anymore.

In fact, we did some research. We discovered that there are some plants that are looking into using and producing ethanol in California and in Louisiana, using rice as an example, and other by-products. So we have the opportunity to provide some incentives here to help encourage an industry that needs some encouragement right now if we are going to help not only deal with the long-term

energy situation, but if we are going to do it in a way that doesn't sacrifice the quality of water and the quality of air in this country.

So I offer those three ideas to you, and I really do commend you for having a hearing such as this to gather ideas from a cross section of the Congress.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Nussle follows:]

**Statement of the Hon. Jim Nussle, a Representative in Congress from the State of Iowa**

Chairman McCrery, Ranking Member McNulty, and Members of the Subcommittee:

I am pleased to be here today and appreciate the opportunity to testify before the subcommittee about the effects of federal tax laws on the production, supply and conservation of energy. This issue is extremely important in light of our current national energy situation. As you may know, I have drafted and supported several pieces of legislation that I believe will help America meet its long-term energy goals.

Increasing energy efficiency is a key provision in the President's proposed National Energy Policy. Refrigerators and clothes washers, for example, both of which are manufactured in my state, account for approximately 15 percent of all household energy consumed in the United States, and consumers spend approximately \$21 billion annually to operate these appliances. Consumers could save substantial amounts of energy and money each month, and our national economic security and environment would be enhanced, by simply replacing older inefficient appliances with newer high efficiency products.

I would like to bring to your attention a bill that a member of the Subcommittee, Representative John Tanner, and I, along with others from both sides of the aisle, introduced on March 29. H.R. 1316, the Resource Efficient Appliance Incentives Act, would provide a modest but effective tax credit to appliance manufacturers who are able to produce high efficiency refrigerators and clothes washers that significantly exceed DOE standards. Currently we have 26 cosponsors including Representative Dave Camp, Representative John Lewis, and Representative Karen Thurman, all members of the full Committee. You may also be interested to know, Mr. Chairman, that a companion bi-partisan bill has been introduced in the Senate.

The purpose of this tax credit is to accelerate the production and market penetration of leading-edge appliance technologies while creating significant environmental benefits. The more rapidly these high efficiency appliances appear in the market place, the quicker the energy savings will occur.

H.R. 1316 has been drafted to be very defined and manageable. For example, no company can earn more than \$60 million dollars in tax credits over the five-year period of this bill. Further, it is tied to the Energy Star program that the President indicated he wants to strengthen.

H.R. 1316 is structured so that manufacturers of super energy efficient clothes washers would be eligible for a \$50 tax credit for each unit they produce that uses 35% less energy than the current Department of Energy standard, and a \$100 tax credit for units that use 42% less energy than DOE's standard. Manufacturers of super energy efficient refrigerators would be eligible for a \$50 tax credit for units that are 10% more efficient than the today's DOE standard, and \$100 for units that are 15% more efficient than the DOE standard.

I believe this bill has the potential to provide enormous energy and water benefits to the nation, as well as economic benefits to consumers over the life cycle of the super efficient appliance. In fact, it is estimated that expanding the use of these super energy-efficient appliances would save over 200 trillion Btus. This would be equivalent to taking 2.3 million cars off of the road, or shutting down 6 coal-fired power plants for a year. In addition, the super efficient clothes washers would reduce the amount of water necessary to wash clothes by 870 billion gallons of water. That is approximately the amount of water necessary to meet the needs of every household for two years in a city the size of Phoenix, Arizona or every household in the state of Louisiana for four years. The net benefits to consumers from operational savings would be approximately \$1 billion.

Some have advocated that such a tax credit ought to go directly to the consumer. I believe it is preferable to give the tax credit to manufacturers for several reasons. First, the ability to limit the cost of the proposal by capping the benefits is retained. It is estimated that if the credit were to be given to the consumer the cost would be at least \$700 million, or 2½ times more than the cost of H.R. 1316.

Second, is the flexibility to direct the capital to the area of the appliance manufacturers' business that can most effectively convert the incentive into a purchased product. Some manufacturers might need to spend the money on re-tooling or purchasing equipment for their facilities. Others will chose to increase their research and development programs that would help develop technology needed to spread efficiency throughout their entire product line. Some may choose to increase sales force, educational or incentive programs on energy efficiency or create a rebate for consumers.

Lastly, it simplifies the administration of the tax credit and maximizes its benefit. A consumer tax credit could only be collected when a taxpayer files his tax return for the year in which the appliance was purchased. The passage of time between the actual purchase of the super efficient appliance and the filing of a tax return could be lengthy so there would be less incentive to purchase the high efficiency appliance. By letting the manufacturer receive the credit there is no question that the credit will be effectively leveraged.

Not only does H.R. 1316 have bi-partisan support in the House, but the Alliance for Resource Efficient Appliances (AREA) also supports this bill. AREA members include energy and environmental groups like the Natural Resources Defense Council, Alliance to Save Energy, and the American Council for Energy Efficient Economy, as well as the California Energy Commission and the Northwest Power Planning Council. H.R. 1316 is the product of the combined efforts of industry, environment, and government interests and should serve as a model for future energy legislation.

Mr. Chairman, I ask that the Subcommittee consider H.R. 1316 as you move forward in crafting an energy tax package. H.R. 1316 can play a significant role in our National Energy Policy by increasing the number and type of energy-efficient appliances in the market place, which in turn will create substantial savings for consumers and the environment. This bill will be the catalyst for a market transformation in which the long term cost savings of increased energy efficiency will lead to many new products in the market place and a significant change in the consumers purchasing decisions. Once manufacturers develop these new products, retailers and consumers will insist they stay available even after the credit program is over.

In addition, I would like to share with the committee a couple other ideas I have concerning federal tax laws and energy production and supply which have been developed through meetings with lowans to make sure renewable energy becomes an integral part of our nation's long-term energy policy. In response to President Bush's energy proposal, I have introduced two comprehensive pieces of legislation to advance renewable energy use and research.

The Ethanol Energy Promotion Act of 2001 (H.R. 1999) takes a number of specific steps to increase the use of ethanol. First, the bill promotes the development of small ethanol cooperatives. A new tax credit will be of great benefit to the many farmer groups in Iowa currently developing plans to start their own cooperatives. The bill also protects the environment and strengthens the ethanol market by immediately banning the use of MTBE as a fuel additive. Finally, this legislation creates a huge ethanol consumer by requiring the federal government to use ethanol-blended gasoline in its vehicles.

My second bill, the Renewable Energy from Agricultural Products (REAP) Act (H.R. 2000), creates incentives to produce energy from products once thought to have no use; methane, manure, and other forms of animal waste products. The REAP Act also increases demand for another farm product while promoting conservation by allowing switchgrass grown on land in the Conservation Reserve Program (CRP) to be used as an energy additive without affecting the program's payment schedule. Additionally, the REAP Act expands uses for soybeans by allowing diesel fuel blended with 2% soy-based biodiesel to receive a 3 cent/gallon exemption from the diesel fuel excise tax.

In my opinion, ethanol and biodiesel both have unlimited untapped potential. While providing a solution to our energy needs, they can also provide income to farm families. This Congress is all too aware of the prices our farmers have faced over the last few years, and I believe we could kill two birds with one stone by expanding our use of these two fuels.

My colleagues on this panel know that I support alternative fuels, and they also know that I represent farm country. Every member of this Congress tries to promote industries that are vital to their districts, and rightly so. However, I would just like to point out to this panel that research has demonstrated that ethanol and biodiesel can be made from materials other than corn or soybeans. Though I would prefer that everyone buy Iowa corn and beans, ethanol and biodiesel could potentially be produced in your own districts from your own farm products. Companies are looking

into producing ethanol in Gridley, California, using rice waste and in Lafayette, Louisiana, using organic waste.

Mr. Chairman, I appreciate the President's leadership in crafting a national energy policy. I urge you to give consideration to his aims of promoting conservation and renewable fuels. Thank you for the opportunity to participate in this important hearing. I would be happy to answer any questions on the proposals I have outlined today.

Chairman MCCRERY. Thank you, Mr. Chairman. And thank all of our first panel of witnesses for your excellent testimony. Does any Member of the Subcommittee have a question for any of the Members of the first panel? Mr. McNulty?

Mr. McNULTY. Mr. Chairman, I don't have a question. I just wanted to thank all of the Members for their testimony and say that it has been a pleasure working with Congresswoman Johnson on the fuel cell issue, and we both think that this is visionary and will, as her testimony pointed out, decrease our dependence on foreign oil, conserve existing oil supplies and reduce air pollution, and I think those are three goals that we all share. So I thank all of the Members for their testimony.

Mrs. JOHNSON. I would just comment that I think—I would just like to comment that I think the Committee can't be too aggressive in this area. We are 60 percent dependent on foreign oil. It is truly a national security issue. Seventy percent of our oil is used in transportation. I mean, we can do better than this. So there are a lot of ways that we can use this crisis to create not only a national energy policy, but also to look at these distribution issues, because one of the things about fuel cells is it is going to be very helpful in remote areas, because the bigger packs are long-term, clean supply, and it does raise the fundamental issue of whether the public should be responsible for peak load or for normal load. And whether businesses shouldn't be responsible for peak loads, because they can use fuel cells to combine with current resources to manage peak loads.

So it should involve a whole rethinking of not only grid issues, but what is the public responsibility in the energy arena, and so it is an exciting time to talk with you and I appreciate the seriousness of this Subcommittee and look forward to your product.

Chairman MCCRERY. Thank you. Any other Member of the Subcommittee wish to inquire of this panel?

In that case, thank you very much. Our next panel is composed of Jennifer Dunn, Mac Collins, Jerry Weller, Ron Lewis, and with the Subcommittee's indulgence, I will add Mr. Cunningham to the second panel since he has an engagement that he must get to quickly.

So, Mr. Cunningham, if you will come up and join the esteemed Members of the Ways and Means Committee, we will let you be an interloper here. We will even allow you to go first, Mr. Cunningham, since you have got an important engagement that you need to get to off campus.

I would remind all the Members that your written testimony that you submitted will be included in the record, and your oral testimony, of course, is also in the record, and it is just meant to summarize your written testimony. Mr. Cunningham?

Mr. McNULTY. Mr. Chairman, could I just ask one favor, also, because Mr. Markey has been working with Mr. Cunningham on

some legislation, and he is also here at the present time. If he could join on the panel with Mr. Cunningham.

Chairman MCCRERY. If he desires.

Mr. MCNULTY. I thank the Chair.

Chairman MCCRERY. Sure. Mr. Markey, do you and Mr. Cunningham have a tag team planned here for testimony?

Mr. MARKEY. We don't have it planned. That is obvious.

Chairman MCCRERY. You are testifying on the same subject matter?

Mr. MARKEY. Same subject. I am just going to be ditto marks after his testimony.

Chairman MCCRERY. Mr. Cunningham, please proceed.

**STATEMENT OF THE HON. RANDY "DUKE" CUNNINGHAM, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. CUNNINGHAM. Thank you, and I appreciate my colleagues letting me especially go first. I have got a meeting with Mr. Cheney in just a minute.

Mr. Chairman, I would like to submit the full text. I would also like to submit common questions with answers that have been scientifically based and their rationale for those questions on this legislation.

Chairman MCCRERY. Without objection.

Mr. CUNNINGHAM. And I would as like to submit a list of all of the supporters, both business, environmental and community groups, that support this legislation.

Chairman MCCRERY. Without objection.

Mr. CUNNINGHAM. I would like to thank Mr. Markey, who is doing the lion's share on this particular bill, and I would like to commend Mrs. Johnson and Mr. Camp for their testimony. Mr. Nussle testified his bill is to let the panel know that it is a little competing. Ours is more consumer-based. His goes more to business, and I would tell you that if you have a tax incentive, if business builds it, there will be a ready supply if it is a good product. Build it and they will come, like the Field of Dreams. The difference is that we feel the consumers would benefit in a given incentive. Why does a man or woman go to Sears or Wards or something on the holidays? Because they have an incentive, and that is called the sale. If you offer incentives for these different things, the consumer will benefit, and that is the direction of our particular legislation.

The other legislation that was talked about is primarily on developing means for energy. Ours is more on saving those energies that are produced in an efficient way.

California has become the poster child for energy problems over the past few years. A combination of failed regulation, lack of interstate generation and rolling blackouts, and with this summer coming, you can imagine the problems that we are going to have. We must have a policy that looks at supply side, new avenues of production, as well as a demand side. But what this H.R. 778 goes into, it is actually on the savings of energy within buildings themselves. This building, construction buildings, business buildings, we feel that it could be up to 80 percent more efficient and give rev-

enue not only back to the individuals to the businesses, to the consumers, but provide more energy efficiency for this Nation across the board.

It covers heat, cooling, water heating equipment, solar problems, and that is exactly why I think Mrs. Johnson's legislation and Mr. Camp's legislation fits right hand in hand with this. And it will reduce energy demand, bring quick relief to the power grid, but the legislation also has significant environmental benefits to the Nation. It will reduce America's greenhouse gas pollution emissions. I know there has been a lot of talk about that in the media—by at least 3 percent by 2010.

And, again, to give you a few of those groups, the Sierra Club, National Wildlife Federation—this may be a negative, but Friends of the Earth—Global Green, and this whole page is environmental groups that do support this legislation. And I would yield, you know, the time to my colleague who, as I say, is doing the lion's share on this legislation, Mr. Markey.

[The prepared statement of Mr. Cunningham follows:]

**Statement of the Hon. Randy "Duke" Cunningham, a Representative in Congress from the State of California**

Subcommittee Chairman McCreery, Ranking Member McNulty, and Members of the Subcommittee, I appreciate the Committee inviting me here today to speak in support of an important component of any National Energy Strategy, specifically the Energy Efficient Buildings Incentives Act (H.R. 778).

Mr. Chairman, California, specifically San Diego County has become the poster child for energy problems in America. Over the last year, we were hit by a combination of a failed regulation proposal and lack of in-state generation. This combination created shortages and extreme price fluctuations.

This winter was tragic and included rolling blackouts. All of you are familiar with this ongoing problem. Many regions across the country face severe challenges to their electric grid, with California being the extreme example. In addition, this situation is likely to get worse before it gets better.

New York may have serious disruptions in electricity distribution this summer and the Central U.S. may again experience similar problems to those of last year. More troubling, this summer California may have more than simply a price problem. We may actually be unable to get enough power at any price.

The problem is the result of a serious in-state imbalance between supply and demand, which has driven up the price of electricity several-fold compared to last year. This has resulted in drastically increased prices for consumers, and compromised the financial stability of utilities and businesses all across California.

America is in desperate need of a comprehensive energy policy. We must have a policy that looks at the supply side, including new avenues of production and generation. But we must also address as well as the demand side, considering innovative conservation alternatives. These policies should consider the costs and risks to consumers and businesses. They should also provide incentives for economic growth and environmental protection.

I have no illusions that developing a national consensus on a comprehensive energy policy will be easy. But, I am fairly confident that we can pass bi-partisan legislation which will meet our growing need for energy.

I believe an important piece of a comprehensive energy policy will be an expanded effort to increase energy efficiency. Energy efficiency was an important part of President Bush's energy strategy of 1991 and has been the cornerstone of a number of state efforts.

To this end, Mr. Markey of Massachusetts and I have introduced the Energy Efficient Buildings Incentives Act (H.R. 778). This is a companion to Sen. Bob Smith's S. 207 in the Senate. This legislation is designed to give new impetus to energy efficiency in buildings. This process shows tremendous short-term as well as long-term promise.

Increasing energy efficiency is one of the few policy tools that can make an immediate difference. Within a matter of months after passage of this legislation, manufacturers and building designers will be able to provide significantly increased energy efficient technology to families and businesses.

These new technologies will help in two ways: first, consumers who utilize them will immediately see lower energy bills. Second, as homes and businesses become more efficient, we will see reduced demand for fuels, and prices will come down.

The sooner we can introduce energy efficiency into the marketplace, the sooner consumers and businesses will start to see solutions to their energy problems.

Congress has passed several important pieces of bipartisan energy legislation over the past 15 years. These laws provide for more competitive and open energy markets; federal standards on the efficiency of appliances and equipment; assistance to states considering building efficiency standards; and tax incentives on the production side of the energy equation.

Utilities have also learned over the past 20 years how to develop incentives that can encourage energy efficiency. Utilities have been very successful in promoting improvements in energy efficiency.

However, there are two powerful difficulties when it comes to encouraging state-of-the-art improvements in energy efficiency, and that is why we need to work through the tax code.

The first problem is that energy-consuming devices are produced for national markets, but utilities only serve a single region.

Even if a utility offers attractive incentives for, say, an advanced new air conditioner, manufacturers will not be inclined to produce the product because their production has to be geared to national or even global demands, not those of a single region. National incentives will solve this problem.

The second difficulty is timing. A major commercial building often takes over 2 years to construct. If the architect learns that the utility is offering an incentive for energy efficiency, the first question he or she will ask is: will the incentive still be available in 30 months when my building is finished?

Most utilities will have to answer that they cannot ensure that this is the case. Therefore, the architect will refrain from making the commitment to energy efficiency.

H.R. 778 addresses both of these problems and sets the stage for unleashing a wave of new technology that can provide major advances in energy efficiency in the easiest manner.

H.R. 778 provides incentives for enhanced energy efficiency in buildings, because buildings account for over \$300 billion a year in energy costs and account for over a third of pollution emissions in the United States.

There are opportunities for new technology to save from 30% to 50%, and maybe even more of energy costs, while enhancing the productivity of workers in the buildings and increasing the comfort of families at home.

H.R. 778 targets the entire set of building-related energy systems, for non-residential buildings, commercial buildings such as offices, stores, warehouses, greenhouses, etc., as well as public buildings such as schools, hospitals, and local government buildings.

It also targets homes, including single-family, multi-family, and manufactured homes. It includes heating, cooling, and water heating equipment systems; and solar photovoltaic and water heating equipment. It provides incentives based on energy performance, not on cost.

This structure is different from the energy efficiency tax incentives of the 1970's, which were based on cost and are perceived by many to have failed. These targets are ambitious but realistic.

If they were less ambitious, there would be a risk of paying for energy efficiency investments that would have happened anyway. If they are too ambitious, no one would claim the tax incentive, which would fail to accomplish the purpose of the energy policy.

The bill provides tax incentives for a fixed time period which are intended to be temporary through the end of taxable year 2007. Six years should be sufficient to provide financial reasons for manufacturers to invest in plants producing efficient equipment.

This should be enough time for designers and contractors to get additional education and training in energy efficient design, construction practices, and to establish competitive markets for more efficient buildings and equipment.

At the end of 6 years, I anticipate that the markets for energy efficiency will be strong enough that these tax incentives will no longer be needed. I believe that these incentives can transform the markets for energy efficient buildings over these 6 years, as several utility-sponsored programs have done in the past.

This is because they rely on market forces, and establish a level playing field for competition between different industries and different companies.

H.R. 778 will reduce energy demand and bring quick relief to the power grid, which will help alleviate electric supply problems. That is why H.R. 778 is so broad-

ly endorsed by utilities, including all of California's major electric utilities and many national power generators as well.

But the legislation also has significant environmental benefits to the nation. It will reduce America's greenhouse gas pollution emissions, as well as air pollution emissions, by 3% by the year 2010.

That is why this bill is endorsed by the nation's major environmental organizations. We have worked hard to deliver a bill that has both bipartisan support in the congress and support from the business and environmental community. I have attached a list of supporters along with my statement.

Although the primary motivations for this bill are to help solve America's energy policy problems and reduce emissions, there are also large economic benefits of the bill.

By reducing energy costs for businesses, which are tax-deductible, we believe it will actually increase revenues to the Treasury over a 5-year period. Energy efficiency can be an excellent investment, with returns of 25% per year and better. By stimulating such investment, this bill will save businesses and families over \$40 billion on net by 2010.

The benefits of this bill grow over time, as more and more energy-efficient buildings are constructed and the technologies for efficiency get cheaper and better due to competition.

I want to close by saying that the solution to California and America's energy problems is not found on the supply side alone. We must address demand, and our bill will do that.

I want to thank you for the opportunity to come before the Committee today. With swift enactment, we can all enjoy lower energy bills and a better environment.

SUPPORTERS OF S. 207 / H.R. 778  
*Smith-Feinstein / Cunningham-Markey*  
*Energy Efficiency Legislation*

The Real Estate Roundtable	New England Council
National Assoc of State Energy Officials	California Building Industry Assoc.
Insulation Contractors Association of America	Florida Solar Energy Center
Home Builders Association of Central Vermont, Inc.	National Association of Counties
California Association of Building Energy Consultants	California Air Resources Board
National Council of the Housing Industry	National Insulation Association
Florida Solar Energy Industries Association	California Energy Commission
Building Owners and Managers Association	Indiana Builders Association
ENRON	American Public Power Association
Pacific Gas and Electric Company	Southern California Edison
Sacramento Municipal Utility District	Montana Power
PacificCorp	California ISO
Northern California Power Agency	Sempra Energy
CA Municipal Utilities Association	City of Los Angeles
Northeastern Public Power Association	Los Angeles Water & Power
NorthEast Utilities	National Grid USA
Narragansett Electric Company	Granite State Electric Company
Massachusetts Electric	
Natural Resources Defense Council	Sierra Club
League of Conservation Voters	National Wildlife Federation
Environmental Defense	Consumer's Choice Council
U.S. PIRG	The Wilderness Society
World Wildlife Federation	National Environmental Trust
Defenders of Wildlife	Physicians for Social Responsibility
American Oceans Campaign	Global Green USA
Environmental and Energy Study Institute	Friends of the Earth
Legal Environmental Assistance Foundation, Inc	Union of Concerned Scientists
Michigan Environmental Council	World Wildlife Fund
Minnesotans for an Energy Efficient Economy	Consumer's Choice Council
American Rivers	National Environmental Trust

Izaak Walton League of America	National Audubon Society
North American Insulation Manufacturers Association	Trane
Air Conditioning Contractors of America	Siemens Solar Industries
Foamed Polystyrene Alliance	Climatic-Solar Corp
American Portland Cement Alliance	Energy Partners
Polyisocyanurate Insulation Manufacturers Association	Solar Systems of Florida
American Energy Technologies	AllSolar Service Company Inc.
American Solar Energy	Solar-Fit
Energy Conservation Services of North Florida	Solar Source

05/08/01

(THESE ARE SOME OF THE BUSINESSES WHICH THE TRADE ASSOCIATIONS REPRESENT BUT HAVE NOT NECESSARILY SPECIFICALLY SIGNED ON)

Honeywell, Inc.	Vulcan Materials
Evanite Fiber Corp	Certain Teed Corp
Fibrex Insulations, Inc.	Isolatik International
Johns Manville Corp	Knauf Fiber Glass
MFS, Inc.	Owens Corning
OCHT	Rock Wool Manufacturing Co.
Roxul, Inc.	Sloss Industries Corp
Thermafiber LLC	USG Interiors, Inc.
Western Fiberglass Group	Air Products & Chemicals, Inc.
Akzo Nobel	Atlas Roofing Corp
BASF Corp	Bayer
C.K. Witco Corp	Carlisle Syntec, Inc.
Dow Chemical USA	Elf Atochem North America, Inc.
Exxon Chemical Co.	Firestone Building Products Co.
Goldschmidt Chemical Co.	Honeywell International
Hunter Panels	Huntsman Corp
Huntsman Polyurethane	IKO Industries, Ltd
Johns Manville Corp	KoSa
Laroche Industries, Inc.	OAF
Old American Products	Petrocel S.A.
Phillips 66 Co.	Rmax, Inc.
Solvay Fluorides, Inc.	Stepan Co.

**STATEMENT OF THE HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS**

Mr. MARKEY. I thank the gentleman very much, and this is a true partnership, in fact. Duke and I on any ADA scale would definitely average 50. I would have 100 and Duke would not. So obviously what we are trying to do is define common sense solutions to the problem.

The United States only has 3 percent of the world's oil reserves. The Organization of Petroleum Exporting Countries (OPEC) nations have 75 percent. Obviously we are never going to be able to fully win any race against OPEC in oil production. What is our advantage? Our advantage is technology. We are the technological giant in the world, and as my mother used to say, if you work smarter, not harder, you can get to the correct result much more quickly. So in summary, how does the taxpayer qualify for the tax incentive? Well, a homeowner would have to increase the overall efficiency of their home by 30 to 50 percent. A business would have to increase by 50 percent, above already-existing minimal standards. They would have to go above that.

How much incentives do taxpayers get? Well, a homeowner would get \$2,000 if they could—a tax credit up to \$2,000 if they could improve the efficiency by 30 to 50 percent. A businessperson would get \$2.25 per square foot of commercial building space if they could increase their overall efficiency by 50 percent.

How does it benefit the country? In sum, it reduces consumer energy cost, if this is fully implemented, by \$10 billion. It produces economic activity, because 440,000 new jobs would have to be created in order to implement this kind of a national tax credit-driven policy. It is the equivalent in air pollutants of taking 20 percent of all of the automobiles in the United States off the road.

So, in other words, it is greenhouse-gas friendly, because it definitely deals with those issues. And it improves the electric reliability of our Nation by reducing the need for 30,000 megawatts of electricity having to be produced in our country.

So in other words, it is just looking at the existing homes, commercial residences, giving a tax incentive. As long as there is substantial improvement, they qualify. And Duke and I really do believe that this is a common sense, bipartisan, non-ideological way in which we can use the market in order to drive solutions. And I thank you for giving me the opportunity of testifying.

Mr. CUNNINGHAM. If I may also say, this is also supported in the Senate by Mr. Smith and Ms. Feinstein, S. 207, which is a very strong bipartisan bill already moving forward. Thank you.

[The prepared statement of Mr. Markey follows:]

**Statement of the Hon. Edward J. Markey, a Representative in Congress  
from the State of Massachusetts**

Mr. Chairman, thank you for allowing me the opportunity to testify before the Subcommittee this afternoon.

I am pleased to join with the gentleman from California (Mr. Cunningham) and a bipartisan coalition of 43 other Democrats and Republicans in sponsoring the “Energy Efficient Buildings Incentives Act.”

Energy use in buildings in this country accounts for approximately 35% of polluting air emissions nationwide about twice as much as the pollution from cars. It costs the average American \$1500 to heat and cool their homes every year, which amounts to an annual cost of \$150 billion nationwide. Commercial buildings and schools incur \$100 billion in annual utility bills. And yet, the tax code fails to provide sufficient incentives to reduce wasteful and unnecessary energy use. This is bad policy, and it must be changed. In these times of rolling blackouts in California and rising electricity prices throughout many regions of the country, we can and should be looking for ways to ensure that energy is never wasted. Instead, we should ensure that technologies that can enable us to become more efficient in our use of energy and deployed as widely as possible.

That is why the Gentleman from California (Mr. Cunningham) and I have introduced the “Energy Efficient Buildings Incentives Act.” Our bill would spur use of energy efficient technologies, such as super-efficient air conditioning units, which could result in a substantial drop in peak electricity demand of at least 20,000 megawatts—the equivalent of the output of 40 large power plants. At a time when many communities are currently facing electricity supply shortages, and the local political issues involved with siting and building new power plants are difficult and contentious, our bill provides a way to reduce pressures on the nation’s electricity grid. Specifically, our bill provides tax incentives for:

This bill provides tax incentives for:

- Efficient residential buildings, including manufactured housing, that saves 30% or 50% of energy cost to the homeowner compared to national model codes, with a higher incentive for the higher savings;
- Efficient heating, cooling, and water heating equipment that reduces consumer energy costs, and, for air conditioners, reduces peak electric power demand, by about 20% (lower incentives) and 30%–50% (higher incentives) compared to national standards;

- New and existing commercial buildings, including rental housing and schools, with 50% reductions in energy costs to the owner or tenant; and,
- Solar hot water and photovoltaic systems.

The incentives are based on performance, not costs, in order to foster competition between suppliers of different technologies that can meet the proposed targets. In the case of buildings and equipment, there are one or two tiers of energy cost reduction targets that qualify the taxpayer for a fixed incentive per appliance, per home, or per square foot of non-residential building. For solar systems, the incentives are based on energy production, on a sliding scale. The incentives are provided for a 6-year period, taxable years 2002 through 2007, after which they sunset.

The incentives are provided to the taxpayer with only one exception. For non-residential buildings, the incentives are in the form of a fixed dollar amount deduction to the business entity that pays for the construction. However, if the business entity is a municipality, such as a school district (which is tax-exempt), the deduction is assignable by the owner to the architect with primary responsibility for the design. This is designed to assure that there are incentives for incorporating energy efficiency into the design of schools and other public buildings.

For residential buildings, the incentive is in the form of a tax credit that goes to the individual homeowner or the individual who purchases qualifying homes or equipment. In the case of condominiums or co-operatives, the owners get the credit on a pro-rated basis. In the case of rental housing, the incentive is a deduction to the building owner.

If only 50% of new buildings reach the energy efficiency goals of this legislation, it has been estimated that air pollution emissions in this country could be reduced by over 3% in the next decade, and decrease even more dramatically over time. In that same ten-year period, this legislation could result in direct economic savings of \$40 billion to consumers and businesses. For example, a family that installs an energy efficient water heater can get \$250 to \$500 back from the tax code changes and an additional \$50 to \$200 every year in reduced utility bills. Or a family that purchases a new home that meets the standards in this bill can get as much as \$2,000 returned to them by the tax incentives, in addition to the \$300 or more in continuing energy savings.

I urge the Subcommittee to include this proposal in any energy tax legislation it takes up. This bill is both good tax policy and good energy policy. It will help save American consumers money, improve the air we breathe and the water we drink, increase the competitiveness of American industries, and reduce the energy consumption of our commercial and residential buildings.

Thanks again, for allowing me to testify. I look forward to working with you and other Members of the Subcommittee on this and other energy tax-related measures.

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Chairman McCRERY. Thank you, Mr. Markey. Thank you, Mr. Cunningham. Ms. Dunn?

**STATEMENT OF THE HON. JENNIFER DUNN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON**

Ms. DUNN. Thank you very much, Mr. Chairman. We now face a problem that requires all of us in living rooms, kitchens all over America to take note. As little children, we were tucked in by our parents and assured that the bogeyman did not come out from underneath the bed when the lights went out. We were told that there was no reason to be afraid of the dark. But today adults across the Pacific Northwest particularly have every reason to fear the darkness that could blanket our Region. Thankfully, for the first time in a decade, a President and Congress are seriously considering a national energy policy that is designed to help bring together business, government, local communities and citizens to promote dependable, affordable and environmentally friendly energy for the future.

I am very happy that the administration's policy promotes energy conservation and efficiency. These elements are crucial, especially

in my home State of Washington. Across the Pacific Northwest, energy demand is outpacing supply, because of a record low water supply year and a high-priced west coast power market. This deficit is driving up monthly electric bills and making it very difficult for families in my area to make ends meet.

I believe that conservation is an important part of this solution in easing our energy problems, and I think it is up to us to provide the tools to empower families and businesses all over America so that they can better manage their energy use. We can encourage conservation with tools like smart meters, and that is what I would like to dedicate my next couple of minutes to telling you about. These are real-time metering devices that look just like the water meters that you have on the side of your house right now that tell consumers the cheapest and best time to flip on their hot tub switch and run their washer and drier. Currently utility bills give us no indication of when power is cheap and when it is expensive. For example, consumers who are washing laundry between 5:00 and 9:00 in the evening will pay up to 25 percent more in their electric bill. They don't know this. But if they waited until after 9:00, the costs would go way down.

In a monthly energy bill when consumers peak costs are averaged with off-peak costs in that utility bill, the higher costs of peak electricity supplies is covered up and masked so that they don't know. As a result, consumers may not recognize the benefits of changing their energy habits. And this bill that I am proposing would do just that. It would give consumers the information so that they could change their behavior, thereby using less energy and paying less for it.

It is our responsibility as public servants to propose thoughtful and sensible solutions to this energy quagmire. And that is why I have introduced the Energy Efficiency and Conservation Incentives Act of 2001, providing tax incentives designed to promote energy management conservation and efficiency through real-time metering.

Thanks to innovative technology, we can now make better choices regarding our power usage. Electric and natural gas meters can—and natural gas meters can be fitted with smart meters so that consumers can receive current pricing information and adjust their air-conditioners down during the peak usage periods, turn them back up later in the day when usage drops and prices also are lower.

These new high-tech devices allow us to monitor our daily use of electricity and provide us information on how to save money and energy. With this device, consumers can easily conserve the electricity they use on a daily basis. Specifically, my legislation provides two tax incentives to encourage the use of smart meters. First, utilities will receive a \$30 deduction per meter, just about the cost of the meter, not the cost of installation. They install with this new technology. Second, it would allow these devices to be depreciable over 3 years. Utility companies will be able to take the tax deduction from their corporate taxable income. The amount of the one-time deduction roughly equal to the cost of the device. Existing meters that are retrofitted would also be eligible for this same deduction.

The benefits of information as it relates to conservation can't be overstated. In my home district, for example, if just half the customers did their laundry in off-peak hours rather than during on-peak hours, it would free up enough power to serve nearly a quarter of a million households. As we move forward and continue to grapple with our energy problems, we have got to embrace market-based solutions to conservation. My legislation is an innovative way to employ new technologies, to prompt changes in consumer behavior. Conservation doesn't have to be dictated. It can be learned, and with the right motivation and structure, it can work.

This device and other reasonable conservation measures will help us squeeze out more efficiency from the existing system. I think it would be a shame for us to surrender to misleading and divisive rhetoric or quick-fix solutions like price caps when we have before us something that has not yet been tried.

More importantly, let us not pass up this opportunity to propose thoughtful and responsible conservation solutions.

Thank you very much, Mr. Chairman, for the opportunity to testify, and I would be happy to answer any questions.

[The prepared statement of Ms. Dunn follows:]

**Statement of the Hon. Jennifer Dunn, a Representative in Congress from the State of Washington**

We now face a problem that requires all of us in living rooms and kitchens across America to take note. As children, we were tucked in by our parents and assured the boogeyman did not come out of from underneath our bed the minute the lights went off. We were told there is no reason to be afraid of the dark. But today, adults across the Pacific Northwest have every reason to fear the darkness that could blanket our region.

Thankfully, for the first time in a decade, a President and Congress are seriously considering a national energy policy designed to help bring together business, government, local communities, and citizens to promote dependable, affordable, and environmentally friendly energy for the future.

I am pleased that the administration's policy promotes energy conservation and efficiency. These elements are crucial, especially in my home state of Washington. Across the Pacific Northwest, energy demand is outpacing supply because of a record low water year and a high priced West Coast power market. This deficit is driving up monthly electric bills, and making it difficult for families to make ends meet.

Conservation is an important piece of the solution in easing our energy problems. We must provide the tools to empower families and businesses across America so they can better manage their energy use.

We can encourage conservation with tools like "smart meters," real-time metering devices that tell consumers the cheapest and best time to flip on the switch, and run the washer and dryer. Currently, utility bills give no indication of when power is cheap and when it is expensive. For example, consumers washing laundry between five and nine o'clock in the evening will pay up to 25% more in their electric bill than they will if they wait until after nine.

When consumers' peak costs are averaged with off-peak costs in their utility bill, the higher cost of peak electricity supplies is masked. As a result, consumers may not recognize the benefits of changing their energy habits.

Because it is our responsibility as public servants to propose thoughtful and sensible solutions to this energy quagmire, I have introduced the Energy Efficiency and Conservation Incentives Act of 2001, providing tax incentives designed to promote energy management, conservation, and efficiency through real-time metering.

Thanks to innovative technology, we can now make better choices regarding our power usage. Electric and natural gas meters can be fitted with smart meters so consumers can receive current pricing information and adjust their air conditioners down during peak usage periods and turn them back up later in the day, when usage drops and prices are lower.

These new hi-tech devices allow us to monitor our daily use of electricity and provide us information on how to save money and energy. With this device, consumers can easily conserve the electricity they use on a daily basis.

Specifically, my legislation provides two tax incentives to encourage the use of smart meters:

- First, utilities will receive a \$30 deduction per smart meter they install with this new technology.
- Second, it would allow these devices to be depreciable over three years.

Utility companies will be able to take the tax deduction from their corporate taxable income. The amount of the one-time deduction is roughly equal to the cost of the device. Existing meters that are retrofitted are also eligible for the deduction.

The benefits of information as it relates to conservation cannot be overstated. In my home district, for example, if just half the customers did their laundry in off-peak hours rather than during on-peak hours, it would free up enough power to serve nearly a quarter of a million households.

As we move forward and continue to grapple with our national energy problems, we must embrace market-based solutions to conservation. My legislation is an innovative way to employ new technologies to prompt changes in consumer behavior. Conservation does not have to be dictated by the federal government. But rather it can be learned, and with the right motivation and structure, conservation can work.

This device and other reasonable conservation measures will help us squeeze more efficiency out of our existing system. Let's not surrender to misleading and divisive rhetoric or to quick fix solutions like price caps. More importantly, let us not pass up this opportunity to propose thoughtful and responsible conservation solutions.

In addition to conservation, a sound national energy policy should encourage a clean and diverse range of domestic energy supplies. Such diversity helps to ensure that future generations of Americans will have access to the energy they need. Renewable energy can help provide for our future needs by harnessing abundant, naturally occurring sources of energy.

Hydropower is the nation's leading renewable resource. Overall, roughly 98,000 megawatts of clean and efficient power is produced from hydro facilities—enough electricity for 98 million homes. According to the Department of Energy, approximately 4,300 megawatts of additional power could be developed from existing hydroelectric facilities in the near term—none of this development would require new dam construction. Bringing new hydro generation on-line, however, is increasingly difficult and expensive.

That is why I have introduced H.R. 1677, the Hydropower Capacity Improvement Act. My bill provides a tax credit for incremental hydropower for ten years. This tax credit will encourage hydro owners to modernize equipment and become more efficient in their energy production. As we face rising energy prices and increasing levels of pollution, it is clear that we must do as much as we can to promote clean, reliable and domestic resources like hydropower. Today more than ever, there is a need to provide incentives to encourage the development of incremental hydropower.

In addition to hydropower, we must also address the current laws governing the use of biomass material. This committee has previously heard testimony from witnesses stating that the biomass provisions under Section 45 are not applicable to most taxpayers since they are defined as "closed loop" credits. Currently, only agricultural products grown exclusively for combustion in a power plant are eligible for the credit. We should amend Section 45 from "closed loop" to "open loop" so that a broader cross section of taxpayers can take advantage of the credit.

The forest products industry, for example, generates a substantial portion of its onsite electricity from renewable resources. Although the industry is 60% percent self-sufficient using biomass, they are forced to turn to other sources to meet the balance of their energy needs. High oil and gas prices—coupled with energy shortages—threaten the financial well being of the industry and its employees. Converting the biomass credit from "closed" to "open loop" will help alleviate the strain the industry faces.

Thank you for the opportunity to testify and I would be happy to answer any questions.

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Chairman MCCRERY. Thank you, Ms. Dunn. And now another Member of the Ways and Means Committee, Mr. Mac Collins from Georgia, Mr. Collins.

**STATEMENT OF THE HON. MAC COLLINS, A REPRESENTATIVE  
IN CONGRESS FROM THE STATE OF GEORGIA**

Mr. COLLINS. Thank you, Mr. Chairman. Thank you for the opportunity to testify before this Subcommittee this afternoon. I have three separate recommendations relevant to the Subcommittee's review of energy policy. The first issue is municipal utility natural gas supply for H.R. 1986, legislation that would permit municipal gas systems to continue to use their tax-exempt bond authority to purchase natural gas on a long-term basis. Twenty-two additional members of the House have also cosponsored this legislation, including seven members of the Ways and Means Committee, and there is a companion bill that has been introduced in the Senate by Senator Breaux.

There are approximately 1,000 publicly owned gas distribution systems in the U.S., primarily located in small towns and rural communities. Deregulation of the natural gas industry in the early nineties made it more difficult for small municipal gas systems to locate gas suppliers, arrange transportation and maintain an assured supply of natural gas for their customers.

In response, many formed joint action agencies to acquire and manage the delivery of gas. Sixty-four towns in my home State contract with the Municipal Gas Authority of Georgia for their natural gas supply. The Georgia Authority buys gas on the long-term basis to obtain the most reliable, reasonably priced product for their customers. Obtaining the best price is important, but another priority is ensuring a dependable supply, not only for residential customers, but also for industrial operations so that they will know that locating in a small rural community will not mean a greater threat of supply disruptions.

Until August 1999, joint action agencies issued tax-exempt bonds to finance long-term, prepaid supply contracts with gas suppliers, usually for a 10-year period. However, in 1999, the IRS issued a request for public comment on whether funding these contracts with bonds proceeds violates the tax exempt bond arbitrage rules. Since that time, the IRS has failed to issue any regulation, revenue ruling or general guidance.

With the simple comment request created uncertainty, essentially denying municipal gas systems the ability to most effectively fund the long-term purchase of gas. Today, natural gas prices have reached record levels. Shortages have developed, and the markets are experiencing disruption. The inability to use tax-exempt bond authority to finance long-term prepaid contracts further undermines access to an assured supply of reasonably priced natural gas.

Current law is clear. Arbitrage rules do not permit tax exempt bonds to be used to raise proceeds that are then used to acquire, and I quote "investment-type property," which has a higher yield in bonds. However, treasury regulations provide that a prepayment does not give rise to investment-type property if the prepayment, one, is made for a substantial business purpose other than investment return, and, two, the insurer has no commercially reasonable alternative to the prepayment.

Municipal gas systems clearly have a substantial business purpose for entering into prepayment transactions and no commercially reasonable alternative. H.R. 1986 would clarify the law and

remove the confusion created by the IRS. It would ensure that a long-term prepaid contract for natural gas used by public utilities do not violate the arbitrage rules. And it is my hope that we can address this problem as part of the comprehensive energy legislation.

The second issue is tax incentives for electric vehicles. We introduced this legislation last year. It would provide a \$4,000 tax credit for the—for those who purchase electric vehicles. Especially in areas like Atlanta where you have a lot of commuters, it would be very helpful. That is part of a legislation that Representative Camp has introduced and also which I support.

The third is the Generator Tariff Elimination Act. I introduced this in the last Congress, and while it is—and, again, this year. While this is actually a tariff issue rather than a tax concern, I believe it is relevant to today's discussion about energy costs imposed by the Federal Government. This measure would repeal the duty on the importation of replacement steam generators used in nuclear power plants. Steam generators are necessary for the operation of nuclear power facilities. Despite the fact that there is no domestic manufacturer of these generators, a tariff is imposed on their importation.

Prior to the conclusion of last year's Congress, a reduction in this tariff was included in the Miscellaneous Tariff And Technical Corrections Act, H.R. 4868. However, the tariff should be fully repealed. This is an indirect tax on energy that is passed onto the ratepayers, directly and indirectly.

Mr. Chairman, I appreciate the opportunity to bring these issues before you and the Subcommittee, and hopefully we can have assistance in seeing that they become reality. Thank you.

[The prepared statement of Mr. Collins follows:]

**Statement of the Hon. Mac Collins, a Representative in Congress from the State of Georgia**

**THE MUNICIPAL UTILITY NATURAL GAS SUPPLY ACT (H.R. 1986)**

The first issue is the **Municipal Utility Natural Gas Supply Act** (H.R. 1986)—legislation I have introduced along with Representative John Lewis. This bill would permit municipal gas systems to continue to use their tax exempt bond authority to purchase natural gas, on a long term basis, for their customers. Twenty-one additional Members of the House have cosponsored this legislation, including seven Members of the Committee on Ways and Means. *[A companion bill has been introduced in the Senate by John Breaux and six of his colleagues].*

There are approximately 1,000 publicly owned gas distribution systems in the United States—primarily located in small towns and rural communities. Deregulation of the natural gas industry in the early 1990s made it more difficult for small municipal gas systems to locate gas suppliers, arrange transportation and maintain an assured supply of natural gas for their residents and businesses. In response, many formed joint action agencies to acquire and manage the delivery of gas.

Sixty four towns in my home state contract with the Municipal Gas Authority of Georgia for their natural gas supply. The Georgia authority buys gas on a long term basis to obtain the most reliable, reasonably priced product for their customers. Obtaining the best price is an important consideration. But even more important is ensuring a dependable supply, not only for residential customers, but also so industrial operations know that their location in a small, rural community will not mean a greater threat of supply disruptions.

In today's energy markets, the most reliable means of obtaining natural gas is through long-term *prepaid* supply arrangements. Until August of 1999, joint action agencies issued tax-exempt bonds to finance prepayment supply contracts with gas suppliers to obtain a long-term supply of gas (usually ten years).

However, in 1999, the IRS issued a request for public comment on whether the use of tax-exempt bonds to fund long term prepaid natural gas supply contracts violates the tax exempt bond arbitrage rules. Since that time, the IRS has failed to act on the request for comment. No regulation, revenue ruling or any other guidance has been issued. But the simple request for comment created uncertainty and killed the market, denying municipal gas systems the ability to most effectively fund long term purchases of gas.

Today, natural gas prices have reached record levels, shortages have developed, and the markets are experiencing disruption. The inability to use tax-exempt bond authority to finance long term prepaid contracts further undermines access to an assured supply of reasonably priced natural gas for consumers.

Current law is clear. Arbitrage rules do not permit tax-exempt bonds to be used to raise proceeds that are then used to acquire "investment-type property" which has a higher yield than the bonds. However, Treasury regulations provide that a prepayment does not give rise to investment-type property if the prepayment is made for a **substantial business purpose** other than investment return and the issuer **has no commercially reasonable alternative** to the prepayment. The municipal gas systems clearly have a "substantial business purpose" for entering into prepayment transactions and "no commercially reasonable alternative."

The legislation I have introduced simply clarifies the law to remove the confusion created by the IRS by providing that long term prepaid contracts for natural gas used by public utilities do not violate the tax-exempt bond arbitrage rules. It is my hope that we can address this problem as part of comprehensive energy legislation.

## **ELECTRIC VEHICLE TAX INCENTIVES**

### **Purchase Incentives**

The second issue is tax incentives for electric vehicles. Through the Energy Policy Act, Congress enacted expiring tax incentives aimed at reducing the costs and expanding access to pollution-free electric vehicles. The technology is here. But the cost to consumers remains high.

Legislation I have previously introduced would extend and modify the current-law provision which provides a tax credit of 10%, up to \$4,000, toward the purchase cost of an electric vehicle. In large commuter cities such as Atlanta, electric vehicles are increasingly becoming a viable mode of pollution-free transportation. Companies such as Georgia Power are implementing creative electric vehicle incentive programs for employees that are being fully utilized—in fact demand for electric vehicles outpaces the supply. I support legislation which would extend the expiring tax credit through 2008 (which currently expires 2004) and convert the credit to a flat \$4000 amount.

### **Infrastructure Incentives**

Additionally, the committee should consider other tax-based incentives which would offset the costs of electric vehicle infrastructure. Under current law, businesses are provided a \$100,000 deduction for the purchase of clean vehicle fueling property (batteries for electrics, hydrogen stations for fuel cells). This provision expires in 2004 and should also be extended. There are several other incentives which have been included in the Clean Efficient Automobiles Resulting From Advanced Car Technologies (CLEAR ACT) Act (H.R. 1864), introduced by Representative Dave Camp. Among those are additional infrastructure incentives including a \$30,000 credit against the cost of the construction and installation of either public or private recharging stations.

## **GENERATOR TARIFF ELIMINATION ACT (H.R. 1141)**

Lastly, I have introduced the Generator Tariff Elimination Act (H.R. 1141). While this is actually a tariff issue, rather than a tax issue, I believe it is relevant to today's discussions about energy costs imposed by the Federal Government. This measure would repeal the duty on the importation of replacement steam generators used in nuclear power plants. Steam generators are necessary for the operation of nuclear power facilities. Despite the fact that there is neither a current nor any reasonable likelihood of future domestic manufacturing capability of these generators, a tariff is imposed on these imports. Prior to the conclusion of last year's Congress, a reduction in this tariff was included in the Miscellaneous Trade and Technical Corrections Act (H.R. 4868).

However, this tariff should be fully repealed. While providing no benefit to any domestic manufacturer, this indirect "tax" on energy is passed on to the ratepayer directly and entirely through the state public utility commissions in ratemaking proceedings. This tariff repeal legislation enjoys bipartisan support in both the House

of Representatives and the Senate. I hope it can be considered as a part of any energy-related bill that the committee reports.

Thank you for the opportunity to testify on these issues.

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Chairman McCRERY. Thank you, Mr. Collins. And now another Member of the Committee, Jerry Weller from Illinois, Mr. Weller.

**STATEMENT OF THE HON. JERRY WELLER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS**

Mr. WELLER. Thank you, Mr. Chairman, Mr. McNulty and my fellow Members of the Subcommittee. I appreciate very much the opportunity to appear before this Subcommittee, and with your permission, Mr. Chairman, I would prefer to summarize my testimony rather than read it in its entirety. But I do want to commend you for your leadership on conducting these hearings as we move forward to develop a bipartisan national energy policy. As President Bush noted, we are now paying the price of the failure for our country to have a national energy policy over the past decade.

Of course, we have seen that with higher gasoline prices in Chicago last summer, higher gasoline prices in Chicago this summer, higher home heating costs in Chicago this past winter. And I would like to present to the Subcommittee today two initiatives which I would like to offer to help address our concerns with rising natural energy prices and our need to reduce our dependence on imported sources of energy.

Two initiatives today I wish to discuss with the Subcommittee. One addressed the tax treatment and nuclear decommissioning funds as we look at electricity restructuring around the country, and also legislation which I will be introducing tomorrow, providing tax incentives to create an energy-efficient home, as well as improvements, as well as new construction.

Nuclear power, of course, is a major part of electricity production in the United States. It has demonstrated the ability to be safe, and also when you are concerned about clean air, a way of providing safe energy without having an impact on air quality.

I would note that across this country, we have seen more and more States that have moved forward in electricity restructuring. As a result of that, you are now seeing utilities that are decidedly in different portions of the business, but as a result of that, you are seeing nuclear power plants change hands, one company buying from another. As a result of that, we need to modernize the tax treatment. The nuclear decommissioning funds that these funds are in place when the time comes to decommission these plants. I believe as we develop tax provisions to address the need to reduce our energy dependence on overseas sources, as well as to find safe and environmentally safe uses of generating electricity, that we need to address this important issue involving the decommissioning of nuclear power plants by modernizing the tax treatment.

I also believe, Mr. Chairman, that we need to find ways to encourage investments by consumers, as well as home builders, in development of energy efficient homes. Tomorrow, I will be introducing legislation along with a number of my colleagues, providing up to a 20 percent tax credit, up to \$2,000 which can be used either

by the consumer, by the homeowner or by the home builder for making at least a 30 percent improvement in the energy efficiency of new and existing homes. And this would—this tax incentive would be available for installing new windows, installation, energy efficient air-conditioners, water heaters and home heating appliances.

Mr. Chairman, we are looking for ways to reduce our dependence on imported sources of energy, and I believe by encouraging the development and improvements to homes, creating energy efficient homes, we can move toward that goal. By helping reduce the demand on the Nation's power grid and lower cost for consumers, it is estimated in 1998 that there was an estimated 74 million single family homes, 6 million multi-family homes, and 6 million manufactured housing units in the United States, which accounted for 92 percent of total household energy consumption.

In 1998, these homes accounted for nearly 20 percent, one-fifth of all energy consumed in our country. By making changes in the energy efficiency of our homes, consumers can save real money. It is estimated that consumers can save 10 percent or more on energy bills by simply reducing the number of air leaks in their home. Double-pane windows with low emission coating can reduce heating bills by 34 percent in climates such as we have in my home area in Chicago.

If all households upgraded their insulation to meet the International Energy Conservation Code Level, which is a private sector energy code used in the United States, this Nation would experience a permanent reduction of annual electricity consumption totaling 7 percent of current total electricity consumed. That is real savings, Mr. Chairman, and I believe by providing tax incentives, not only that I am suggesting, but others have suggested, that we can move toward this goal.

Bottom line is, it will reduce our dependence on imported sources of energy, it will help the environment, and of course it will help our economy. So, Mr. Chairman, I thank you for the opportunity to be—sit before you today and present a couple of ideas that I have. I look forward to working with you, and I hope that we can work together to develop bipartisan energy policy for the good of our Nation. Thank you, Mr. Chairman.

[The prepared statement of Mr. Weller follows:]

**Statement of the Hon. Jerry Weller, a Representative in Congress from the State of Illinois**

Mr. Chairman, thank you for the opportunity to testify before the Subcommittee on two energy issues that are important to my constituents in Illinois, as well as consumers across the country. As you may be aware, the Chicago region is currently faced with some of the highest energy costs in the nation. This is costing real people real money.

Did you know that the average household in America spends nearly \$1,300 per year on home energy costs? This is an average of more than \$100 per month. Again, this is real money for real people.

I would like to address two issues today (1) the need to address the tax treatment of nuclear decommissioning funds, and (2) a bill I am introducing later today to allow for a tax credit for making energy efficient home improvements to a newly constructed or existing home.

As you may know, I have more nuclear power plants in my district than any other Congressional district in the United States. This industry is important to my constituents because it provides electric power and jobs for thousands of people. For the

past two years, I have been the lead sponsor of legislation to make ensure that, in a competitive electricity market, funds continue to be available to pay for safe and timely decommissioning of nuclear power plants. I believe that this is a public policy we want to encourage.

The tax rules governing these funds are out of date because of electric utility restructuring. Adjustments to the tax code need to be made to ensure that policies are kept in place which ensure that nuclear power plants are decommissioned as they should be. To this end, during the 106<sup>th</sup> Congress and again this year, Congressman Cardin and I have introduced legislation to modernize the tax provisions related to decommissioning nuclear power plants. Last Congress, portions of this legislation were included in a large tax bill which passed the House and Senate and was sent to President Clinton and ultimately vetoed. I am pleased that this year, President Bush has included provisions related to decommissioning nuclear power plants into his budget. Our legislation adapts the tax code to reflect the competitive utility market that exists today. It helps facilitate the transfer and sale of nuclear power plants. I believe that ensuring that nuclear power plants are decommissioned safely is a policy we should all support. I encourage my colleagues to join me in doing so.

While I strongly believe that enacting this legislation to encourage proper decommissioning of nuclear power plants is the right thing to do, I also believe that given the skyrocketing energy costs consumers are facing, we should also look for ways to conserve energy and slow the rising demand which is driving up costs. To this end, I will be introducing legislation later today which will provide a 20% tax credit, up to \$2,000, to individuals and homebuilders for making at least 30% in improvements to the energy efficiency of new and existing homes. This includes installing new windows, insulation, energy efficient air conditioners, water heaters and home heating appliances.

This tax credit will significantly reduce the demand on the nation's power grid and lower costs for consumers. In 1998, there were an estimated 74 million single family homes, 6 million multi-family homes and 6 million manufactured housing units in the United States which accounted for nearly 92% of total household energy consumption. Additionally, in 1998, homes accounted for nearly 20% of all of the energy consumed in the United States.

By simply making changes in energy efficiency to their homes, consumers can save real money. Consumers can save 10% or more on energy bills by simply reducing the number of air leaks in their home. Double pane windows with low emissivity coating can reduce heating bills by 34% in cold climates like Chicago.

If all households upgraded their insulation to meet the International Energy Conservation Code level, which is a private sector energy code used in the United States, the nation would experience a permanent reduction of annual electric consumption totaling 7% of the total consumed. This is a real savings.

This proposal doesn't only benefit individuals, but it benefits the environment and the entire economy. Reduced energy consumption reduces our reliance on imported oil. By increasing energy efficiency in homes, the emission of greenhouse gasses is significantly reduced. At the same time, construction and improvements made to homes will create new jobs.

Mr. Chairman, I encourage my colleagues to join me in supporting this common-sense, long-term energy efficiency measure. I believe that it is in the best interests of our country to reduce our reliance on foreign energy sources by supporting and encouraging proper use and decommissioning of nuclear power plants, as well as conservation of energy by encouraging consumers to make energy efficient home improvements.

I appreciate the opportunity to testify before the Subcommittee regarding these important issues and I would be pleased to answer any questions.

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Chairman McCRERY. Thank you, Mr. Weller. And now another Member of the Ways and Means Committee, the gentleman from Kentucky, Ron Lewis, Mr. Lewis.

**STATEMENT OF THE HON. RON LEWIS, A REPRESENTATIVE IN  
CONGRESS FROM THE STATE OF KENTUCKY**

Mr. LEWIS. Mr. Chairman, and Members of the Subcommittee, I thank you for the opportunity to testify today about my legislation

to help increase the use of biofuels. Biofuels, such as ethanol and biodiesel, are renewable sources of fuel, that I believe can play a large role in our future energy security. Our vehicles and economy have become increasingly energy efficient and much friendlier to our environment. The demand for fuel will continue to increase. While biofuels are not able to replace gasoline or diesel fuel yet, additional tax incentives for fuel retailers, consumers and businesses can help promote their use.

Our farmers currently produce a surplus of corn and soybeans and could meet the demands of higher biofuel use. Every gallon of these fuels used means fewer barrels of foreign oil we have to buy.

Ethanol tax laws already on the books have made ethanol more price competitive, improved its quality as a fuel and encouraged its production. In 1999, the United States consumed 1.4 billion gallons of ethanol, both blended and unblended. That may sound like a lot, but it makes up only 1.2 percent of the nearly 125 billion gallons of gasoline used this same year. When it comes to the more pure forms of ethanol used, just more than 3 million gallons were consumed in the past year.

Biodiesel use has expanded to about 60 billion gallons per year. Manufacturers are making more flex-fuel vehicles for ethanol that cost basically the same as vehicles that run only on conventional gasoline. Biodiesel, a newer alternative, has the advantage of compatibility with conventional diesel engines, eliminating the cost of new vehicles or engines. These are just two factors that make biofuels attractive choices for renewable fuels.

Tax incentives, rather than mandates on fuel content or vehicle use, are a better means of encouraging private-sector consumers to choose biofuels. We have invested in research and provided fuel tax exemptions for refiners and marketers and received support from interests in agriculture and the environment. Retailers and consumers, however, need to be a large part of that incentive package.

Fueling infrastructure has not expanded rapidly because retailers don't feel there is enough demand. Consumers, on the other hand, are not demanding these fuels or vehicles that use them because of the lack of fueling infrastructure.

My legislation will add and expand tax benefits for sale and use of biofuels for retailers and consumers. First, this bill will expand and improve tax credits available for the purchase and installation of infrastructure for the sale or personal use of pure forms of biofuels. It is expensive for retailers or businesses and farmers with their own refueling equipment to add new tanks or pumps for these fuels. Using tax credits for refueling property and adding a credit for installation costs help retailers, individuals and businesses offer these fuels.

Second, I propose that retailers receive credit for the sale of pure forms of biofuels so that they have an additional reason to promote and sell these to consumers. Savings due to these income tax credits for retailers could also be passed on to consumers in the form of fuel cost reduction, encouraging their use of biofuels.

My legislation also provides businesses with more tax incentives rather than Federal mandates to use ethanol or biodiesel in their vehicles, whether they operate a single delivery van or fleet of trucks.

Finally, this legislation includes provisions to expand the small producers' tax credit for ethanol so that farm cooperatives can receive equitable tax treatment for their role in ethanol sales and production.

I look forward to working with the Ways and Means Committee on these and other tax incentives we can offer to increase the sale and use of renewable biofuels. While they alone will not solve all of our energy problems, I strongly support the promotion and use of biofuels in order to reduce our dependence on foreign oil, increased fuel supply, provide air quality benefits and improve the livelihood of our farmers.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Lewis follows:]

**Statement of the Hon. Ron Lewis, a Representative in Congress from the State of Kentucky**

Chairman McCreery and members of the subcommittee, thank you for the opportunity to testify today. I believe our nation has an energy supply problem and faces even greater problems in the years to come if we continue to only rely on conventional fuel sources. Consumer demand for fuels continues to increase, even while our vehicles and economy have become increasingly energy efficient and much friendlier to our environment.

One way we can meet increased fuel demand is to encourage use of more renewable fuels, particularly biofuels such as ethanol or biodiesel. Our farmers currently produce a surplus of corn and soybeans and could meet the demands of higher biofuel use. Every gallon of these fuels used, even when used as blends, displaces a gallon of conventional gasoline or diesel fuel. The excise tax exemption and research have made ethanol more price competitive and have encouraged its production.

In 1999, the United States consumed 1.4 billion gallons of ethanol, mostly in the form of a 10 percent blend with gasoline. That may sound like a lot, but it makes up only 1.2 percent of the nearly 125 billion gallons of gasoline used in the same year. When it comes to the more pure forms of ethanol used in flexible fuel or alternative fuel vehicles, just more than 3 million gallons were consumed in the past year. Biodiesel use has expanded to about 60 million gallons per year.

Manufacturers are making more flex-fuel vehicles that cost basically the same as vehicles that run only on conventional gasoline. Biodiesel, a newer alternative, has the advantage of compatibility with conventional diesel engines, eliminating the cost of different vehicles and other infrastructure. These are two factors that make biofuels attractive choices for renewable fuels.

Tax incentives, rather than mandates on fuel content or vehicle use, are a more preferable means of encouraging use of biofuels in the private sector. With the research investments, tax treatment and support from a variety of interests, these fuels still have not reached the use level we all would hope for. Fueling infrastructure has not expanded rapidly because retailers and others do not see the consumer demand. Consumers, on the other hand, may not be drawn to these fuels because of the lack of fueling infrastructure.

I am working on legislation to add and expand tax benefits for sale and use of biofuels. We need to expand and improve tax credits available for the purchase and installation of infrastructure for the sale and personal use of the more pure forms of biofuels. These credits would go to retailers, individuals or businesses. The addition of a sales tax credit for retailers would also provide incentive to promote and sell ethanol and biodiesel. Some of these savings would be passed on to consumers, encouraging their use of biofuels. I also believe we should provide businesses with more tax incentives, rather than federal mandates, to use biofuels in their vehicles, whether they operate a single delivery van or a fleet of trucks. Finally, I support expanding the small producers tax credit for ethanol so that farm cooperatives can receive equitable tax treatment for their role in ethanol sales and production.

I look forward to working with the Ways and Means committee on these and other tax incentives we can offer to increase the sale and use of renewable biofuels. While they alone will not solve all of our energy problems, I strongly support the promotion and use of biofuels in order to reduce our dependence on foreign oil, increase fuel supply, provide environmental benefits and improve the livelihood of our farmers.

Chairman MCCRERY. Thank you, Mr. Lewis, and thank all the Members of the panel for your testimony. Does any Member of the Subcommittee wish to inquire of these panelists?

Thank you very much, gentlemen and lady. We look forward to working with you to bring some of your suggestions to fruition. No questions, Mr. Collins. If you have questions of us, you are free to ask.

[Laughter.]

Our next panel would please come forward, Mr. Gephardt, Mr. Stenholm, Mr. Filner, Mr. Sandlin. Welcome, gentlemen, and to introduce our first witness on this panel, I defer to my colleague from New York, Mr. McNulty.

Mr. MCNULTY. Thank you, Mr. Chairman.

I am pleased to welcome before the Subcommittee someone who has served as a Member of the House of Representatives for a quarter of a century. He has been a leader on energy and tax issues, among others. He has risen through the ranks to become the Democratic leader in the House of Representatives, but Mr. Chairman, most important of all, he is a former Member of the Ways and Means Committee.

So we all want to welcome back the distinguished gentleman from Missouri, Mr. Gephardt.

Chairman MCCRERY. The gentleman from Missouri may proceed

**STATEMENT OF THE HON. RICHARD A. GEPHARDT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MISSOURI, AND HOUSE DEMOCRATIC LEADER**

Mr. GEPHARDT. Thank you, Mr. Chairman.

Members of the Committee, thank you to my friend from New York for that generous introduction. Clearly my service on this Committee in years past is the highlight of my career in the House, so I am always happy to come back here. And I commend all of you, because I know how important the work is that you do on a daily basis in so many different, important areas.

I am really pleased to be part of this hearing today. I want to thank the Subcommittee for inviting us to testify on this important subject. To put it in a word, energy is a huge issue for all of us as Americans, and Missouri people, for two summers in a row, have watched gas prices spike up to \$2 a gallon.

I have been in California twice in the last 3 months. I have seen firsthand how the energy crisis is impacting people's lives. One survey of small business people in San Diego found that two out of three could go under if energy prices stay as high as they have been in the last year.

People are paying astronomical electric rates at home. Some people have a residential bill of \$1,250 a month. Consumers and small businesses can't afford these high prices at the pump or in the home. Families are canceling vacations. West Coasters cannot continue to live under the threat of rolling blackouts.

A couple of weeks ago I was at an energy forum in Oakland. We heard how it is affecting the disabled senior citizens and others. And the fact is, in California thousands of people are on some kind

of life support machinery; when blackouts strike, their lives are at risk.

So this problem is huge and it is national. The current crisis I think should give all of us pause.

We must move ahead with a policy that helps consumers now. That is why we have fought so hard for temporary price caps on wholesale energy prices, especially in the West.

But we also have got to have a long-term policy. I believe we have to set ideology aside and approach this issue in the pragmatic, common-sense way that I think most Americans do. This is no time for a one-sided or narrow approach. We need to find ways to increase production, bring new plants online, and we must make efficiency a major part of any strategy.

There are many ways to get at this. I have always been for incentives rather than penalties. I think the positive is always better than the negative. We need to figure out how to give real incentives for efficient buildings, increased production in renewable energy and for the hybrid automobiles which can help solve our energy problems.

One of my concerns about the tax bill the President, just signed, is that it does not leave enough room for action on energy. We should be promoting immediate relief for consumers and helping to develop new technologies to promote energy efficiencies in renewable sources. Unfortunately, with the surplus diminished, our options are limited.

We have many of these new technologies in front of us right now. You can buy cars right now; for little more than \$20,000 you can buy a hybrid car. If we put a real tax incentive behind it, we might really get scale of production for the producers and begin to make a real difference in the emissions and efficiencies of cars.

Fuel cells are right behind.

If we invest wisely in research and tax incentives, the return would be terrific. In fact, I am told that there are now available kits that could convert internal combustion engines to run on hydrogen fuels right now. It seems to me we should look at incentives for those kinds of technologies.

I saw a tag line on an ad for the biotech field the other day; it said, "We will never know how far we can go"; the tag line should be, "unless we try." We can do a lot on global warming. We can do a lot on energy and the environment, but we have got to try.

A good energy policy, in my view, should do two things. First, it should produce reliable and affordable energy; second, it should sustain the environment. That is what the American people want, and that is what we deserve. It can be done with tax incentives and research playing a vital role in promoting innovation, inefficiency and production. We will never be able to pump more oil than OPEC, but we win every single time when we use technology and innovation to solve our problems.

My colleagues and I on the Democratic side recently put forward our principles for sound energy policy. We hope this Committee will give consideration to the ideas in that report. We won broad support from conservative to progressive Members. We found agreement on production and efficiency incentives that are together the most cost-effective way to balance supply and demand.

Many of the principles we supported are already represented in bipartisan bills before the House. For example, small independent energy companies produce 50 percent of the petroleum and 65 percent of the natural gas in the lower 48. We have proposed tax incentives to help keep marginal wells in production and to encourage increased production by these small, but crucial, energy companies.

I think these ideas have support of both Republicans and Democrats. Ed Markey and Duke Cunningham have legislation that would dramatically increase energy savings in commercial buildings and new housing. It uses existing technology, but would stimulate the market for new ideas. Experts at the Department of Energy have predicted that energy efficiency measures like Markey-Cunningham can produce energy savings equal to 600 300-megawatt power plants over the next 20 years. That is over 40 percent of the number of new plants the President has suggested that we build. So I hope that we will look at that legislation.

For anyone who still questions the importance of having a balanced energy policy, I want to point out one fact. From 1973 to the present, Americans have saved between \$150 and \$200 billion by improving energy efficiency.

Another promising idea is hydrogen-run fuel cell cars and other hybrid engine technologies. The Democratic energy plans in both the Clinton and Bush administrations propose incentives for these and similar kinds of cars. If we structure sensible local and Federal tax credits, we can help make these cars a success. Also, hydrogen fuel cell technology holds great promise not just for powering cars, but also for electrifying buildings in a more efficient, environmentally sensitive manner.

What we lack is leadership in public policy that will lead us in that direction.

The same applies to renewable sources like solar and wind. For instance, presently wind power produces only 1.3 percent of yearly capacity in California. According to the American Wind Energy Association, the wind potential of California is 30 percent of California's total energy demand. There are several bills with Republican and Democratic sponsors that give strong support to developing cost-effective renewable energy.

Finally, one of our greatest failures is not sustaining a consistent, long-term energy policy. We put money in research and tax incentives for efficiency and renewables when the price of gasoline, oil and natural gas goes up; and when the price goes down, we cut out these same programs. We must adopt new thinking and new ideas so the American people have the opportunity to reach for their twin goals of plentiful energy and protecting our environment at the same time.

The problems are real, the solutions are real. There are hybrid cars on the market today that get 70 miles per gallon that have much less emission than present cars. Who would have believed that that could be true 25 years ago, the last time we faced an energy crisis? We have to find ways to release the full creativity and ingenuity of the American people in resolving these problems.

I am convinced if together, in a bipartisan way, we sustain a long-term energy policy in this country, we can solve these prob-

lems both in terms of energy and the environment and we can make a better America.

Thank you very much.

[The prepared statement of Mr. Gephardt follows:]

**Statement of the Hon. Richard A. Gephardt, a Representative in Congress from the State of Missouri, and House Democratic Leader**

"Thank you Chairman McCreery and Ranking Member McNulty for inviting me to testify about one of the biggest issues of the day.

"Energy is a huge issue for all Americans. In Missouri, people for two summers in a row have watched gas prices spike up to \$2 per gallon. I've been to California twice in the last three months. I've seen first-hand how the energy crisis is impacting people's lives. One survey of small businesses in San Diego found that two out of three could go under if energy prices stay as high as they've been in the past year. People are paying astronomical electricity rates, and I've even heard of one family paying as much as \$1,250 each month in their home energy bills.

"Consumers and small businesses simply can't afford to pay such high prices at the pump or in the home. Families have been canceling vacations because they can't afford the price of gas. Meanwhile, Californians, Oregonians, Washingtonians can not continue to live under the threat of rolling blackouts which hit without notice, and with devastating impact. Just a couple of weeks ago, I was at an energy forum in Oakland. I sat with other members of Congress and listened to people testify about how this crisis is affecting their lives. I found one fact particularly striking. The fact was this: in California, thousands of people are on some kind of life support machine. When blackouts strike, their lives are at risk. For them, the energy issue is not just about economics, it's a matter of life and death.

"So this is a huge immediate problem, and it's a long-term national energy challenge. The current crisis should give all of us pause. We must move ahead with an energy policy that helps consumers in the here and now and creates a stable, sustainable energy supply over the long-term. And whatever we do, we must not roll back our hard-won progress on the environment. As difficult as this crisis is for many Americans, I also see it as a golden opportunity for the future of our country. Working together, we can address our short- and long-term national energy needs.

"To do this, I believe we must set ideology aside and approach the issue in a pragmatic way that makes sense for all Americans. This is no time for a one-sided or narrow policy. It's no time to let theories that are set in stone dictate or narrow our choices in energy policy. We need to find ways to increase production and bring new plants on line, and make efficiency a major part of any national energy strategy.

"There are many ways to get at this. I've always been for incentives rather than penalties. I think the positive is always better than the negative. We need to figure out how to give real incentives for efficient buildings, increased production and renewable energy, and for the hybrid automobiles which can help solve our energy problems. One of my concerns about the large tax cut which the President just signed is that it leaves little room for action on energy. We could be promoting immediate relief for consumers, and helping to develop new technologies to promote energy efficiencies and renewable sources. Unfortunately, with our surplus diminished, our options are also diminished.

"We've got many of these technologies in front of us right now; this is not pie in the sky stuff. You can go buy these cars right now; for a little more than \$20,000 you can buy a hybrid car. If we put a real tax incentive behind it we might really get it out there—get scale of production for the producers and really begin making a difference in the emissions of cars. Fuel cells should be right behind it. If we invest wisely in research and tax incentives, the return would be terrific. I saw kind of a tag line on an ad the other day that said "we'll never know how far we can go," and the tag to that should be, "unless we try." We can do a lot on global warming, we can do a lot on energy and the environment, but we must try. We must have a policy and we have to stick with it.

"A good energy policy should do two things. First, it should produce reliable and affordable energy. And second, it should improve the environment. That is what the American people want, and that is what they deserve. And it can be done, with tax incentives playing a vital role in promoting innovation in energy efficiency and energy production.

"We will never be able to pump more oil than OPEC, but Americans will win every single time when we use technology and innovation to solve our problems.

"My colleagues and I recently put forward Democratic principles for sound energy policy. I believe this Committee should give consideration to the ideas in our report. We won broad support from conservative to progressive members. When we found agreement on production and efficiency incentives that are together the most cost-effective way to balance supply and demand.

"Many of the principles we supported are already represented by bi-partisan bills in the House. For example, small, independent energy companies produce 50% of the petroleum and 65% of the natural gas in the lower 48 states. We have proposed tax incentives to help keep marginal wells in production and to encourage increased production by these small, but crucial energy companies. These ideas have the support of Democrats and Republicans.

"Ed Markey and Duke Cunningham have legislation that would dramatically increase energy savings in commercial buildings and new housing. It uses existing technologies, but also helps to stimulate the market for new ideas in energy efficiency. Experts at the U.S. Department of Energy have predicted that energy efficiency measures, like Markey-Cunningham, can produce energy savings equal to 600 300 mega-watt power plants over the next 20 years. That is over 40% of the number of new plants President Bush wants to build. Our approach means more power, lower energy bills, and billions saved from not having to build 600 power plants.

"For anyone who still questions the importance of having a balanced energy policy—one that includes both production and energy efficiency—I point out one fact. From 1973 to the present, Americans have saved between 150 and 200 billion dollars by improving energy efficiency.

"One very promising idea is hydrogen-run, fuel cell cars and, other hybrid engine technologies. The Democratic energy plan—and both the Clinton and Bush Administrations—proposed incentives for these and similar kinds of cars. If we structure sensible local and federal tax credits, we can help make these cars a success.

"Hydrogen-fuel cell technology holds great promise for powering autos and electrifying buildings in a much more efficient, environmentally sensitive manner. What we lack is the public leadership and public policy to lead us in that direction. The same applies to renewable sources of energy like solar and wind. For instance, presently wind power produces only 1.3% of yearly capacity in California. According to the American Wind Energy Association, the wind potential of California is 30% of California's total energy demand.

"There are several bills, with Republican and Democratic co-sponsors, that give strong support to developing cost-effective renewable energy.

"One of our great failures is not sustaining a consistent, long term federal energy policy. First, we put money in research and tax incentives for efficiency and renewables and then later we cut these same programs. We must adopt new thinking and new ideas so the American people have the opportunity to reach for their twin goals of plentiful energy and protecting our environment at the same time.

"The problems are real. The solutions are real. There are hybrid cars on the market today that get 70 miles per gallon. Who would have believed that could be true 25 years ago, the last time we faced an energy crisis? We must find ways to release the full creativity and ingenuity of the American people in resolving this problem. We must move forward in a pragmatic way that taps into our capacity for innovation and new ideas, which Americans have in abundance, and which I believe is the key to meeting the challenges I've just outlined above."

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Chairman MCCRERY. Thank you, Mr. Gephardt. Mr. Stenholm.

**STATEMENT OF THE HON. CHARLES W. STENHOLM, A  
REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS**

Mr. STENHOLM. Thank you, Mr. Chairman, Members of the Committee; thank you for your foresight in holding these hearings.

As a Member who has been here for 22 years, I will say that at no time since the Carter administration has any administration provided leadership for a national energy policy, as I believe we are facing today and we are hearing today; and also I am very glad to see this Committee giving serious thought to a national energy policy as evident by the hearings you are holding today and the activi-

ties that you, as Members of this Committee, are in fact carrying on. And I thank you for the privilege of participating.

I commend my colleague from Texas, Mr. Thornberry, for introducing H.R. 805, the Independent Energy Production Act, of which I am an original cosponsor. This bill is designed to preserve the marginal properties and capital of independent oil and gas producers, thus protecting this important, yet high-risk, sector of our economy from volatile world price fluctuations.

Marginal wells remain a huge source of oil and gas, yet their profitability is questionable during periods of low prices. Rather than merely capping these wells and creating problems for States and Federal lands, a counter-cyclical tax credit would keep these wells pumping, something that we failed to do 2 years ago when we had the opposite of pricing that we have today.

Moreover, I would encourage the Committee to create a plowback incentive, a 10 percent tax credit that would apply to expenditures for domestic oil and gas exploration and production. I also would ask you to look at the bill introduced by Mr. Moore of Kansas to stimulate production of unconventional gas by extending the section 29 tax credit for unconventional gas production.

Unfortunately, despite the wide-ranging bipartisan support for incentives to improve the domestic oil and gas industry, we have been unable to enact these simple provisions that would deter wild price swings that hurt American families. In a letter I recently received from the Texas Alliance of Energy Producers, the lack of support for independent producers was noted with disappointment. The letter specifically states the Alliance believes "that price volatility is an issue that must be addressed in the debate about a national energy policy."

"The Democratic proposal does a much better job of using the Tax Code to encourage exploration and development of reserves. The President's plan does not have any tax provisions for small independent producers." I submit their letter for the record with my testimony.

We also have a growing demand for electricity and coal which plays an important role in producing over half of our electricity needs. In that light, it is important that we provide incentives for reducing pollution from existing coal-fired power plants. The Blue Dog energy plan, which Mr. Sandlin will talk more about, proposes a 10 percent tax credit for qualified expenses toward the construction of new power plants using advanced clean-coal technology or the retrofitting and repowering of existing conventional power plants with new advanced clean-coal technology; and I would ask you to look at that as you continue your deliberations.

Refining capacity, it is no secret that domestic refining has actually fallen over the last decade even as demand for refined petroleum has increased. As one who represents—at one time, represented two refineries in my District—one is no longer operating; it was closed because of its judgment that it could not meet the standards that were implied. Another has had terrific problems in dealing with the standards that we through Congress and congressional activity have placed upon them. I think we need to take a good, hard look at that.

By reclassifying petroleum refineries as eligible for the 7-year depreciation, the industry can retain capital for essential investments in infrastructure, and I would ask you to look at that.

Likewise, construction should begin as soon as possible to bring North Slope natural gas to the United States markets. It is crucial that Congress support a production tax credit to promote the development of a new trans-Alaskan natural gas pipeline to bring natural gas on Alaska's North Slope to the continental United States.

Regarding electricity transmission, as we have seen over the course of the last 9 months, restructured electric markets recently have come under stress as increased demand creates supply bottlenecks, exposing the limitations of the delivery system and causing regional electricity disruptions. Transmission constraints in the patchwork of split responsibility between States and the Federal government is no longer adequate, and new mechanisms should be considered to address regional needs and circumstances.

I encourage my colleagues on the Committee to support the transmission industry agreement between independent operating utilities, municipals and rural electric cooperatives, modifying the Federal Tax Code to facilitate the transmission and distribution of electricity.

Also, as you have heard, alternative and renewable energy sources need to be looked at in their entirety: wind, solar, hydroelectric, other renewable energy resources such as ethanol, biomass, biodiesel, as well as alternative sources such as nuclear energy. We need to look at all of them.

I commend Mr. Foley, a Member of this Committee, for his bill, H.R. 876, providing for a 5-year extension of the production tax credit regarding wind energy and renewable energy, and I think that is headed in the right direction.

Additionally, Congress should consider increasing the existing investment credit for renewable energy infrastructure to 20 percent for solar and geothermal, as well as increasing the current tax credit for producing electricity to 2 cents per kilowatt hour for electricity produced from wind and biomass and extend the credit to solar and to geothermal.

I also come to you today as the Ranking Member of the House Agriculture Committee, and you will hear, as you heard from the previous witnesses, agriculture has got a role to play and vice versa. I have observed you cannot produce food and fiber without oil and gas. You cannot produce oil and gas without food and fiber. There is a natural partnership to be designed here, and it is this that I have been working on, since I represent the oil patch as well as the cotton patch.

We have been working to see what we can do to work together. And there are many things that can be done, not the least of which is providing the research and development funds to answer those questions where there are legitimate concerns about the efficiency of those actions today, but also to continue to move forward in the development of alternative sources of energy.

We must become more self-dependent upon our own energy, rather than dependent upon foreign sources. The only way I know to do that is to produce more energy, and all of these alternative sources offer tremendous potential that I believe can be developed

at economically sound price levels if we will address those in a sound research and development process.

Finally, on consumer needs, it is no secret today that consumers all over the United States are having terrific problems regarding their bills today, as they see them. And I think we must recognize, particularly, those who are unable to pay for their bills. We must look at ways in which we can be of help to those who, through no fault of their own, find themselves in an economic situation in which they cannot pay their electric bills.

But I would hope that, in doing so, we would also look at long-term needs, we would look at making certain that we would have the energy available and the incentives to produce those efficient vehicles, efficient homes and other home improvements through the Tax Code.

And here I will conclude my remarks to you in saying that I hope the Committee will be innovative and creative as you shape our country's next energy program. We no longer can rely on the same old policies. America needs a balanced, forward-looking energy policy which will infuse our energy sector with both efficiency and competition, seeking to protect America against emergencies in the energy market. However, we must take care to ensure that our energy policy fits within the context of a fiscally responsible budget framework.

I was extremely disappointed that the tax incentives that I have mentioned today—and there were many—were not even considered within the context of the budget process that we have just gone through. The recently passed \$1.35 trillion tax cut signed into law has consumed virtually all of the available surplus and left us with very little room to make changes in the Tax Code as part of an energy policy without dipping into the Social Security and Medicare trust funds. I do not see how this Congress will be able to set in place a national energy policy that is more than skeletal.

The challenge this Committee faces is not only to identify changes in tax policy that can contribute to a national energy policy, but also to figure out how to pay for these policies without dipping into the trust fund. I know you share this desire.

This Congress could have taken time to look at using the Tax Code to accomplish some of the much-needed improvements in our energy policy. Regrettably, we have made it virtually impossible to provide for the needed spending in the area of energy. I say “virtually” because I hope that in your wisdom, as you look at this, you will find ways that we can do so, and I look forward to working with you as you attempt to do just that.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Stenholm follows:]

**Statement of the Hon. Charles W. Stenholm, a Representative in Congress from the State of Texas**

Thank you Mr. Chairman, and I thank the members of the committee for allowing me to come and be here today. I commend you for holding this hearing today on the development of a national energy policy. I have become increasingly concerned about this country's lack of a national energy policy and what impact that failure has on both producers and consumers. The state of our energy industry has far reaching economic, geographic and political ramifications and we ignore it at our own peril. My hope is that this hearing can begin a process of developing a comprehensive national policy for this vital industry.

### **Oil Production**

Oil prices, on a long slide, dipped to \$10 and under in late 1998 and early 1999. The average dip in oil prices lasts about six months, and this recent one lasted three times as long. The price collapse forced many oil and gas companies to sell equipment, layoff employees, and shelve exploration and production plans. A number of energy companies went out of business as a result.

In my District, the 17<sup>th</sup> District of Texas, which also is known as the “oil patch,” claims for unemployment from the oil and gas industry quadrupled from 1,171 to 4,730 between December 1997 and 1998. During this time, the lost oil wellhead value dropped \$5.79 million and the value of oil to the Texas economy dropped almost \$1 billion.

The number of producing wells declined by 2,855 during this time as well. In my home county of Jones, oil production in December 1997 was 83,706 barrels, in December 1998 it was 69,966 barrels, and in December 1999 it had declined to 58,534 barrels. That’s a decline of 25,172 barrels from December 1997 to December 1999, or a decline of 30%.

Oil production in the United States is on the decline as we are operating from a mature resource base that makes the cost of production high. Total domestic crude oil production has declined from 8.7 million barrels per day in 1986—the first oil price collapse—to 5.9 million barrels per day in 1999. We must recognize that a healthy domestic oil production industry is also essential for a healthy domestic natural gas industry, because they are inherently intertwined.

### **Gas Production**

Much of the nation’s natural gas comes from oil wells. Many of the nation’s independent producers, particularly hard hit by the industry down turn, focused on finding natural gas. When prices are below the cost of exploring and producing crude, these small independent producers cannot stay in business, causing a ripple effect throughout local communities as schools and hospitals in Texas rely on a strong oil and gas industry for revenues. Over the past several years, we warned that critically low prices have the potential to turn into a price shock. Unfortunately, this is a lesson that we should have learned many times over in the last two decades. Production of both oil and gas declined in 1999 and, despite high prices paid to producers now, has not climbed to pre-collapse levels.

Oil and natural gas producers are responding. In April of 1999, only 126 rigs were drilling for oil and 362 rigs were drilling for natural gas, nationwide. By January 2001, rigs drilling for natural gas more than doubled with 878 rigs in production and the rig count for crude oil doubled as well (240 rigs in production). However, wells generally take three months to a year to come on line, so, with temperatures lower than normal nationwide, prices likely will not go down significantly for several months.

Despite a doubling of rigs in production, demand for natural gas is far out-weighting supply. According to a study conducted by the National Petroleum Council, the natural gas demand will increase by slightly more than 30% over the next decade. The U.S natural gas demand has grown from 19 Thousand Cubic Feet (TCF) in 1990 to approximately 22 TCF in 1998, or about 2% per year, and has continued to represent about one quarter of the nation’s fuel needs.

### **Looking Forward**

If ever there was a time of dramatic demonstration, the compacted experience of the last three years with its highs and lows illustrates the need for our Nation to take responsibility of its energy future. We do need a free market for the production of energy, but it cannot be a “free” market dominated by foreign producing countries that do not necessarily have our best interests at heart. Former Senator Lloyd Bentsen of Texas once said that when America imported more than half of its crude and petroleum products, it would have reached a peril point. We are now there!

In formulating a national energy policy, it must be in the context of a continuously improved understanding of how energy demands of the 21<sup>st</sup> Century challenge the energy infrastructures of the 20<sup>th</sup> Century, of how the new economy is affecting the competition for the capital needed to improve and upgrade our energy infrastructures, and of how the government’s incentive structure and statutory frameworks should evolve to meet emerging energy needs. As policymakers, we can focus on the role of oil and gas in power production, producer incentives—including making access to capital using tax incentives more available—and conservation measures.

### **Fossil Fuel Production Incentives**

I commend my colleague from Texas, Mr. Thornberry for introducing H.R. 805, the Independent Energy Production Act of 2001, of which I am an original co-sponsor. H.R. 805 is designed to preserve the marginal properties and capital of independent oil and gas producers thus protecting this important yet high-risk sector of our economy from volatile world price fluctuations. Specifically, H.R. 805 establishes a series of targeted tax incentives for the domestic production of crude oil and natural gas, including:

- Tax credit for marginal domestic oil and natural gas well production;
- Election to expense geological and geophysical expenditures and delay rental payments;
- Five-year net operating loss carryback for losses attributable to operating mineral interests of independent oil and gas producers;
- Temporary suspension of limitation based on 65% of taxable income and extension of suspension of taxable income limit with respect to marginal production; and
- Modification of the definition of “small refiner” for purposes of the exception to oil depletion deduction.

Marginal wells remain a huge source of oil and gas, yet their profitability is questionable during periods of low prices. Rather than merely capping these wells and creating problems for states and federal lands, a counter-cyclical tax credit would keep these wells pumping. Additionally, these exclusive tax deductions are designed to preserve the capital of independent producers and small refiners amidst some of the unique challenges facing the industry. They would also assist producers during times of low oil price shocks, often the result of international events.

I would encourage the Committee to also create a “plowback” incentive (10% tax credit) that would apply to expenditures for domestic oil and natural gas exploration and production.

Unfortunately, despite the wide ranging, bi-partisan support for incentives to improve the domestic oil and gas industry, the current Administration has chosen to ignore these simple provisions that would deter wild price swings that hurt American families. In a letter I recently received from the Texas Alliance of Energy Producers, the lack of support for independent producers was noted in disappointment. The letter specifically states, “The Alliance believes that price volatility is an issue that must be addressed in the debate about a national energy policy. The Democratic proposal does a much better job of using the tax code to encourage the exploration and development of reserves. The President’s plan does not have any tax provisions for small, independent producers.” I submit this letter for the record with my testimony.

Furthermore, the Committee also should consider legislation re-introduced by my colleague, Mr. Moore of Kansas, to stimulate production of unconventional gas by extending the “Section 29” tax credit for unconventional gas production will provide the energy sector with a necessary incentive to produce gas that is both difficult and costly to obtain. By extending the credit’s availability through 2012 and also allowing it to be taken by taxpayers who are assessed under the Alternative Minimum Tax (AMT) schedule, I believe this legislation will encourage additional future gas production.

From 1970 to 1998, the U.S. Population grew by 32%, and total consumption of electricity increased 133%. Coal is a source for over 50% of America’s electricity generation and with over 250 years of coal reserves, America’s most readily available fuel stock. We have a growing demand for electricity and coal plays an important role in producing over half of our electricity needs. In that light, it is important that we provide incentives for reducing pollution from existing coal-fired power plants. The Blue Dog Energy Plan proposes a 10% tax credit for qualified expenses toward the construction of new power plants using advanced clean coal technology, or the retrofitting and re-powering of existing conventional power plants with new advanced clean coal technology.

### **Pipeline Construction Incentives**

Likewise, construction should begin as soon as possible to bring North Slope gas to United States markets. The industry has wisely conserved natural gas as it produced the oil over the last twenty years, and the natural gas can now be transported to the Lower 48 States. It is crucial that Congress support a production tax credit to promote the development of a new Trans-Alaskan natural gas pipeline to bring natural gas on Alaska’s North Slope to the continental United States.

### **Improving Refinery Capacity**

In addition to each of the incentives highlighted above, the Blue Dog Energy Plan that will be released later this month recognizes that additional regulatory controls combined with low rates of return on capital act as a disincentive to expanding the additional refinery capacity necessary to meet our energy needs. Addressing our energy problems requires a substantial commitment to improving the energy infrastructure within the United States. Domestic refining has actually fallen over the last decade, even as demand for refined petroleum has increased. The slack has been taken up by a dramatic increase in imports, which contributes to our international balance of payments problems. Even with demand at an all-time high, small refineries may still go out of business due to prohibitive costs of the installation of equipment to remove sulfur from the products and other costly modifications required to reduce air emissions. By reclassifying petroleum refineries as eligible for 7-year depreciation, the industry can retain capital for essential investments in infrastructure.

### **Electricity Transmission**

As we have seen over the course of the last 9 months, restructured electricity markets have recently come under stress as increased demand creates supply bottlenecks, exposing the limitations of the delivery system and causing regional electricity disruptions. Transmission constraints and the patchwork of split responsibility between states and the federal government is no longer adequate and new mechanisms should be considered to address regional needs and circumstances. I encourage my colleagues on the Committee to support the transmission industry agreement between Independent Operating Utilities, Municipals, and Rural Cooperatives modifying the federal tax code to facilitate the transmission and distribution of electricity.

### **Alternative and Renewable Energy Sources**

As part of a national energy policy, we also need to further improve and expand other avenues of energy, including wind, solar, hydroelectric, and other renewable energy resources such as ethanol, biomass, and bio-diesel as well as alternative sources such as nuclear energy. If we are to achieve energy independence, we must research and develop all sources of energy and provide access to capital to bring these sources into our national energy supply.

For example, the U.S. wind industry has successfully financed and built wind plants capable of generating 1700 Mega Watts of power. These plants now produce more than 3.1 billion kilowatts per hour per year. Based on this performance, the industry is developing a corporate structure that has increasing access to some of the same capital markets as electric utilities. Many rural communities, including some in the 17<sup>th</sup> District of Texas, are taking advantage of the wind's clean energy to provide their electrical needs or for pumping water when they are unable to be tied to a utility grid, lack conventional resources, or simply want to be independent of utility bills. This demand for wind energy is helping expand the industry as well as helping provide a cleaner environment while operating in harmony with farming, ranching, forestry, and other open space operations. Research and development play a key role in advancing wind technology. These organizations include national laboratories and facilities for testing new hardware.

Since the 1980s, wind energy production has increased its efficiency by a remarkable 80%—from 25 cent per kilowatt-hour to 4.5 cents per kilowatt-hour. Through expected equipment and manufacturing efficiencies, the industry anticipates the cost of wind energy will fall to 3 cents per kilowatt-hour or less in the next few years. It is important that we continue to support the wind energy production tax credit for this environmentally friendly form of renewable energy that produces no greenhouse emissions. I encourage the committee to follow the lead of my colleague Mr. Foley, who introduced H.R. 876 providing for a 5-year extension of the production tax credit. I also support expansion of the Renewable Resource Credit (Section 45 Credit) to include Alternative Energy Sources and any qualifying energy produced from renewable sources.

Additionally, Congress should consider increasing the existing investment credit for renewable energy infrastructure to 20% for solar and geothermal as well as increasing the current tax credit for producing electricity to 2 cents per kilowatt hour for electricity produced from wind and biomass, and extend the credit to solar and geothermal.

### **The Role of Agriculture**

I also come before you today as the Ranking Democrat on the House Agriculture Committee. I want to share with you not only the impact that energy price and

availability have on agriculture, but also how America's farmers and ranchers can play a role in meeting our energy needs.

For 2001, cash production expenses are forecast to increase \$1.5 billion to a record level of \$179.5 billion for the sector. Fuel prices are expected to remain close to last year's level, however, the recent spikes in natural gas prices have led to much higher fertilizer prices, which will have a major impact on producers' bottom lines and even what they plant this year.

The recent spikes in natural gas prices have wreaked havoc in the domestic fertilizer industry. While natural gas prices appear to have moderated, albeit at a higher price, and the availability of fertilizer for spring pre-planting application is less in question, there is no doubt that farmers will be paying much higher prices for nitrogen fertilizers this spring. As an example, anhydrous ammonia prices went from an average price of \$200 per ton in 2000 to \$334 per ton at the beginning of January.

Agricultural producers cannot pass along higher costs. An increase in energy and energy-related input costs not only increases farmers' direct out of pocket expenses, but also results in lower prices from the market as the purchasers of their commodities try to recoup the higher costs they are paying for transportation, processing and marketing.

As Congress has had to pump billions of dollars into the farm economy to prevent disaster, there is no doubt that the picture is not improving in the short term, especially with agriculture's reliance on energy in various forms and the impact that higher energy prices will continue to have on agriculture's bottom line.

However, American agriculture can provide a ready source of raw materials to help meet our domestic energy needs. Over the last 20 years, we have made great progress in promoting the use of ethanol at both the state and federal level. I believe the time is right to also promote the use of biodiesel. It is a fuel that can be made from vegetable oils (which we currently have a surplus of) as well as recycled oils and animal fats. The fuel has passed vigorous environmental, health and engine testing. Soybean growers have spent over \$25 million of their own money, with little government assistance, to successfully commercialize this fuel.

It is imperative that the tax situation with ethanol be addressed the Ways and Means Committee. Currently those states, mainly in the Midwest, which utilize ethanol the most are penalized in the amounts they receive for highway improvements and construction from the Transportation Efficiency Act for the 21<sup>st</sup> Century or TEA-21 bill passed by Congress in 1998. I do not believe that we should be penalizing these states for using a homegrown product, corn, to meet their energy needs.

Our energy policies should be comprehensive and framed to encourage the development and use of many viable fuels. The answers to our energy dependence and power generation problems can best be met by broadening our base of energy resources. I personally feel strongly that fuels like biodiesel and ethanol can be and should be a part of a national energy program.

### **Consumer Needs**

We need to consider measures to help restore market stability with domestic crude oil and natural gas prices maintaining a level where domestic producers can compete in a global market. At the same time, our national energy policy must recognize both producer and consumer issues. We need to consider the use of incentives to encourage consumers to make energy efficient improvements to their homes and purchase energy efficient automobiles.

Americans already are making lifestyle-changes because of high energy prices, and as most of the country is at the start of air conditioning seasons and summer vacation, many families will have to curtail the use of appliances or change their vacation plans in order to be able to pay their energy bills. There are a host of innovative technologies that could significantly reduce the energy use of heating and cooling appliances used in residential and commercial buildings. For example, super-efficient electric air conditioners, refrigerators and clothes washers use 25-50% less energy than typical new models sold today. However, purchasing costs are a major barrier preventing more widespread production, marketing, and sale. Financial incentives can spur the purchase of these products and overcome the initial high cost barrier and be mass-produced.

Innovative tax incentives for gains in energy conservation and efficiency could provide help to families and businesses to maximize energy efficiency and conservation without having to make large and painful lifestyle changes. Flexible, non-refundable, tax credits for high efficiency vehicles, purchase of energy efficient homes, or defined home improvements that reduce energy costs have been proposed by the House Democratic Caucus Energy Task Force and are likely to be a part of the Blue Dog Energy Plan as well.

**Concluding Remarks**

I hope the Committee will be innovative and creative as you shape our country's next energy program. We can no longer rely on the same old policies. We must look for additional sources and resources to complement our traditional sources of energy. America needs a balanced-forward-looking energy policy based on the proposals that have been put before this Congress. We need a responsible approach that will infuse our energy sector with both efficiency and competition, seeking to protect America against emergencies in the energy market.

However, we must take care to ensure that our energy policy fit within the context of a fiscally responsible budget framework. I was extremely disappointed that these tax incentives to boost domestic production of all forms of energy and provide consumers and businesses with the means to better utilize current technology that improves energy efficiency were not considered within the context of the budget process. The recently passed \$1.35 trillion dollar tax cut signed into law has consumed virtually all of the available surplus and left us with very little room to make changes in the tax code as part of an energy policy without dipping into the Social Security and Medicare trust fund. I do not see how this Congress will be able to set in place a national energy policy that is more than skeletal. The challenge this Committee faces is not only to identify changes in tax policy that can contribute to a national energy policy, but also to figure out how to pay for these policies without dipping into trust fund surpluses that we have voted to protect.

This Congress could have taken time to look at using the Tax Code to accomplish some much-needed improvements in our energy policy. Furthermore, it is imperative that we enact environmental and production incentives as well as many of the other provisions that I have cited in this testimony that we clearly need to do for the benefit of this country. Regrettably, we have made it virtually impossible to provide for the needed spending in the area of energy as well as other top priority issues that are facing this country. Notwithstanding the fact that I would have far preferred to be in a more hospitable budgetary environment for enacting some of the necessary reforms I have just mentioned, I still strongly encourage this committee to press forward as far as possible in outlining a workable national energy policy. Thank you for your consideration and attentiveness this afternoon.



May 30, 2001

The Honorable Charles Stenholm  
Room 1211 Longworth HOB  
Washington, DC 20515

Dear Congressman Stenholm:

Last week President Bush and the Democratic leadership released comprehensive plans designed to reduce the country's dependence on foreign oil.

Americans need America's energy. For too long, the nation has been going in reverse as our dependence upon foreign oil has increased from 32% in 1973 (the year of the first oil embargo) to 59% today. In 1980, there were 224 refineries in the United States operating at 68% of capacity. Today, there are 154 refineries operating at 97% of capacity. Today, there are 500,000 less people in the energy industry than there were in 1982.

Now, several plans have been introduced that focus on the full development of America's energy resources for America. Conservation must be a key component of an energy policy, too. But, an energy policy based solely on conservation will fall short of meeting the needs of consumers.

A national energy policy must encourage the full development of energy resources in America. Without ample supply of energy, prices will escalate and shortages will occur. California is a perfect example of a system that ignored the laws of supply and demand.

Which plan do we like best? The Democratic plan talks about market stability for both the oil and gas industry to help maintain and increase domestic production, and to deter wild price swings that hurt American families. The Democratic plan calls for an optimum price of between \$15 and \$30 per barrel. The President's plan does not mention "market stability," but Vice President Cheney addressed the issue on May 29, 2001, in an interview with Tim Russert on NBC. Vice President Cheney said that oil price volatility has been a major contributor in energy problems the nation faces today, and that the Bush Administration seeks market stability. **The Alliance believes that price volatility is an issue that must be addressed in the debate about a national energy policy.**

The Democratic proposal does a much better job of using the tax code to encourage the exploration and development of reserves. The President's plan does not have any tax provisions for small, independent producers.

Even though the Alliance supports opening the ANWR -- we believe that America needs that oil -- our members do not have the capital and technology to explore ANWR as do the major oil companies.

In closing, I look forward to discussing with you the many other energy issues as we seek a national energy policy that will provide a safe and secure energy supply at a reasonable price for Americans.

Sincerely,

Charles W. Seely  
Chairman of the Board

The Texas Alliance of Energy Producers, which represents 1,680 members in 187 cities and 31 states, emerged in 2000 following the merger of the North Texas Oil and Gas Association and the West Central Texas Oil and Gas Association. Three-out-of-Four members are the owner.

719 Scott Avenue, Suite 500, Wichita Falls, TX 76701 • (940) 733-4121 • (800) 289-2258 • Fax (940) 733-4132 • E-mail: alliance@texasenergy.com  
P.O. Box 2232, Abilene, TX 76904 • (915) 677-2469 • Fax (915) 677-2450 • E-mail: westtexas@texasenergy.com  
615 West 10th Street, Fort Worth, TX 76102 • (917) 232-1390 • Fax (817) 332-1426 • E-mail: Alliance@texasenergy.com

Chairman MCCREERY. Thank you, Mr. Stenholm. Mr. Filner from California.

#### STATEMENT OF THE HON. BOB FILNER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. FILNER. Thank you, Mr. Chairman, and I thank the Committee for these hearings and for giving your colleagues not on the Committee a chance to share our experiences with you.

I am going to speak as a Congressman from San Diego, where the electricity crisis really started, to speak solely on electricity although I think what I say has to do with other forms of energy, whether it is natural gas or gasoline. And I want to talk specifically about some short-term steps that need to be taken because we are in incredible crisis in California.

The economy is teetering. The economy is being bled dry. The taxpayers of our State, because the utilities have gone bankrupt, are paying over \$3 million an hour for electricity—\$70 million, sometimes \$100 million a day, \$3 billion a month. Our economy

and, therefore, the Nation's economy cannot sustain this kind of bleeding, and we need your help.

Obviously, the answers that you come up with for solutions, both long-range and short-range, depend upon your understanding of what caused the problem. San Diegans believe, and I think I speak for virtually everyone, Republican and Democrat, in San Diego believes that when our prices doubled and tripled within 60 days of deregulation, it was a result of market manipulation. And I am talking about full deregulation, Mr. Chairman, deregulation of both wholesale and retail prices.

We knew this was not a supply-and-demand problem or a cost-of-production problem. The summer was no warmer than it was the summer before. Demand was almost the same, maybe even less. Cost of production had not increased. This was a result, and virtually everyone in San Diego will agree with me, of a manipulated market brought about by—a not-very-well-crafted deregulation plan for the State of California. The market was manipulated by outside energy wholesalers, and we are being bled dry by that.

This is not fundamentally a problem of supply and demand. We have tight supplies. And the Governor of California is doing everything he can to increase those supplies. We have a dozen plants on-line that will be available for production within 2 to 3 years, and he is doing everything he can to spur conservation. We reached a goal last month, we surpassed his goal of 10 percent with 11 percent conservation. We were already the second most conserving State per capita in this Nation.

The problem is the price!

Now, it would be simple for our Federal Energy Regulatory Commission (FERC) to impose cost-based rates for the Western grid in this Nation. In fact, when San Diego's prices went up two and three times, when small businesses by the scores went out of business, Mr. Chairman—and as the Democratic leader said, a recent report showed 65 percent of San Diego small business faced bankruptcy this year. When 65 percent of our small businesses almost going out of business, we have a problem.

When the evidence of market manipulation was presented to the Federal Energy Regulatory Commission, they agreed in a November report of last year, Mr. Chairman, that, yes, the market was manipulated, these were unjust and unreasonable prices, they were illegal prices. Yet they did absolutely nothing. They had the power right then to say prices ought to be reduced. They did nothing, and they signaled the energy cartel that they could rob our State blind and rob the rest of the West blind; and that is exactly what they are doing.

The FERC found these prices to be illegal. They could impose cost-based rates. Cost-based rates provided more than a reasonable profit for decades and decades in this country. That is going back to the regulated rate, and in fact, they ought to refund the criminal overcharges that my constituents have been paying since last June.

So if the problem is prices, then cost-based rates ought to be imposed. If they don't act, the Congress can act to do that. This Congress can also send signals to all cartels, whether it is natural gas or gasoline or electricity.

I have a bill, H.R. 443, which is a windfall profits tax which imposes a 100 percent tax on windfall profits, which can be defined as a term of art. These companies are entitled to a reasonable profit; that is what the regulation said for 100 years in this country. They are not entitled to gouge in a criminal way the consumers of California or Oregon or Washington or Montana or New Mexico or Wyoming or New York.

So you have windfall profit tax bills for your consideration.

I know Mr. Foley has put in tax incentives for wind power. I have a bill, H.R. 269, which I hope you will look at, Mr. Foley, also, because I worked it out with the top windmill manufacturer in the United States who is in San Diego. And they have thrived, and this country can thrive on wind power.

As Mr. Gephardt suggested, a 30 percent goal for electricity is reasonable. I just got back from Denmark where their national goal is 20 percent, and they are going to achieve that, so we ought to be looking at these.

But I will tell you in conclusion, in the short run, in electricity, this economy is being threatened by the prices in California and in the Western grid. This Congress, this Nation, this President have got to bring down those prices. We need a 2-to-3-year breathing period before the new supply is online, before the conservation effects have taken full root. We need your help in doing that and I will tell you, the economy is threatened if we don't.

I thank the Chairman.

[The prepared statement of Mr. Filner follows:]

**Statement of the Hon. Bob Filner, a Representative in Congress from the State of California**

Mr. Chairman, thank you for scheduling this hearing to examine the effects of federal tax laws on the production, supply and conservation of energy in the United States. It is critical that we act now to provide immediate relief for the American people from a growing energy crisis that threatens to disrupt the country. At the same time, we must also make greater strides in addressing the nation's long-term needs by implementing realistic and effective proposals.

It's no secret that there is an energy crisis in California. San Diego was ground zero in this crisis. Our county became the first area in California where full electricity deregulation occurred in both retail and wholesale prices. My constituents were paying market-based electricity rates last summer which has resulted in triple-digit utility bills ever since.

The impact does not stop with the individual consumer—our whole Nation bears the consequences. A surge in the price of energy can derail the economic expansion that we have worked so hard to achieve and maintain.

California consumers have been gouged throughout the last year. Small businesses have been forced to close their doors. The utilities in our State have been brought to their knees. Yet quarterly reports show increased profits by nearly 1,000 percent for electricity wholesalers.

To address this problem, I urge Congress to immediately pass my legislation, H.R. 443, the Public Oversight of Wholesale Electric Rates Act or POWER Act which would impose a windfall profit tax on wholesale power sold throughout the western U.S. Anything over a "just and reasonable" amount of profit would be taxed 100%.

California is just part of a regional electricity grid. The obscene prices have spread to Oregon and Washington. Idaho and New Mexico are next, and the rest of the West will soon follow. It is time for Congress to act. We must hold this cartel accountable and provide the relief that Californians and all Americans so desperately need and deserve.

We must also take lessons from the current crisis that we face and act to make certain that we do not have recurring and long-term problems. In an effort to help address this need, I have sponsored H.R. 269, the WIND for Electricity Act.

We have failed to support the development of alternative energy resources. In terms of domestic resource potential, wind energy is the most overlooked fuel source

in this Nation. Wind is available just about anywhere, and can be utilized for electric generation more quickly than any other energy resource.

Compared with the tax incentives for conventional nuclear energy, Federal tax support for renewable energy resources, such as wind, is relatively small. Aside from accelerated depreciation, which is shared by other fast-evolving technologies, wind facilities now qualify only for a temporary Federal production tax credit.

This credit helps provide a price floor, but if the price of wind-generated electricity rises above a certain benchmark, the tax credit phases out and this credit took effect in 1994. It was originally decided to sunset this credit in June of 1999. But several years after the credit was enacted, Congress considered repealing it when energy prices were at an all-time low.

Fortunately, Congress retained the credit and later extended it until 2002. Despite wavering congressional policy, the credit has promoted use of domestic wind energy resources and has promoted technological development. An uncertain credit and a temporary extension, however, does not support long-term planning, development and construction of electric generation projects.

To spur this effort, I ask for your support of the WIND for Electricity Act to specifically promote the development of wind energy resources in the U.S. I know that San Diego is looking to this Congress for short-term relief from the high prices of electricity and for long-term alternative energy resources. I thank you for your support.

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Chairman MCCRERY. Thank you, Mr. Filner. And next Mr. Sandlin from Texas.

**STATEMENT OF THE HON. MAX SANDLIN, A REPRESENTATIVE  
IN CONGRESS FROM THE STATE OF TEXAS**

Mr. SANDLIN. Thank you, Mr. Chairman. It is good to be here, and I too appreciate the work of the Committee today in calling attention to this important problem. We certainly appreciate your focus and look forward to working with the Committee and other Members of Congress in addressing this problem.

I have long been concerned that our country lacks a comprehensive energy plan that links the balances between supply and demand to Federal environmental regulatory and tax policies. A patchwork of local and national rules and laws sends mixed cues to the energy industry, stifling expansions in capacity and advances in technology.

The Federal Tax Code in particular plays a crucial role in shaping industry behavior. I am here today to highlight what I believe are ways we can modify the Tax Code to maximize capital formation within the energy sector, promote stability in the energy markets and, thus, lower the cost of energy paid by consumers; and I will try to limit remarks to things that have not been talked about in detail by my colleagues.

The exploration and production of energy resources is very capital-intensive, as you know. Those who explore and produce energy must leverage large amounts of capital throughout the process of identifying and recovering energy supplies. In many respects, this process is not that different from other sectors of the economy. The energy industry relies on the use of cutting-edge technologies and the large capital investments in equipment common to other industries.

However, unlike the high-tech companies of Silicon Valley that, until recently, seemed to reap huge profits for investors, the domestic oil and gas industry is just now recovering from the record low

prices and abysmal earnings of 1998 and 1999. The energy sector's traditional cyclical fluctuations present hurdles to attracting a consistent stream of capital for investment. Try attracting investment when natural gas is 98 cents an MCF, as it was in 1999, and you begin to understand why dozens of independent oil and gas producers went out of business, curtailing the production of natural gas, an increasingly important fuel stock for electricity generation.

Modifying the Federal Tax Code will allow producers to retain the necessary capital crucial to expanding capacity and spurring production in this country. Providing access to capital is linked to securing market stability, which benefits both the consumers and the energy producers.

The domestic oil and gas industry, particularly the independent petroleum and gas producers are just now recovering from losses caused by the low prices in 1998 and 1999. The failure to recognize the need to respond to those low prices resulted in a 10-percent loss in domestic production, most of which has been made up by imports of gas and oil from Canada and OPEC.

Easing this feast-or-famine swing of the oil and gas markets must be a key priority to a comprehensive energy policy. Congress should modify the Federal Tax Code by providing the proper cues and incentives to maintain adequate levels of production during times of low and high prices. A basket of targeted tax incentives can help maintain and increase domestic production deterring wild price swings that hurt American families and produce uncertainty within the industry.

A bipartisan coalition of Congress recognizes the need to secure our energy future. Numerous bills have been introduced in the House and the Senate, with substantial cosponsorship, during the 106th Congress and now the 107th Congress. I am pleased to join as a cosponsor and speak in support of two of those bills today, H.R. 805 and H.R. 876, which, if enacted, will encourage the production and development of energy sources.

H.R. 805, the Independent Energy Production Act of 2001, is designed to preserve the marginal properties and capital of independent oil and gas producers and to protect this important, yet high-risk, sector of our economy from volatile world price fluctuations. Many of the provisions contained in H.R. 805 encourage independent gas and oil producers to reinvest capital in capacity and production, which will smooth out the supply and demand chain. I would like to briefly outline a few of the measures in that bill.

The marginal well production tax credit: This credit will allow a \$3 per barrel tax credit for the first three barrels of daily production from an existing marginal oil well and a 50 cent per MCF tax credit for the first 18 MCF of daily natural gas production from a marginal well. This credit could cost the Treasury as little as \$20 million a year, but according to the Department of Energy, could prevent the loss of 140,000 barrels per day if fully employed during times of low prices like 1998 and 1999.

Geological and geophysical costs: Geological and geophysical costs, or G&G surveys, are used to locate and identify properties with the potential to produce oil and natural gas, as well as to determine the optimal location for developing a well. An example of G&G expense is the use of 3-D technology, which utilizes state-of-

the-art computer models to provide more detailed and, thus, reliable predictions of possible resources. By allowing current expensing of geological and geophysical costs incurred domestically, domestic producers can benefit from the same tax incentives for research and development that we provide to other industries; and as you know, it is now capitalized.

H.R. 876, Mr. Foley's bill: I would like to shift gears for a moment and focus on that. The U.S. wind industry has successfully financed and built wind plants capable of generating 1,700 megawatts of power. These plants now produce more than 3.1 billion kilowatts per hour per year. Based on this performance, the industry is developing a corporate structure that has increasing access to some of the same capital markets as electric utilities.

Recently I met with a Texas-based wind generating company that is preparing to undertake a significant expansion of its infrastructure that will provide power to tens of thousands of Texans. To promote the continued development of wind energy production in the United States and to encourage projects such as the one I described, it is imperative that Congress act to extend the wind energy production tax credit. The construction of wind power generating facilities is capital-intensive with projects often competing against fossil fuel-generated power. Extending the wind tax credit will provide developers with certainty and stability to undertake the massive projects unleashed.

In closing, Mr. Chairman, I am hopeful that Congress will take up these progrowth tax reform proposals in the 107th Congress. We all recognize the importance of promoting a wide range of energy supplies. We must advance an energy plan that utilizes the Tax Code to encourage domestic energy production and development.

Let me comment that the Blue Dog Democrats are currently working on an outline of a comprehensive, forward-looking market-based and balanced national energy strategy.

In past administrations, Democratic and Republican, various public officials have taken an ad hoc pledge to pursue energy independence for the Nation, but this commitment quickly fades into complacency once the crisis of the moment begins to subside. We must not allow this to happen again. Although the energy recommendations set forth by the current administration omit several of the provisions outlined in my testimony and the testimony of others here today, Congress should not be deterred from leading on energy by passing these good bills.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Sandlin follows:]

**Statement of the Hon. Max Sandlin, a Representative in Congress from the State of Texas**

Mr. SANDLIN. Thank you Mr. Chairman for calling this important hearing and allowing me an opportunity to testify before the Subcommittee today. I have long been concerned that our country lacks a comprehensive energy plan that links the balances between supply and demand to federal environmental, regulatory, and tax policies. A patchwork of local and national rules and laws sends mixed cues to the energy industry, stifling expansions in capacity and advances in technology. The federal tax code in particular plays a crucial role shaping industry behavior. I am here today to highlight what I believe are ways we can modify the tax code to maximize capital formation within the energy sector, promote stability in energy markets, and thus lower the cost of energy paid by consumers.

The exploration and production of energy resources is capital intensive. Those who explore and produce energy must leverage large amounts of capital throughout the process of identifying and recovering energy supplies. In many respects, this process is not that different from other sectors of the economy. The energy industry relies on the use of cutting edge technologies and the large capital investments in equipment common to other industries. However, unlike the high-tech companies of Silicon Valley, that until recently seemed to only reap huge profits for investors, the domestic oil and gas industry is just now recovering from the record-low prices and abysmal earnings of 1998 and 1999. The energy sector's traditional cyclical fluctuations present hurdles to attracting a consistent stream of capital for investment. Try attracting investment when natural gas is 98 cents tcf—as it was in 1999—and you begin to understand why dozens of independent oil and gas producers went out of business, curtailing the production of natural gas, an increasingly critical fuel stock for electricity generation. Modifying the federal tax code will allow producers to retain the necessary capital crucial to expanding capacity and spurring production.

Providing access to capital is linked to securing market stability, which benefits both consumers and energy producers. The domestic oil and gas industry—particularly the independent petroleum and gas producers—is just now recovering from losses caused by low prices in 1998 and 1999. The failure to recognize the need to respond to those low prices resulted in a 10% loss in domestic production—most of which has been made up by imports of gas and oil from Canada and OPEC. Easing the feast or famine swings of the oil and gas markets must be a key priority to a comprehensive energy policy. Congress should modify the federal tax code by providing the proper cues and incentives to maintain adequate levels of production during times of low and high prices. A basket of targeted tax incentives can help maintain and increase domestic production, deterring wild price swings that hurt American families and produce uncertainty within the industry.

A bipartisan coalition of Congress recognizes the need to secure our energy future. Numerous bills have been introduced in the House and Senate with substantial cosponsorship during the 106th Congress and now in the 107th Congress. I am pleased to join as a cosponsor and speak in support of two bills—H.R. 805 and H.R. 876—which, if enacted, will encourage the production and development of energy resources.

#### **H.R. 805—Independent Energy Production Act of 2001**

H.R. 805, the Independent Energy Production Act of 2001, is designed to preserve the marginal properties and capital of independent oil and gas producers and to protect this important yet high-risk sector of our economy from volatile world price fluctuations. Many of the provisions contained in H.R. 805 encourage independent gas and oil producers to reinvest capital in capacity and production, which will smooth out the supply and demand chain. I would like to briefly outline a few of the measures in the bill.

- **Marginal Well Production Tax Credit:** This credit will allow a \$3 per barrel tax credit for the first 3 barrels of daily production from an existing marginal oil well and a \$.50 per Mcf tax credit for the first 18Mcf of daily natural gas production from a marginal well. This credit could cost the Treasury as little as \$20 million a year, but according to the Department of Energy could prevent the loss of 140,000 bpd if fully employed during times of low oil prices like 1998 and 1999.
- **Geological and Geophysical Costs:** Geological and geophysical (G&G) surveys are used to locate and identify properties with the potential to produce oil and natural gas, as well as to determine the optimal location for developing a well. An example of a G&G expense is the use of 3-D technology, which utilize state-of-the-art computer models to provide more detailed and thus reliable predictions of possible resources. By allowing current expensing of geological and geophysical costs incurred domestically, domestic producers can benefit from the same tax incentives for research and development that we provide to other industries.

#### **H.R. 876, Wind Energy Production Tax Credit**

I would like to shift gears for a moment and focus on incentives for the production of electricity from renewable resources.

The U.S. wind industry has successfully financed and built wind plants capable of generating 1700 Mega Watts of power. These plants now produce more than 3.1 billion kilowatts per hour per year. Based on this performance, the industry is developing a corporate structure that has increasing access to some of the same capital markets as electric utilities.

Recently, I met with a Texas-based wind generating company that is preparing to undertake a significant expansion of their infrastructure that will provide power to tens of thousands of Texans. To promote the continued development of wind energy production in the United States, and to encourage projects such as the one I described, it is imperative that Congress act to extend the wind energy production tax credit. The construction of wind power generating facilities is capital intensive with projects often competing against fossil fuel generated power. Extending the wind tax credit will provide developers with certainty and stability to undertake the massive projects ready to be unleashed.

In closing Mr. Chairman, I am hopeful that Congress will take up these pro-growth tax reform proposals in the 107th Congress. Democrats recognize the importance of promoting a wide range of energy supplies. The Democratic Caucus energy plan utilizes the tax code to encourage domestic energy production and development. Additionally, the Blue Dog Democrats are working to outline a comprehensive, forward-looking, market-based, and balanced national energy strategy.

In past Administrations, Democratic and Republican, various public officials have taken an ad hoc pledge to pursue energy independence for the nation, but this commitment quickly fades into complacency once the crisis-of-the-moment begins to subside. We must not allow this to happen again. Although the energy recommendations set forth by the current Administration omit several of the provisions outlined in my testimony, Congress should not be deterred from leading on energy by passing these good bills.

Thank you, Mr. Chairman.

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Chairman MCCRERY. Thank you, Mr. Sandlin. I thank all the Members of the panel for your testimony. Does any Member of the Subcommittee wish to inquire?

Mr. FOLEY. Thank you, Mr. Chairman.

Chairman MCCRERY. Mr. Foley.

Mr. FOLEY. Thank you all very, very much and particularly for your comments on wind energy. They certainly are appreciated by this Member, and I would hope we can continue to work on those.

Mr. Gephardt, the Democrats seem to have made quite an issue of President Bush and Mr. Cheney's discussions, at least in formation on drilling, and particularly in Arctic National Wildlife Refuge (ANWR), more recently in the Gulf of Mexico. The discussions pretty much have both focused on, that is not the sensible way to go, as well as kind of a political wedge they are creating between the Governor and his brother, the President.

What is the Democratic Caucus's position on offshore drilling off of Florida? Do you have a formulated policy?

Mr. GEPHARDT. As you know, Representative, we are a widely based party, and we have many different views on energy. I would never tell you that we have one view on drilling rights offshore or in ANWR.

We have a lot of Members who feel that drilling in environmentally sensitive areas should be put to a later point in our energy policy, if at all, and we ought to be emphasizing the kinds of things that all of us have talked about here. Bringing more production out of marginal existing wells, natural gas pipelines from existing fields in Alaska, we think, is a very exciting and sensible idea.

Developing more wind energy, solar energy and fuel cells and hydrogen fuel cells for both stationary electricity and for automobiles, I think you would get a strong consensus in the Democratic Caucus and, I will bet, in the Republican Conference for all of those ideas; and we believe that those should be pursued intensely and actively

and over a long period before we go into drilling in environmentally sensitive areas.

Mr. FOLEY. That is why I need your help as the most powerful Democrat here on Capitol Hill. Today's Associated Press reports, "Democrat control of Senate may not help stop Florida drilling." It goes on to say, "Democratic control of the U.S. Senate has turned out to be no windfall for Florida politicians trying to block oil and natural gas drilling off the State's shores. The change from Republican control made a drilling advocate, Senator Jeff Bingaman, chairman of the Senate Energy and Natural Resources Committee. Senator Bingaman is sponsoring a broad energy bill that would permit leasing 5.9 million acres for drilling in the Gulf of Mexico, about 100 miles south of Florida's panhandle."

Now, obviously that is a great concern to me, and I agree that what we are doing here today is very, very important. You cannot underestimate our Nation's lack of resolve in this particular arena. Democrats and Republicans have failed miserably at adopting an energy policy that meets the test of time. We have fallen asleep since Jimmy Carter's day, and we remain asleep today; and we seem to think the only way is to stick a pipe in the ground and drill for fossil fuels, and that is our answer.

And that is why I am excited about the bipartisanship, but at the same time, I am troubled when the attacks go on when Mr. Bush and Cheney haven't even brought their report forward, and a Senator in your party is the prime sponsor of the effort to drill.

We have to find some common ground here, and every Senator and every House Member has the privilege and honor in this process of being able to pursue their best thought strategy. I criticize no one other than if we are going to have a concerted effort on environmental policies, we must obviously try and speak at least in one voice and correct those who may be wayward in their own party at times.

And I am certainly sending a message to Mr. Cheney and Mr. Bush on my desires not to have offshore drilling in Florida, but I would also encourage you to maybe have a conversation with Mr. Daschle, Mr. Bingaman, so that if those are the proposals that they are going to bring forward as the first offers as chairmen of those committees that we also focus on these much more important strategies.

You all mentioned the tax cut, and I think, yes, we can disagree on that as well; but my hope is that when those \$300 and \$600 checks go out that at least minimally they may help fill the SUVs of the soccer moms. They may allow businesses to at least get over that little bit of a hump that the energy prices have brought forward.

And the one final question, if you will, Mr. Gephardt, you mentioned price controls, where were you speaking of those price controls? Were those at the pump? Were they at the producer levels because of California's problem? Where do those controls come into play?

Mr. GEPHARDT. Well, first, the bill that I am interested in is the Waxman bill that would apply to wholesale electric prices on the West Coast. We see that as a temporary relief solution. We believe that California has four electric plants coming online this summer

and 19 that have been permitted. We think there is a long-term solution here, but we think temporarily there is a crisis and this is the best way to deal with it.

On the tax bill, I understand what you are saying. My concern there is twofold. One, I would have hoped we could have gotten some of these energy incentives we have been talking about today into that tax bill. Now that has gone past us. It is going to be harder in our view to get this done in the budget, but we are committed to work with you to find ways to get it into the budget.

The other thing on the rebates is that about a fourth of the people in the country won't get a rebate because they don't pay that much income tax. But they do pay payroll tax, and they have cars, too, and we would have hoped we could have figured out a way to help them.

Finally, let me agree with you that we need to work together in a bipartisan way to get this policy put together. It is the only way it is going to work.

I think there is a bipartisan agreement in both Houses that would put drilling in places like off Florida and even in ANWR way back in the solution, if at all, and a bipartisan agreement to do the incentives for marginal wells, to do the wind, to do the solar, to do the fuel cells, to do the hybrid cars, to do a lot, to do the natural gas pipeline from Alaska, that would give us a lot of answers.

Our biggest problem is the one you identified. The minute the price of oil and natural gas goes down, we forget all this stuff; we throw it out and we forget about it. It is kind of like after World War II we thought we didn't need much of a national defense infrastructure, then we figured out that here comes Korea, here comes Vietnam, here come all these skirmishes, and we need a good defense.

We need a long-term energy policy that provides security for the American people—and only we can provide it—and stay with it in thick and thin and see it through to 50 years from now when it is really going to be needed.

Mr. FOLEY. Would the chairman indulge one moment?

Chairman MCCRERY. If the gentleman will restrict his further questions to the jurisdiction of this Subcommittee, I will indulge him.

Mr. FOLEY. The only thing I was going to say is, these conversations are extremely cooperative, and I always enjoy them in this process; and I just hope, as we go back to our respective caucuses, the dialogue continues as positively as it has today, rather than, as we see, the attack modes from both sides. It is regrettable.

But if we focus, as we have done today, I just see so many good things coming out of the process. I thank the chairman for giving me the opportunity.

Chairman MCCRERY. Yes, sir. Mr. Brady.

Mr. BRADY. Yes, sir. I agree with my colleagues here today. It is refreshing we are discussing this issue.

Even though President Bush inherited the problem, I am thrilled he is shooting straight with America about what it is going to take to produce reliable, affordable, environmentally clean energy. We do have responsibility, Republican and Democrat alike, to meet more of our energy needs. It will take a balanced game plan based

on conservation, innovation and new supply, and we all agree on that; and we can't rely any more on obsolete networks to deliver energy when and where it is needed around the United States.

The good news is that if we do work together, we can achieve energy independence; and I don't know about the panelists, but for me, this issue is more than just economics. It is a matter of national security. As long as America relies on foreign countries for more than half of our daily energy, we are vulnerable; and there is no reason why the most prosperous Nation in the world continues to allow itself to be held economically or politically hostage to any country, as we do.

And as we talk about solving this problem, let's talk about what we don't want to export, especially from California. Let's not export California's irresponsibility. Let's not export its feel-good Band-Aids of price controls and windfall profit taxes that won't produce even one more watt of electricity for Californians who need it this summer.

And let's especially not export their blame game. I think people are tired of politicians promising to fix this problem and then engaging in nothing but a blame game. People are tired of that. They want the long-term, high-tech, common-sense solutions we are capable of as a country.

And I know, too, that as we address this problem, we will be asking questions of ourselves such as why is Dennis Rodman in California paying less for his electricity than Mr. Gephardt's mom in Missouri? You have got to ask why one of the richest areas in the region, California, doesn't have people flocking to sell them energy. You have to wonder why we have blackouts in the winter and the spring when there is no reason anywhere in America to be having these blackouts, especially in the mild, moderate climate of California.

We have got some real key issues to deal with. We have got to avoid the blame game. We have got to avoid the Band-Aids. We have got to work together.

Mr. Chairman, I yield the balance of my time.

Chairman MCCREY. Thank you, Mr. Brady. Mr. McNulty.

Mr. McNULTY. I don't have any questions, Mr. Chairman. I just want to thank all of the Members for their testimony, especially Leader Gephardt for his emphasis on the fuel cell technology which Congresswoman Johnson and I have been promoting. I thank all the Members.

Chairman MCCREY. I, too, would like to thank all the Members of this panel, especially the Minority Leader for spending so much time with us today, and also for his suggestion—at least as I heard it, correct me if I am wrong—that this Committee put together items that have bipartisan support and package it in a tax bill that we can move within the budget constraints; and let's get it done and not worry about the things we can't agree on, whether it is ANWR or drilling off of Florida or price controls in California, stuff not within the jurisdiction of this Committee.

I think that is a sensible suggestion. I think it can be done. We do have common ground that we can work with. So I am of a mind to do just that, and I appreciate the Minority Leader's suggestion that we pursue that course.

I appreciate Mr. Stenholm's suggestion that we do it in the constraints of the budget, which I think is reasonable; and I am hopeful and I am optimistic that we can do that.

So I appreciate very much your testimony and your constructive suggestions today for this Committee. Thank you.

Mr. GEPHARDT. Thank you, Chairman

Chairman MCCRERY. And now our last panel, Mr. Inslee, Mr. Moore, Mr. Engel, Mr. Terry, Ms. Capito, Ms. Davis, and Mr. Issa.

Thank you all for coming this afternoon. Mr. Inslee, we will begin with your testimony. Your written testimony will be submitted for the record, and we would ask that you summarize your written testimony orally in a 5-minute time limit. Thank you.

**STATEMENT OF THE HON. JAY INSLEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON**

Mr. INSLEE. Mr. Chairman and Members, I really appreciate your holding this hearing.

This is just the perfect moment for a hearing of this nature, because we are at the starting line of a two heat race. The first heat involves a national race to decide who is going to be the dominant player in the new technologies that are going to handle the next century of our energy needs that are not necessarily just carbon-based fuels. And I think there is, hopefully, bipartisan agreement that the world is going to need a new generation of industrial base to provide these new, clean technologies and conservation-based technologies. And there is a question right now on who is going to be the dominant player on that, whether it is Japan or France or Germany or the United States.

And I am very happy you are holding this hearing because we ought to be fast out of the blocks. And, frankly, we are not quite there yet. There is no reason that the Danes and others in Europe should be leading in wind technology right now. There is no reason for us to be behind except perhaps a lack of vision. There is no reason that we shouldn't be first forever in fuel cells as perhaps we are at the moment.

So we are in that race. That is the first heat.

The second heat is the race that is driven by the global climate change challenge. As you know, the National Academy of Sciences just came back with a report that is rather conclusive to the effect that, in fact, we are increasing carbon dioxide and other climate-change gases, that the planet is warming up, and that human activity is a source of that phenomenon and that it will lead to unpredictable results.

And it is my belief that while the President is over engaging some of our allies in a discussion internationally about this, there is no reason for us to have to wait for an international agreement for us to act with new clean sources that are nonclimate-changing sources of energy.

We need not, we should not, and we cannot wait for other countries to act. We don't have to fail to act, and the reason is if you look at our leadership in the past, we didn't wait for international agreement to pass the Clean Air Act. We didn't wait for an international agreement to pass the Clean Water Act. We acted.

And that is why I am so encouraged that this Committee is considering measures to deal with clean new technologies, and I will be promoting the Clean Energy Incentives Act, which is a comprehensive package of incentives for a large number of new technologies; and you have heard several of those addressed today, whether it be wind, fuel cell, solar, geothermal, increased hydro-power efficiencies and the like.

And what I have been working to do is to develop a package of those incentives that are not directed to any one single bullet, because I don't think there is a single bullet here of new technologies. There are a whole host of new candidates for those that—we ought to, in Congress, give an incentive and let the technology and the market decide who are going to be the winners.

For that reason, I have been working for the last several months to put together a package with a whole variety of industries from the insulation manufacturers to the appliance makers, to the automobile makers, to the wind power folks, to the solar, to the geothermal, to the hydropower, all of those, to come up with a package of incentives that those industries also believe are, number one, effective for their industry and, number two, are fair relative to the other new technologies that are coming on line. And I think that is an important fact, while we move forward, to realize there is going to have to be some fairness, if you will, between these new technologies; and I will present to you a package in the next several weeks that I believe will do just that.

Just briefly, it sort of has four provisions. One is to deal with the renewable and alternative energy electric production tax credits besides extension of wind, geothermal, solar and the like.

Second is an alternative fuels vehicle package which is very similar to Senator Hatch's proposal in the Senate.

Third is energy efficiency and conservation, which is a whole host—it is again a package of incentives for higher insulation in homes, better appliances and the like.

And fourth, new incentives for demand management and distribution generation to essentially try to have more effective management of our electricity uses.

Mr. Chairman, as you move for this, I will just ask you for this consideration. I hope in the next several weeks to present to you a comprehensive package in this regard, and I will look forward to working with you on a bipartisan basis. I have been working with Members across the aisle in this regard. This ought to be our shining moment, working together on this, and I think this package will help you along.

Thank you very much.

[The prepared statement of Mr. Inslee follows:]

**Statement of the Hon. Jay Inslee, a Representative in Congress from the State of Washington**

First, I would like to thank the Chair and the Committee for holding this hearing. This is a perfect moment for the Congress to focus on how tax policy can be used to advance our national energy policy for two reasons. First, our current short-term energy crisis makes it obvious that we need conservation and efficient technology and new sources of generating capacity. Secondly, and just as importantly, the challenge of global climate change drives our need for conservation and new clean generating technologies just as powerfully as our raw shortage of kilowatts. This much is certain—we must develop new industrial bases for cleaner generating systems as

well as achieving new efficiencies, or we run the risk of unintended and unpredictable climate change.

President Bush is in Europe today discussing climate change and prospective international tactics to address it. We need not, we should not, and we cannot wait for other nations to act. We need to act now, with an American policy of American innovation. We did not have to wait for other nations when we passed the Clean Air Act, the Clean Water Act, or National Environmental Policy Act. We should not wait now.

Fortunately, we are a nation uniquely talented when it comes to acquiring the need for new technology. It ought to be our national goal to lead the world in these new technologies, not just for environmental reasons but for economic ones as well.

To that end, I have been working with Members of both parties, and a wide gamut of people leading in these new technologies, to develop a comprehensive package of tax policies that can spur innovation in this direction. The product we have produced represents a broad-based and well-balanced package of measures to encourage the use of new technologies. Rather than focusing on one technology, our bill addresses a number of new fronts so that Congress does not put itself in the position of “picking a winner.”

I can also say that this package is one with broad-based support throughout the world of new technologies. As such, it represents the culmination of a process of consensus in that community, rather than a request by just one player.

The following is a summary of this legislation:

#### **TITLE I—RENEWABLE AND ALTERNATIVE ELECTRIC ENERGY PRODUCTION**

Tax incentives for the production of electricity by the use of renewable fuel sources.

##### **Section 101 Expansion of Renewable Resource Credit to Include Alternative Resources**

- One and a half cents/kWh production tax credit for solar, open loop biomass, hydropower efficiency, incremental geothermal, and landfill gas.
- One cent/kWh for biomass portion of co-firing with coal. Allows credit for co-production of electricity with heat, mechanical power, or minerals.

##### **Section 102 Additional Modifications of Renewable Resource Credit**

- Allows transfer or offset of credit for public utilities. Applies minimum tax provision to be reduced by the credit allowed for renewable production.
- Extends existing wind, closed loop biomass, and poultry litter production tax credits.

#### **TITLE II—ALTERNATIVE FUEL VEHICLES**

Tax incentives to encourage the use of motor vehicles powered by fuel cells, hybrid technologies, battery electric technology, and alternative fuels. (Sections 201–204: Hatch—S. 760 with slight changes)

##### **Section 201 Alternative Motor Vehicle Credit and Modification of Credit for Qualified Electric Vehicles**

- Provides tax credits to consumers to purchase alternative fuel and advanced technology vehicles (fuel cell vehicles, hybrid vehicles, dedicated alternative fuel vehicles and battery electric vehicles). Divides the vehicle tax credit in two parts—one part to provide a base tax credit for the purchase of vehicles dedicated to the use of alternative fuel or vehicles using advanced technologies, the other part to be used as a bonus credit based on the vehicle’s efficiency and reduction in emissions.
- Performance criteria and emission backstops have been established in order for a vehicle to receive the tax credits.
- There is a minimum level of tax credits for introducing the technologies into the marketplace.
- Performance incentives are based on fuel economy improvements over 2000 Model Year levels for “like vehicle” categories.
- A sliding scale ranging from 125% to 300% over current city mileage levels is included to reward fuel economy improvements proportionately.
- Emission backstops are included to ensure that incentives apply only to vehicles whose emissions meet or beat the average applicable standards.
- Incentives are provided for the full range of transportation categories including light, medium and heavy duty applications.

**Section 202 Credit for Retail Sale of Alternative Fuels as Motor Vehicle Fuels**

- Provides a tax credit of 50 cents per gasoline-gallon equivalent for the purchase of alternative fuel at retail.

**Section 203 Extension of Deduction of Certain Refueling Property**

- Extends the existing deduction for the capital costs of installing alternative fueling stations.

**Section 204 Credit for Installation of Alternative Fueling Stations**

- Provides a 50 percent credit for the installation costs of retail and residential refueling stations.

**Section 205 Credit for Investment in Property to Convert Waste to Fuel**

- Fifteen percent investment tax credit for equipment used to convert plastic waste and biomass into a usable fuel source. \$10,000 limitation.

**TITLE III—ENERGY EFFICIENCY AND CONSERVATION**

Tax incentives to promote energy efficient and conservation technologies for certain commercial and industrial property, new homes, existing homes, and appliances.

**Section 301 Energy Efficient Commercial Building Property Deduction**

- Investment tax credit of 20% for purchases of electric heat pumps, hot water heaters, and natural gas heat pumps. (Section 102 of Bingaman—S. 596)

**Section 302 Credit for Construction of New Energy-Efficient Homes**

(Cunningham/Markey—H.R. 778 with increased credit amount, the credit going to the builder instead of the purchaser, and the Photovoltaic provision removed)

- Tax credit up to \$1,500 for homes with annual heating and cooling energy consumption 30% less than the national model standard in accordance with the International Energy Conservation Code of annual heating and cooling energy.
- Tax credit up to \$2,500 for homes with annual heating and cooling energy consumption 50% less than the standard reference model. In general, credits equal the aggregate adjusted bases of all energy-efficient property installed in a qualified new energy-efficient home during construction.

**Section 303 Credit for Energy Efficiency Improvements to Existing Homes**

- Up to 20% tax credit for qualified energy efficiency improvements to an existing home. In order to qualify, property must meet or exceed standards set by the 2000 International Energy Conservation Code or achieve at least a 30% reduction in heating and cooling energy usage. \$2000 limitation.

**Section 304 Credit for Energy Efficient Appliances**

(Rep. Nussle—H.R. 1316)

- Production tax credit of \$50 for clothes washers manufactured with a 1.26 Modified Energy Factor (MEF) and refrigerators that consume 10% less kWh per year than the energy conservation standards promulgated by the DOE for 2001
- Production tax credit of \$100 for clothes washers manufactured with a 1.42 MEF and refrigerators that consume 15% less kWh per year than such energy conservation standards.

**Section 305 Credit for Adjustable Speed Drives**

- 10% investment tax credit for adjustable speed drives of fifty horsepower or more that achieves at least 20% energy savings. \$10,000 limitation.

**TITLE IV—DEMAND MANAGEMENT AND DISTRIBUTIVE ENERGY GENERATION**

Tax incentives for utilities to purchase demand management technologies, and tax incentives to encourage investment in distributive energy generation powered by renewable fuels and fuel cells.

**Section 401 Credit for Distributive Energy Generation and Demand Management****Property Used in Business**

(Section 101 of Bingaman—S. 596 with changes)

This section provides a tax credit to the purchaser of business property including certain solar, geothermal, energy efficiency building equipment, combined heat and power systems, anaerobic digester and low core distribution transformer property. The credit amount varies.

**Section 402 Credit for Residential Solar and Fuel Cell Energy Property**

(Includes Johnson—H.R. 1275 and Hayworth—H.R. 2076)

- Tax credit of 15% investment tax credits for solar thermal & solar electric systems.
- Tax Credit of \$1000 per kilowatt for purchasers of all types and sizes of permanently installed stationary fuel cell systems. The credit does not specify input fuels, applications or system sizes so a diverse group of customers can take short-term advantage of the credit to deploy a wide range of fuel cell equipment.

**Section 403 Credit for Qualified Energy Demand Management Devices**

- Tax credit of 20% for utilities to purchase equipment which will allow consumers to monitor their energy usage on a real-time basis, and to adjust their consumption to respond to price and usage signals, thereby enabling individuals and small businesses to adjust their energy consumption to reduce their electricity bills while helping to “flatten” the energy demand curve.

**Section 405 Incentive of Distributive Wind Generation**

- Thirty percent tax credit for consumers purchasing wind energy generation units of 75 kilowatts or less. \$5,000 limitation.

**Section 406 Credit for the Purchase of Flywheel Energy Storage Devices**

- Ten percent consumer tax credit for the purchase of flywheel energy storage device. \$2,000 limitation.

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Chairman MCCRERY. Thank you, Mr. Inslee. Mr. Moore.

**STATEMENT OF THE HON. DENNIS MOORE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF KANSAS**

Mr. MOORE. Thank you, Mr. Chairman. I appreciate the opportunity to be here as well.

I want to talk to you very briefly today about the importance of extending the section 29 tax credit for the production of unconventional fuels. For those of you unfamiliar with the section 29 tax credit, Congress created this tax credit in 1980 to encourage domestic production of unconventional fuels from the processes that are difficult and expensive to produce. These fuels include such fuels as coalbed methane, tight gas sands, and gas produced from Devonian shale. They would make it very difficult and costly to recover these fuels without a tax credit, and I think that that would not be the exploration that we have seen without this tax credit.

The section 29 fuel exists in all regions of the country, including Kentucky, northwestern Louisiana, and make up a significant portion of our Nation’s natural gas resource base. Currently, the section 29 credit is scheduled to expire in December of 2002 for all qualifying fuels.

I have introduced H.R. 794, the Energy Security for American Consumers Act, which would extend the section 29 credit to 2016 with the value of the credit gradually declining between 2012 and 2016. This bipartisan legislation would encourage new drilling by applying the credit to wells drilled between the date of enactment and 2010.

During the last Congress, Senator Murkowski introduced a companion bill in the Senate that was cosponsored by Members across

the aisle, including Senator John Breaux. A section 29 credit is also included in the Blue Dog proposal.

According to the Congressional Research Service, the section 29 credit has significantly reduced the cost and stimulated the supply of unconventional gases in this country; and the Gas Technology Institute, GTI, and Energy and Environmental Analysis, Inc., EEA, basically—I have attached a copy of the summary of the EEA that talks about unconventional fuel, such as section 29. This study demonstrates that an extension of section 29 could have a significant impact on prices for the consumer by increasing the aggregate supply of natural gas.

According to the study, natural gas currently provides approximately 23 percent of our Nation's energy needs. The study predicts that demand for natural gas in our country will grow to approximately 30 trillion cubic feet per year in the next 15 years. Electricity generation will account for a great deal of that demand for gas.

According to the study, section 29 has been successful in boosting unconventional gas production in the past, and the section 29 tax credit extension will provide additional unconventional gas production to meet our Nation's growing demand for gas.

As the study indicates, from 1986 to 1996, 70 percent of the increase in the lower 48 gas production came from unconventional sources. Currently, unconventional gas represents 30 percent of well production in the lower 48 States.

These next two things, I think, are extremely important. Extension of section 29 to wells drilled through 2010 could increase U.S. gas supply by approximately 2 trillion cubic feet per year. This would be additional gas production that likely would not occur without the section 29 credit.

The study further predicts that increased supply of gas stimulated by production of section 29 fuels would translate into lower natural gas prices and estimated total savings to consumers of over \$100 billion through 2015.

Mr. Chairman I have heard from both producers and consumers in my district, and both stand to benefit greatly from extension of this section 29 credit. The section 29 credit can play a vital role in increasing and stabilizing the domestic supply of natural gas at a time when our Nation is looking for additional supplies.

The study that I have mentioned, that is attached to my statement, suggests that while the extension of the credit may not solve—will not solve our Nation's energy problems by itself, the section 29 tax credit has the potential, I think, based upon past performance and future projections, to play an instrumental role in increasing our supply of energy.

Mr. MOORE. I think that is what we have to look at. This is one small piece of the overall comprehensive policy that we have talked about that we need to develop on a bipartisan basis in this Congress.

This came to my attention last June. Very briefly—and I will finish here. When a friend of mine and a constituent back home contacted me last June, a year ago, he said at the time, Congressman, have you seen what has happened, the supply of—the cost of natural gas in our country? I said, I really haven't paid attention. He

said, well, it has doubled since the first of the year. I expect it to double again by the end of the year. He said, if you think consumers are upset now about the price of gasoline at the pumps, wait till they get their heating bills this last winter.

And he was exactly right. It happened. I said, what can be done? He was in the business—he had formerly owned a medical lab, sold it and made some money. He went out and started drilling natural gas wells, and he found substantial natural gas wells, coalbed methane in Kansas. He said, what can be done is to extend this credit which will be expiring and encourage other people to increase the supply of natural gas and hopefully drive the cost down.

I talked to several people in the industry and others around who know something about this, and they shared the same view, and that was the basis for my section 29 tax bill. I hope this Committee will take a look at it and recommend this be included in the bill; and I very much appreciate the opportunity to testify here, Mr. Chairman.

[The prepared statement of Mr. Moore follows:]

**Statement of the Hon. Dennis Moore, a Representative in Congress from the State of Kansas**

Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to appear before you today to talk about the importance of extending the section 29 tax credit for the production of unconventional fuels.

For those of you who are unfamiliar with the section 29 credit, I would like to provide you with some brief background information. Congress created the section 29 credit in 1980 to encourage domestic production of unconventional fuels from deposits that are inordinately difficult and expensive to produce. These fuels, such as coalbed methane, tight gas sands, gas produced from Devonian shale and oil produced from shale or tar sands, would not be economically recoverable for producers in most areas of the nation without a federal tax incentive. Section 29 fuels exist in all regions of the country, including Kentucky and northwestern Louisiana, and make up a significant portion of our nation's natural gas resource base.

Currently, the section 29 credit, which is equivalent to \$.50 cents per thousand cubic feet (Mcf) for gaseous fuels and \$3.00 per barrel of oil for liquid fuels, is scheduled to expire on December 31, 2002, for all qualifying fuels except biogas and synfuels. For biogas and synfuels, the credit will expire on December 31, 2007.

I have introduced H.R. 794, the Energy Security for American Consumers Act, which would extend the section 29 credit to 2016, with the value of the credit gradually declining between 2012 and 2016. Additionally, this bipartisan legislation, which I originally introduced during the 106<sup>th</sup> Congress, would encourage new drilling by applying the credit to wells drilled between the date of enactment and 2010. During the last Congress, Senator Frank Murkowski introduced a companion bill in the Senate that was cosponsored by members from both sides of the aisle, including Senator John Breaux. Further, Senator Murkowski included section 29 extension in his comprehensive energy tax legislation that he introduced in February, S. 389.

According to the Congressional Research Service, the section 29 credit "has significantly reduced the cost and stimulated the supply of unconventional gases . . ." This assertion is closely mirrored in a recent analysis of section 29 by the Gas Technology Institute (GTI), which has been analyzing unconventional fuels production for 20 years, and Energy and Environmental Analysis, Inc. (EEA), which, as many of you know, was the lead contractor in the landmark 1999 study of natural gas supply undertaken by the National Petroleum Council. The EEA's 1999 study is the current industry standard reference for gas market projections and policy analysis. Please find a summary of the GTI/EEA study attached to my remarks.

This study demonstrates that an extension of section 29 could have a significant impact on prices for the consumer by increasing the aggregate supply of natural gas.

- According to the GTI/EEA study [referred to hereafter as "the study"], natural gas currently provides approximately 23% of our nation's energy needs. The study predicts that demand for natural gas in the United States will grow to approximately 30 trillion cubic feet (Tcf) per year in the next 15 years. Electricity generation will account for much of this increased demand for gas, as nearly all new generation facilities are now powered by natural gas. In order

to meet this growing demand, we must focus on ways in which we can increase our total supply of natural gas.

- According to the study, "section 29 has been successful in boosting unconventional gas production" in the past, and "a section 29 tax credit extension will provide additional unconventional gas production" to meet our nation's growing demand for gas. Total unconventional gas production doubled during the 1990s from 2 trillion cubic feet in 1990 to 4.8 trillion cubic feet by 1999, and coalbed methane production alone increased from zero production in 1990 to over 1.1 trillion cubic feet per year by the end of the last decade. As the study demonstrates, "from 1986 to 1996, 70% of the increase in lower-48 gas production came from unconventional sources." Currently, unconventional gas represents 30% of well production in the lower 48 states.
- Extension of section 29 to wells drilled through 2010 could increase U.S. gas supply by approximately 2 trillion cubic feet (Tcf) per year, adding a cumulative volume of over 15 trillion cubic feet of additional unconventional gas by 2015. I would like to reiterate that this would be *additional gas production that likely would not occur without the section 29 credit*. Production from new wells would also likely extend beyond 2015, and consumers will continue to benefit from both expanded supply and new technological innovations even after the term projected by the study.
- The study further predicts that increased supply of gas stimulated by production of section 29 fuels would translate into lower natural gas prices and estimated total savings to consumers of over \$100 billion through 2015. This estimate is based upon analysis of similar model runs completed for the 1999 National Petroleum Council study.

Mr. Chairman, I have heard from both producers and consumers in my district, and both stand to benefit greatly from extension of this credit. Producers and investors need stability in order to make the long-term investments necessary to extract and produce gas from difficult sources. Additionally, section 29 can play a vital role in increasing and stabilizing the domestic supply of natural gas at a time when our nation is consuming more natural gas than ever before.

The statistics contained in the GTI/EEA study suggest that, while extension of the section 29 credit may not solve our nation's energy problems by itself, section 29 has the potential, based on past performance and future projections, to play an instrumental role in increasing our supply of energy. It is my hope that extension of section 29 will exert downward pressure on the exorbitant prices consumers and businesses have recently been forced to pay for natural gas.

I appreciate the opportunity to testify before the Subcommittee today, and I urge you to include extension of the section 29 tax credit in either a future tax extenders measure or comprehensive energy tax policy legislation.

Attachment:

*Rationale for Section 29 Non-Conventional Gas Tax Credit Extension*, prepared by the Gas Technology Institute and Energy & Environmental Analysis, Inc., March, 2001.

[The attachment is being retained in the committee files.]

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Chairman MCCRERY. Thank you, Mr. Moore. Mr. Engel.

**STATEMENT OF THE HON. ELIOT L. ENGEL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK**

Mr. ENGEL. Well, thank you, Mr. Chairman and Mr. Ranking Member, for holding this hearing today to allow Members to discuss proposals on tax credits for energy-saving measures.

Let me say, on a personal note, it is nice to see people from the class of 1988 in such high places.

As you know, New York City was initially expected to be hit by a California-type energy crisis this summer with an increased load and a lack of generation within the city, coupled with a lack of transmission lines into the city. There is a growing disparity between the supply and demand. Although I am told that there will be enough supply for this summer, it is still expected to be a tight

crunch. The country is in the current energy situation because our economy and energy use have grown in tandem over the past 10 years, while energy infrastructure has not improved or expanded. As a result, we are stuck with generation and transmission bottlenecks and outdated, inefficient infrastructure which artificially drives up demand.

My colleague on my left, although not politically, Mr. Terry and I have been working to develop bipartisan legislation that would address the conservation side of a national energy plan. We have been working on various ideas, including tax credits for replacing boilers, heating and cooling systems and windows with Energy Star ratings, which Mr. Terry will focus on his testimony.

In addition, we are proposing legislation which will offer tax credits for homeowners and businesses to change their blacktop roofs to cool roofing material and to buy and use renewable sources of energy, including solar panels and wind turbines.

Finally, the legislation includes a provision on net metering to allow owners of renewable sources of energy to remain connected to the grid and to get credit for putting any excess electricity they generate on the grid.

I represent an urban district with a significant amount of residential and high-rise housing. Many of the apartment buildings were built before the energy crises of the seventies and therefore do not have many of the energy efficient equipment included in new homes. They have blacktop roofs that create heat traps on the top floor to the buildings and, like most communities across the country, do not have the incentive to invest in energy conservation, equipment and materials. Black surfaces in the sun can become up to 70 degrees Fahrenheit hotter than the most reflective white surfaces. On those dark surfaces or roofs, some of the heat collected by the roof is transferred inside. Staying comfortable under a dark shingle roof often means more air-conditioning and higher utility bills. These roofs also heat the air around them.

Conversely, cool roofs can save energy. In a study founded by the U.S. EPA, the Heat Island Group carried out a detailed analysis of energy-saving potentials of light-colored roofs in 11 U.S. metropolitan areas. About 10 residential and commercial building prototypes in each area were simulated. Considering both the savings in cooling and penalties in heating, they estimated saving potentials of about \$175 million per year for the 11 cities. Extrapolated national energy savings were about \$750 million per year.

The legislation we are proposing offers a 30 percent tax credit to homeowners and businesses who want to change their blacktop roofs to cool roofing materials, defined as having a solar reflectance index of 65 percent or greater.

Tax credits for renewables are not new. In fact, the Energy Tax Act 1978 created residential solar credits and residential and business credits for wind energy installations. Unfortunately, the legislation expired in 1985; and while the business credits were extended indefinitely by the Energy Policy Act of 1992, the residential credits were not.

Our proposed legislation would offer 25 percent credit to residential users and expand the business tax credit to 25 percent for buying and installing solar panels, wind turbines, geothermal pumps

and other alternative energy generation equipment. The short-term costs of the renewables equipment is still high, but the savings are immeasurable and permanent. Not only are electricity bills reduced, but long-term positive benefits of turning to renewables and reducing emissions include cleaner air, cleaner water, and a reduction in the demand on the electricity grid.

Incidences of childhood asthma are a serious problem in my district. The mercury poisoning in fish and the effects of global warming will all likely be reduced by investing in renewable sources of energy.

Finally, the provision on net metering would allow homeowners and businesses who generate their own electricity with renewable sources of energy to put any excess power generated onto the grid. In turn, their electric meters would turn backward so that they would receive credits for producing excess energy. They would receive a credit against the next month's bill for any excess generation and a refund at retail price if they generate more than they use in a calendar year.

I thank you for your consideration of our legislation, and we look forward to working with you in a bipartisan spirit as legislation on energy tax credits progresses.

[The prepared statement of Mr. Engel follows:]

**Statement of the Hon. Eliot L. Engel, a Representative in Congress from the State of New York**

Thank you Chairman McCrery and Ranking Member McNulty for holding this hearing today to allow Members to discuss proposals on tax credits for energy-saving measures.

As you know, New York City was expected to be hit by a California-like energy crisis this summer. With an increased load and a lack of generation within the City coupled with a lack of transmission lines into the City, there is a growing disparity between supply and demand. Although I am told that there will be enough supply for this summer, it is still expected to be a tight crunch. The country is in the current energy situation because our economy and energy use have grown in tandem over the past ten years while energy infrastructure has not improved or expanded. As a result, we are stuck with generation and transmission bottlenecks and an outdated, inefficient infrastructure which artificially drives up demand.

My colleague, Mr. Terry, and I have been working to develop bipartisan legislation that would address the conservation side of a national energy plan. We have been working on various ideas, including tax credits for replacing boilers, heating and cooling systems, and windows with Energy Star-ratings, which Mr. Terry will focus on his testimony. In addition, we are proposing legislation which will offer tax credits for homeowners and businesses to change their black top roofs to cool roofing material and to buy and use renewable sources of energy, including solar panels and wind turbines. Finally, the legislation includes a provision on net-metering to allow owners of renewable sources of energy to remain connected to the grid and to get credit for putting any excess electricity they generate on the grid.

I represent an urban district with a significant amount of residential and high-rise housing. Many of the apartment buildings were built before the energy crisis of the 1970s and therefore do not have many of the energy efficient equipment included in new homes. They have black top roofs that create "heat traps" on the top floors of the buildings, and like most communities across the country, do not have the incentive to invest in energy conservation equipment and materials. Black surfaces in the sun can become up to 70°F (40°C) hotter than the most reflective white surfaces. If those dark surfaces are roofs, some of the heat collected by the roof is transferred inside. Staying comfortable under a dark shingle roof often means more air conditioning and higher utility bills. These roofs also heat the air around them. Conversely, cool roofs can save energy. In a study funded by the U.S. EPA, the Heat Island Group carried out a detailed analysis of energy-saving potentials of light-colored roofs in 11 U.S. metropolitan areas. About ten residential and commercial building prototypes in each area were simulated. Considering both the savings in cooling and penalties in heating, they estimated saving potentials of about \$175 mil-

lion per year for the 11 cities. Extrapolated national energy savings were about \$750 million per year. The legislation we are proposing offers a 30% tax credit to homeowners and businesses who want to change their black top roofs to cool roofing materials, defined as having a solar reflectance index (as determined by the Lawrence Berkeley National Laboratory) of 65 percent or greater.

Tax credits for renewables are not new-in fact, the Energy Tax Act of 1978 created residential solar credits and residential and business credits for wind energy installations. Unfortunately, the legislation expired on December 31, 1985. While the businesses credits were extended indefinitely by the Energy Policy Act of 1992, the residential credits were not. Our proposed legislation would offer a 25% credit to residential users and expand the business tax credit to 25% for buying and installing solar panels, wind turbines, geothermal pumps, and other alternative energy generation equipment. The short-term cost of the renewables equipment is still high, but the savings are immeasurable and permanent. Not only are electricity bills reduced, the long-term positive benefits of turning to renewables and reducing emissions include cleaner air, cleaner water, and a reduction in the demand on the electricity grid. Incidences of childhood asthma, a serious problem in my district, mercury poisoning in fish, and the effects of global warming will all likely be reduced by investing in renewable sources of energy.

Finally, the provision on net-metering would allow homeowners and businesses who generate their own electricity with renewable sources of energy to put any excess power generated onto the grid. In turn, their electric meters would turn backwards so that they receive credits for producing excess energy. They would receive a credit against the next months bill for any excess generation and a refund at retail price if they generate more than they use in a calendar year.

Thank you for your consideration of our legislation. We look forward to working with you in a bipartisan spirit as legislation on energy tax credits progresses.

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Chairman MCCREERY. Thank you, Mr. Engel. Mr. Terry.

**STATEMENT OF THE HON. LEE TERRY, A REPRESENTATIVE IN  
CONGRESS FROM THE STATE OF NEBRASKA**

Mr. TERRY. Mr. Chairman, thank you for holding this hearing, as we discuss a national energy policy and focus on the issue of supply and demand. Of course, when we talk about demand-side or lowering demand and creating efficiencies in energy, it is going to take incentives to accomplish those goals and, hence, tax credits.

Well, I am here to ask for the same thing, a bill that I have worked on with Representative Engel, and it has been a pleasurable experience in trying to develop policies to make our country more energy efficient.

One of those ways of accomplishing that goal is the Energy Star program, which was referenced also in the President's National Energy Policy. This program began in 1992 as a voluntary labeling program designed to identify and promote energy efficient products. The goal is to reduce carbon dioxide emissions. In 1996, the EPA partnered with the Department of Energy to promote this Energy Star label. Now, the Energy Star covers many categories of energy-saving products, such as windows, residential heating and cooling equipment, major appliances, lighting, consumer electronics and many others.

Congressman Engel and I are here before you to talk about this bill that we will be introducing within a few days. It is the Energy Efficiency Investment Act of 2001. It is designed to encourage both homeowners and businessowners to replace their old energy inefficient windows, heating and cooling systems and boilers with Energy Star certified products of the same criteria. Our legislation will provide a 25 percent tax credit to either the homeowner or

businessowner if they install the Energy Star products into an existing structure.

To demonstrate how much of an impact this legislation can have, I want to mention some statistics from California and the kind of benefits this legislation could have to the citizens in that State. It could be translated to every other State as well. Currently, there is over 12 million homes in the Golden State that could benefit from the installation of new energy efficient windows. In these homes, over 40 percent of the annual energy budget is used on heating and cooling. By installing these energy efficient windows, the homeowners could reduce their energy bills by 15 percent.

Another example I would like to mention also comes from the same State. According to the California Energy Commission, during the hot summer afternoons, air-conditioning can consume over 16,000 of the available 34,000 megawatts of electricity. A new central air conditioning system with a Federal Energy Star design could use half of the energy of a 20-year-old unit. Individuals who purchase a unit under this program can save 20 to 40 percent on their overall energy bills to help reduce the need for electricity.

As a personal note, we just had to replace our air conditioner. We looked for the energy efficient model. It ran over a third more than the basic unit that you would—a lot of families can't make that stretch. We, of course, did.

The last example comes from my colleague's home State of New York, in the Bronx where there are more apartments and condominiums than freestanding homes. If the owner of these buildings were to take advantage of our legislation, the energy savings would be significant. In fact, we all know that the power supply in New York may be tight this summer. This could certainly help.

The Energy Star program is something that needs to be included in this discussion. The Department of Energy estimates that if all households and businesses in the United States bought only Energy Star-labeled windows instead of standard products for the next 15 years, the reduction in carbon dioxide emissions would be equivalent to reducing gasoline consumption by 120 billion gallons.

Mr. Chairman, this bill is not trying to reinvent the wheel. We are using something that is already put in place by both the EPA and the Department of Energy. Our bill simply takes the Energy Star program and encourages the homeowner and businessowner to invest in exchange for a 25 percent tax credit. We believe that this legislation needs to be part of the overall policy for energy efficiency and conservation discussion.

Thank you.

[The prepared statement of Mr. Terry follows:]

**Statement of the Hon. Lee Terry, a Representative in Congress from the State of Nebraska**

Mr. Chairman, I want to thank you for holding this important hearing. It is important because we need to discuss the variety of energy saving legislation that has been and will be introduced this Congress, so we can decide what elements should be included in the energy policy that will soon be on the House floor. As the debate continues, we must make sure that the decisions we make are both balanced and are based on reducing our demand for energy.

In May, the Energy Star program was referenced by the President in his National Energy Policy as something that needs to be promoted and expanded beyond its current level. This program began in 1992 as a voluntary labeling program designed

to identify and promote energy-efficient products. The goal was to reduce carbon dioxide emissions. In 1996, the Environmental Protection Agency (EPA) partnered with the Department of Energy (DOE) to promote the Energy Star label. Now, Energy Star covers many categories of energy saving products, such as: windows, residential heating and cooling equipment, major appliances, lighting, consumer electronics and many others.

Congressman Engel and I are here before you to talk about a bill that we will be introducing shortly. The Energy Efficiency Investment Act of 2001 is designed to encourage both homeowners and business owners to replace their old energy inefficient windows, heating and cooling systems, and boilers with Energy Star certified products of the same criteria. Our legislation will provide a 25% tax credit to either the homeowner or business owner, if they install the Energy Star products into an existing structure.

To demonstrate how much of an impact this legislation can have, I want to mention some statistics from California and the kind of benefits this legislation could have to its citizens suffering one of the worst energy problems the state has ever seen. Currently, there are over 12 million homes in the Golden State that could benefit from the installation of new energy efficient windows. In these homes, over 40% of the annual budget is used on heating and cooling. By installing these energy efficient windows, these homeowners could reduce their energy bills by up to 15%.

Another example I would like to mention also comes from California. According to the California Energy Commission, during a hot summer afternoon, air conditioning can consume over 16,000 of the available 34,000 megawatts of precious electricity the state needs. A new central air conditioning system with a federal Energy Star designation could use half the energy of a 20-year old model. Individuals who purchase a unit under this program can save 20% to 40% on their overall energy bills, help to reduce California's need for precious electricity and qualify for our energy tax credit. In some cases, this credit is necessary, because a new central air system, which often requires a new heating system as well, is an investment that could cost thousands of dollars to replace.

The last example comes from New York. My colleague represents an area of the Bronx where there are more apartments and condominiums than free standing homes. If the owners of these buildings were to take advantage of our legislation, the energy savings would not be insignificant. In fact, we all know that the power supply in the New York area will be tight this summer. Our bill will help to lessen this problem.

The Energy Star program is something that needs to be included in this discussion, as well as be expanded. The Department of Energy estimates that if all households and businesses in the United States bought only Energy Star labeled windows instead of standard products for the next 15 years, the reduction in carbon dioxide emissions would be equivalent to reducing gasoline consumption by 120 billion gallons.

Mr. Chairman, this bill is not trying to reinvent the wheel. We are using something already put in place by both the Environmental Protection Agency (EPA) and the Department of Energy (DOE). Our bill simply takes Energy Star program and encourages the homeowner and business owner to invest in exchange for a 25% tax credit. We believe that this legislation needs to be part of the energy efficiency and conservation discussion.

Thank you.

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Chairman MCCrERY. Thank you, Mr. Terry. Mrs. Capito.

**STATEMENT OF THE HON. SHELLY MOORE CAPITO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WEST VIRGINIA**

Mrs. CAPITO. Yes. Thank you, Mr. Chairman. I thank you for letting me come here today to testify on the importance of tax credits for energy production and investment.

I take pride in representing the coal-rich State of West Virginia. For generations, coal has played an integral part in the lives and livelihoods of West Virginians, and coal is an integral part of any solution to our country's energy predicament.

Coal accounts for more than one half of the electricity generated in the country. It is our most abundant domestic energy resource, and one quarter of the entire world's known coal supplies are found within the United States.

In terms of energy value, coal constitutes approximately 95 percent of the United States fossil energy reserves. Our Nation's recoverable coal has the energy equivalent of about 1 trillion barrels of crude oil—comparable in energy content to the entire world's known oil reserves. At present consumption rate, U.S. coal reserves are expected to last at least 275 years.

Using coal to generate electricity has been problematic in light of requirements of the Clean Air Act. In response, the Department of Energy has invested substantially in developing and testing clean coal technology, and the President's budget seeks to invest \$2 billion in clean coal technology, including coal gasification over the next 10 years. According to the Department of Energy, coal gasification is one of the most promising clean coal technologies.

Briefly, a coal gasification system turns coal into gas, which can be cleaned of its impurities, virtually to the same levels as natural gas. The gas is then burned in a turbine to generate one source of electricity. Exhaust from the gas turbine is hot enough to boil water, creating steam to drive a steam turbine, generating a second source of electricity. Initial gasification-based plants could boost power plant efficiencies by as much as 20 percent.

The Department of Energy reports that gasification combined cycle technologies are among the cleanest way to generate electricity from coal. As much as 95 to 99 percent of the sulfur and nitrogen impurities in coal gas can be removed through the coal gasification process.

In the early nineties, the Department of Energy recognized that investing in coal gasification technology will be the first step into the next millennium of clean, high efficiency electricity from coal. There are now three coal gasification combined cycle power plants in the United States. They are among the cleanest fossil fuel power plants in the world. Each previous coal gasification plant, however, has relied on substantial direct government subsidies and has been constructed by rate-regulated utilities with a pool of captive rate-payers to absorb cost overruns and the risk of failure.

There has been no test, however, of a coal gasification plant in two ways: in the present energy environment, and one that does not rely on substantial direct infusions of Federal dollars—typically 50 percent of project costs. It is critical that Congress support the demonstration of the commercial viability of a coal gasification plant that would be funded by traditional sources of private debt and equity.

Establishing that coal gasification plants can be built with private capital is not an attempt simply to save scarce Federal resources. It is an essential step in the transition that this country is taking in the deregulation of the generation and distribution of energy. The only plants that will survive are those that produce electricity at a competitive kilowatt-per-hour cost. Coal gasification technology is exciting and promising. However, until the modalities of making it commercially viable in a deregulated environment are determined, it cannot be used.

Private equity and commercial financial institutions are going to need some encouragement. Senate bill 389, Senate bill 60, and Senate bill 596 create a 10 percent tax credit for investments in advanced clean coal technology and a per-kilowatt-hour production tax credit for each kilowatt hour produced at a facility which is implementing advanced clean coal technology. I am proposing that these same tax credits be granted for investments in coal gasification facilities and the production of energy at these facilities.

Production and investment tax credits for coal gasification are similar to energy credits currently in the Internal Revenue Code.

On the investment side, a 10 percent investment tax credit is currently available for energy property which includes solar energy and geothermal energy production. Clearly, energy tax credits have been historically used to encourage a broad range of energy investment.

Investment and production tax credits for coal gasification are good for the country and consistent with current tax policy. At the very least, Mr. Chairman, investment and production tax credits for coal gasification should be available for a demonstration project to test the commercial viability of a coal gasification plant.

Some say that tax credits distort the market by “picking winners.” This criticism is inapt in the case of coal. Mother Nature has picked coal to be America’s principal fossil energy resource. Given this geological fact and given that reducing reliance on foreign energy sources is in the national interest and the increased sensitivity to the impact of energy production on the environment, coal gasification is a logical solution. As such, tax measures supporting clean coal technology like coal gasification are worthy of support.

I look forward to the opportunity to work with you on these important matters. Thank you.

[The prepared statement of Mrs. Capito follows:]

**Statement of the Hon. Shelley Moore Capito, a Representative in Congress from the State of West Virginia**

Thank you, Mr. Chairman,

I thank the members of the Committee for having me here today to testify on the importance of tax credits for energy production and investment. Specifically, I would like to discuss the importance of tax credits for clean coal technology projects like coal gasification.

I take pride in representing the coal rich State of West Virginia. For generations coal has played an integral part in the lives and livelihoods of West Virginians. Clean coal technology projects like coal gasification power plants offer West Virginia the opportunity to play a critical role in the delivery of the energy while preserving the environment.

Coal is an integral part of any solution to our country’s energy predicament. Coal accounts for more than half of the electricity generated in the country. It is our most abundant domestic energy resource. One quarter of the entire world’s known coal supplies are found within the United States. In terms of energy value (Btus), coal constitutes approximately 95 percent of the United States fossil energy reserves. Our nation’s recoverable coal has the energy equivalent of about one trillion barrels of crude oil—comparable in energy content to the entire world’s known oil reserves. At present consumption rates, U.S. coal reserves are expected to last at least 275 years.

At a recent House Commerce subcommittee hearing on energy policy, Chairman Barton (R-TX) appropriately called the United States “[t]he Saudi Arabia of Coal.” He also stated that “[t]his strategic resource will not and should not be ignored or neglected.”

If the United States is to reduce its dependence on foreign sources of energy, the enhanced use of coal is essential.

Using coal to generate electricity has been problematic in light of the requirements of the Clean Air Act. In response, the Department of Energy has invested substantially in developing and testing clean coal technology, and the President's budget seeks to invest \$2 billion in clean coal technologies, including coal gasification, over the next ten years. According to the Department of Energy, coal gasification is one of the most promising clean coal technologies.

A coal gasification system turns coal into gas which can be cleaned of its impurities, virtually to the same levels as natural gas. The gas is then burned in a turbine to generate one source of electricity. Exhaust from the gas turbine is hot enough to boil water, creating steam to drive a steam turbine generating a second source of electricity. Initial gasification based plants could boost power plant efficiencies by as much as 20% over conventional coal burning power plants.

The Department of Energy reports that gasification combined cycle technologies are among the cleanest ways to generate electricity from coal. As much as 95 to 99% of the sulfur and nitrogen impurities in coal gas can be removed through the coal gasification process. Vice President Cheney's National Energy Policy Development Group also reported in May of 2001 that "[t]echnologies like ... integrated gasification combined cycle have been developed that further reduce emissions."

In the early 1990s, the Department of Energy recognized that investing in coal gasification technology would be the first step into the next millennium of clean, high efficiency electricity from coal. There are now three coal gasification combined cycle power plants in the United States. They are among the cleanest fossil fuel power plants in the world.

We now know that coal gasification technology works—coal can be processed into a gas and burned in this latter state in a manner that satisfies clean air standards. Each previous coal-gasification plant, however, has relied on substantial direct government subsidies and has been constructed by rate-regulated utilities with a pool of captive rate-payers to absorb cost overruns and the risk of failure.

There has been no test, however, of a coal gasification plant: (1) in the newly deregulated energy environment, and (2) that does not rely on substantial direct infusions of federal dollars (typically 50% of project costs). It is critical that Congress support the demonstration of the commercial viability of a coal-gasification plant that would be funded by traditional sources of private debt and equity.

Establishing that coal gasification plants can be built with private capital is not simply an attempt to save scarce federal resources; it is an essential step in the transition that this country is taking in the deregulation of the generation and distribution of energy. In the new deregulated environment, the only plants that will survive are those that produce electricity at a competitive kilowatt per hour cost. Coal-gasification technology is exciting and promising; the consumer will not benefit from it, however, until the modalities of making it commercially viable in a deregulated environment are determined.

Private equity and commercial financial institutions are going to need some encouragement to realize that these projects are worthy of support. Senate bills S 389, S 60, and S 596 create both a 10% tax credit for investments in advanced clean coal technology and a per kilowatt hour production tax credit for each kilowatt hour produced at a facility which has implemented advanced clean coal technology. I am proposing that these same tax credits be granted for investments in coal gasification facilities and the production of energy at such clean coal facilities.

Production and investment tax credits for coal gasification are similar to energy credits currently found in the Internal Revenue Code. For example, a production tax credit of 1.25 cents per kilowatt-hour for energy produced by a coal gasification plant would be similar to Internal Revenue Code § 45 that currently provides a 1.50 credit per kilowatt hour for energy produced from certain renewable resources. In addition, coal gasification would qualify for the Nonconventional Fuels Production Credit under Internal Revenue Code § 29 if the gas produced were sold instead of used in energy production.

On the investment side, a 10% investment tax credit is currently available under Internal Revenue Code § 48 for energy property which includes solar energy and geothermal energy production. Clearly, energy tax credits have been historically used to encourage a broad range of energy investment.

I believe that investment and production tax credits for coal gasification are good for the country and consistent with current tax policy. At the very least, Mr. Chairman, investment and production tax credits for coal gasification should be available for a demonstration project to test the commercial viability of a coal gasification plant.

Some say that tax credits distort the market by "picking winners." This criticism is inapt in the case of coal: Mother Nature has picked coal to be America's principle fossil energy resource. Given this geological fact, and given that reducing reliance

on foreign energy sources is in the national interest, and given the increased sensitivity to the impact of energy production on the environment, coal gasification is the logical solution. As such, tax measures supporting clean coal technology, like coal gasification, are worthy of support from all possible perspectives.

I look forward to the opportunity to work with Members of the Committee on these important issues.

Thank you.

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Chairman MCCRERY. Thank you, Mrs. Capito. Mr. Issa.

**STATEMENT OF THE HON. DARRELL E. ISSA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. ISSA. Thank you, Mr. Chairman. I would ask that my official statement be entered into the record.

Chairman MCCRERY. Without objection.

Mr. ISSA. Thank you, Mr. Chairman.

The last time that I was here was 1993 as a private citizen lobbying on behalf of North American Free Trade Agreement (NAFTA). At that time, my testimony centered on the benefit of a free and fair trade and that I felt that our relations between California, my home State, and Mexico were at stake if we didn't engage.

Oddly enough, I am here today to a certain extent to talk about something that has a tax ramification, but for the same reason, that our—the best interest of my State, a State that right now has a terrible problem with getting electricity to where it is needed in a timely fashion and in a reliable fashion. As a result, I am here to talk about a bill that Heather Wilson is the author of and I co-sponsored; and it is H.R. 1045.

You know, many of us have all come the same way. We seem to be all talking about how tax credits will, in fact, do good things for our country.

Distributed power does something that all the tax credits—and they are all valuable and they all make a lot of sense—can't do. It has—strategic interest is served by distributed power. There is no question that right now the problem in California can be linked to an absence of an ability to get sufficient competitors onto the grid, feeding into California. Cogeneration, or its many other—distributed power and many other names, does something more importantly. It puts the power into the grid under our bill, and it puts it in a way in which there is no critical path any longer.

For too long we have been dependent upon just about four major ways of bringing power into California, but the entire country is set up that way. Our bill in distributing power, asking for a credit, has the benefit to America that if at some time in the future any part of the feed into the grid were to go down, if we don't in fact distribute much finer, we could find ourselves in any part of the country with an inability to deliver power when it is needed most.

I am not saying that somebody is going to sabotage the grid today, but I was in a meeting—an international relations meeting, and it was oil producers, and every one of them was interested in our infrastructure and how vulnerable it was and what would happen if exactly that were to occur.

I believe that distributed power benefits us, because in fact it forces the end to what we call in California NIMBYism. Nobody wants something in their backyard, but only if—the only reason they don't want it in their backyard is it is not in their backyard to their benefit. With cogeneration, what ends up happening is the benefit is in the same backyard, or in the case of photovoltaic, probably on your roof.

This bill does not pick winners or losers as to how you do the generation, whether it is natural gas, flex fuel, or any other type of distributed power. What it does say is that if you are willing to produce this power in your own backyard, you should have access to the grid; and, in fact, the conversion to this type of power should enjoy a Federal preference, if you will.

I believe that when we consider ending the single-point or few-point source of electricity and giving this Nation tens of thousands of new and reliable energy sources is weighed against the alternative of endlessly building up the grid to large nuclear or coal facilities located further and further away from metropolitan areas, you will see that this should in fact be a major component.

I would urge you to look at this as an umbrella bill that benefits many of the other technologies talked about here today. Because without distributed power, doing photovoltaic or any other one technology doesn't get on the grid, especially in some of the States like California where the energy suppliers have chosen, unless mandated, to simply ignore the small producer, exactly the producer we wish we had more of today. So both for my home State and for strategic reasons of the United States, I would ask that you seriously consider endorsing the 10 percent credit on bill H.R. 1045, and thank you for this opportunity.

[The prepared statement of Mr. Issa follows:]

**Statement of the Hon. Darrell E. Issa, a Representative in Congress from the State of California**

Thank you, Mr. Chairman for holding this important hearing on energy policy—specifically, on revenue measures to create incentives to increase supply, reduce demand and encourage alternative technologies and energy efficiencies.

I would like to take this opportunity to share with the Subcommittee an important provision in my bill, H.R. 1045, which would provide a 10% tax credit for the purchase of distributed generation units.

Energy self-sufficiency is an integral part of the solution to the current energy problems in the West and should be the guiding principal of our national energy policy. By using distributed generation technology, we can empower individuals and companies to take control and meet their own power needs.

Distributed generation, also known as on-site generation or micro-generation or co-generation, is technology that has been used in various forms since Thomas Alva Edison's Pearl Street Station in New York City. Distributed generation allows individual sites, or in some cases whole sections of the grid, to remain in service during storms, high winds and other natural disasters. Distributed generation can also be used to provide backup service or peaking power during times of high demand. It is currently helping to solve transmission capacity problems in California.

Distributed generation is an affordable, reliable, clean and stable power option than can help solve the problems energy customers are currently experiencing and will continue to experience across the country. These technologies include microturbine generators, fuel cells, solar energy, wind turbines, reciprocating engines and storage technology.

H.R. 1045 has several vital components. It establishes the right to interconnect to the grid, establishes a uniform technology standard to interconnect to the grid, authorizes R&D programs for alternative technology at the Department of Energy, and finally, provides a 10% tax credit for the installation of distributed energy generation technologies.

A tax credit will provide a valuable incentive to encourage self-sufficiency for consumers and encourage the development of new clean technologies for consumer use by making individuals part of the solution to our energy problems.

Again, thank you, Mr. Chairman, for giving me the opportunity to share with you and the other Subcommittee members the benefits of distributed generation and hope the Subcommittee will be able to support the provisions in H.R. 1045.

Chairman MCCRERY. Thank you, Mr. Issa. Finally, we have with us a Member of the Ways and Means Committee, Mr. McDermott.

Thank you for joining us; and I would tell you, having looked over your testimony just briefly, Mr. Filner has already said it. So proceed as you wish.

**STATEMENT OF THE HON. JIM McDERMOTT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON**

Mr. McDERMOTT. Thank you for that warm invitation for my testimony.

I actually—as I sat down, I want to thank you, Mr. Chairman, for having this hearing and for making it last long, for some of us on the West Coast to make it in from the airport.

As I sat down, Mr. Inslee whispered a secret in my ear. He said, everything has been said. Well, unfortunately, I am here to say mine.

It feels a little like *deja vu* all over again, to quote that eminent philosopher Yogi Berra. We said in this Committee in 1993, 1994 when Danny Rostenkowski was the chairman and put together the Green amendments, which we adopted in that session of Congress—there has really been nothing since, and I really commend you for going through this exercise.

I know that you have heard all about all the problems and who did what to whom. So I really want to focus on the things that I think ought to be considered, at least a couple of things that ought to be considered in the process of dealing with this crisis.

It really is brought together by a combination not only of the energy crisis in the United States but the whole question of global warming. Those two issues are really what are bringing us to the table on these issues. And despite the fact that the Vice President has said that alternative fuels are way down the road, I think it is time to really look at the clean, renewable energy sources, including wind, solar, geothermal and so forth, that do not pollute our air and that are renewable.

Renewable energy development continues to rise, while the costs continue to decline. The market for solar power alone is growing by 30 percent each year in the United States, while generating 17 percent of the world's power last year. Widespread use of solar and other renewable energy sources could bring costs down, and I think that that is really what we have to think about.

It is with that in mind that I introduced a bill, H.R. 1969. It is called the Residential Solar Energy Act of 2001. Under the provisions of that bill, electric utilities would be authorized to issue a new type of tax credit bonds. The tax credit bond provisions are modeled on the provisions currently in effect on a limited basis under the Qualified Zone Academy Bond Program, with certain

technical changes that we have made. The utility would be required to use the proceeds of the tax credit bonds to make loans to residential customers to cover the cost of installing photovoltaic cells on the customers' homes.

The loan would be without interest cost to the homeowner. The homeowner would be required to repay the loan in equal installments over a specified period of time.

One might ask why you choose that as the first thing you put forward. One fact makes it real clear. Every day in California, seven times the energy that is used in California falls from the sky in the form of solar energy. We have not capitalized on that. We have not captivated it and turned it into energy, but it is possible. It is going on out there.

Much of this information I have about solar energy came from my son who lives out there and watches what is going on. And there is clearly a movement in California—if you want to know what is going to happen in the world, always look to California first. Whatever is going on there is going to be going on everywhere in the world within 3 years, and I think that the solar energy issue is one to which we should be very attentive.

Now, there is another problem that I—in looking at this whole issue I thought needed to be dealt with, and I have offered these amendments in the Committee before, but I will offer them again here, and I am sure they will be among your favorites to consider as we move toward a final bill.

H.R. 2079 is a windfall profits tax on electric generating facilities having excess profits. Under this bill, wholesalers would have to pay one dollar in tax for every dollar in profit they reaped over a pretax rate of return that exceeds 15 percent. A sense of Congress is expressed that this revenue should be used to moderate the impact of high prices on low-income individuals and small businesses, as well as to encourage the development of alternative energy sources through tax credits that others have talked about.

H.R. 2080 denies the benefits of accelerated depreciation for property. If you don't like the first way to go at it, there is another way to go at it. Just don't give them the depreciation for property used to generate electricity where there are excess profits, again defined by the 15 percent rate of return.

Accelerated depreciation is a benefit designed by the Congress to provide incentives for investment in business assets. The bill is based on the premise that businesses do not need tax incentives when they are enjoying excess profits. Why should you continue to give them a tax credit when they are getting 400 percent profit? If a generating facility has excess profits for any year, the taxpayer is denied accelerated depreciation for that year.

Fifteen percent for excess profits was chosen because it is close to the rates of return that have been used by many jurisdictions before electricity deregulation took hold. Both windfall profit bills do not apply to facilities that rely on renewable energy sources.

Finally, and in conclusion, it is unfortunate, in my view—and I hope that we will have more hearings on this—that my request to have the Consumer Federation testify at tomorrow's hearing was not granted. This organization believes that gasoline and electric shortages are the result of price manipulations and price gouging

and that a windfall profits tax is a reasonable approach to dealing with this problem and protecting consumers. Accordingly, I would ask unanimous consent to include as a part of my statement the joint statement of the Consumer Federation and the Consumers Union.

Chairman MCCRERY. Without objection.

Mr. McDERMOTT. Thank you.

[The prepared statement of Mr. McDermott, and the Consumer Federation and Consumers Union statement follow:]

**Statement of the Hon. Jim McDermott, a Representative in Congress from the State of Washington**

I am very concerned about the current energy crisis we are now facing.

A tight energy market has created a situation, which is allowing a few number of energy marketers to over-charge for wholesale electricity. Wholesale electricity prices that cost \$23 a megawatt last year now cost from \$200 to \$300 a megawatt and have been as high as \$1,000. FERC has declared the rates, "unjust and unreasonable," but the current Administration has failed to act.

We must hold the wholesalers accountable. Why should we allow these big corporations in Texas to make huge rates of return? These corporations reportedly have seen revenues climb by 400 percent in the past two years while local utilities have spiraled into debt.

Additionally, we need to generate policies that focus on the development of clean, efficient, and renewable energy sources. Despite our Vice President's assertion that alternative fuels are still "years down the road," I say the wave of the future is here today.

Clean, renewable energy sources—including wind, solar and geothermal power—do not pollute our air or our water and will never run out, unlike coal, natural gas and other fossil fuels. Renewable energy development continues to rise while its costs continue to decline. The market for solar power alone is growing by 30 percent each year in the U.S., while generating 17 percent of the world's power last year. Widespread use of solar and other renewable power sources will bring costs down, making clean energy even more attractive than fossil fuels.

I have recently introduced three energy bills:

**"Residential Solar Energy Act of 2001" (HR 1969):**

Under the provisions of the bill, electric utilities would be authorized to issue a new type of tax credit bonds. The tax credit bond provisions are modeled on the provisions currently in effect on a limited basis under the Qualified Zone Academy Bond Program, with certain technical improvements.

The utility would be required to use the proceeds of the tax credit bonds to make loans to residential customers to cover the cost of installing photovoltaic cells on the customers' homes.

The loan would be *without interest cost* to the homeowner. The homeowner would be required to repay the loan in equal installments over a specified period of time.

**Two Windfall Profits bills:**

**HR 2079** is a windfall profits tax on electric generating facilities having excess profits. Under this bill, wholesalers would have to pay one dollar in tax for every one dollar in profit they reaped over a pre-tax rate-of-return that exceeds 15 percent. A sense of Congress is expressed that this revenue should be used to: moderate the impact of high prices on low-income individuals and small business, as well as to encourage the development of alternative energy sources through tax credits for research in renewable energy.

**HR 2080** denies the benefits of accelerated depreciation for property used to generate electricity when there are excess profits, (again defined by exceeding fifteen percent of the rate-of-return.) Accelerated depreciation is a benefit designed by the Congress to provide incentives for investment in business assets. The bill is based on the premise that businesses do not need tax incentives when they are enjoying excess profits. If a generating facility has excess profits for any year, the taxpayer is denied accelerated depreciation for that year.

Fifteen percent for excess profits was chosen because it is close to the rates of return that had been used by many jurisdictions before electricity deregulation took hold. Both windfall profits bills do not apply to facilities that rely on renewable energy sources, such as wind, sun, or water.

In conclusion, it is unfortunate that my request to have the Consumer Federation testify at tomorrow's hearing was denied. This organization, along with the Consumers Union, believes that gasoline and electricity shortages are the result of price manipulations and price gouging, and that a windfall profits tax is a reasonable approach to dealing with this problem and protecting consumers. Accordingly, the conclusions and analysis of the Consumer Federation and Consumer Union follow:

### **Consumer Federation and Consumer Union Statement**

(An Analysis of Economic Justifications and Implications of Taxing Windfall Profits in the California Wholesale Electricity Market)

#### **INTRODUCTION**

It has been two decades since this country has had a vigorous debate about windfall profits taxes on energy. The reason is clear, no series of events has called out for a careful consideration of a windfall profits tax than the complete breakdown of the wholesale electricity market and natural gas markets in California and throughout the Western United States. The magnitude of the economic shock created by the unprecedented increase in electricity prices in California exceeds the impact of the second oil price shock.

In nominal dollars, the increase in the amount paid for electricity at wholesale in California between the end of October 2000 and April 2001 was larger than the increase in the total national oil import bill in the entire year after the fall of the Shah of Iran, which is widely recognized as the largest energy price shock in the history of the nation. Expressed as a percentage of gross domestic product, the price increase suffered by California in electricity costs is about twice as large as the increase suffered by the nation in 1980 in its oil import bill. The impacts on electricity prices throughout the West would make these numbers even larger.

The problem is certainly large. But, is it a federal problem that merits the imposition of a windfall profits tax? The following observations suggest that it is.

**1. Fundamental demand and supply conditions in the California electricity market make it vulnerable to the abuse of market power by energy producers.**

**2. The remarkable run up in prices is attributable in significant part to the premature and unjustified deregulation by the Federal Energy Regulatory Commission (FERC) of the wholesale electricity and natural gas markets in California and FERC's subsequent failure to discipline pricing abuse in those and other markets.**

**3. Prices have been driven up by the strategic behavior of merchant generators who have subsequently profited from those increases.**

**4. The profits are excessive by any reasonable measure.**

**5. Taxing away windfalls such as this will not detract from the incentive to build generating capacity to meet demand at a reasonable profit. To the contrary, removing the fun and profit from market manipulation will cause the supply-side of the market to function more efficiently.**

In making these points, we do not mean to suggest that California policymakers and California utilities bear no responsibility for a dysfunctional market or none of the blame. They certainly do, but federal policymakers made a substantial contribution to the problem and they have yet to make up for their mistakes or play a substantial part in finding a solution. The need for Congress to consider this type of policy stems, in part, from the fact that the FERC has demonstrated its inability to ensure that energy markets function properly. If the FERC cannot be counted on to enforce laws that require just and reasonable rates, consumers be charged rates that are just and reasonable, then other federal actions must be taken to provide a back stop to policies to back stop to an agency that has been derelict in its duty are needed. A windfall profits tax would be one such policy.

#### **FUNDAMENTAL DEMAND AND SUPPLY CONDITIONS MAKE ELECTRICITY A VULNERABLE MARKET**

In the list of culprits identified above (FERC, merchant generators, California regulators and California utilities), we do not include California consumers. They are the victims in this drama, not the villains.

California is among the most electricity efficient states in the nation. It consumes less than 50 percent as much electricity as the rest of the country per dollar of state output. On a heating and cooling degree day basis, it consumes considerably less electricity than the rest of the nation. California consumers now pay the highest prices in the country for electricity. If the rest of the country were as electricity effi-

cient as California, we would only need the equivalent of 500 new power plants, instead of the 1300 that Vice President Cheney has discussed, talked about.

Those who suggest that California consumers do not pay enough for electricity have not looked at the facts of the situation. Electricity is a necessity that has no substitute on the demand side in the short-term. At the start of the twenty-first century, electricity is like oxygen—a basic necessity to daily life.

Necessities like electricity have a low elasticity of demand. By this term, economists mean that as prices increase (or decrease) demand does not decrease (or increase) very much. The elasticity of demand is measured in terms of percentage changes. For example, if a ten percent increase in price results in a 20 percent decrease in demand, the elasticity of demand is said to equal 2 (20%/10%). When the elasticity is greater than 1, demand is said to be elastic. Alternatively, if a 10 percent increase in price results in a 2 percent decrease in demand, the elasticity of demand is said to be .2, and this is considered inelastic. The empirical evidence demonstrates that this is the situation in electricity markets. The best evidence from California is that the short run elasticity of demand is considerably less than 1. In fact, the short term elasticity of demand is less than 1. Even in the long term, it is considerably less than 1.

The empirical evidence in California is that supply is also very inelastic in the short term. The supply curve is very steep, (see Exhibit 1). The best evidence from California is that the short run supply elasticity is considerably less than 1. In fact the supply elasticity is probably less than .2 on the basis of 1999 prices. This is probably a higher price elasticity than observed in 2000–2001, which suggests a supply elasticity considerably less than 1 for the peak of 2000 (demand of 35000 MW to 45000 MW) and in the range of .1 to .15 for shoulder periods (demand between 25000 MW and 35000 MW).

When demand and supply elasticities are this low, the potential for the abuse of market power is substantial. Market power is the ability of suppliers to raise prices and earn excess profits. In simple terms, when we talk about market forces, we mean the ability of consumers to cut back or shift their demand and the ability of producers to increase their output in response to price increases—we mean supply and demand elasticities. If these elasticities are too small, market forces are weak and the exercise of market power will take place. Under these circumstances, firms with relatively small market shares can increase profits by withholding supplies. The evidence in California clearly suggests that they have been the victims of a monumental market failure.

#### **FEDERAL REGULATORY RESPONSIBILITY FOR THE PROBLEM**

The Federal Energy Regulatory Commission bears a substantial part of the blame for the problem in California because it deregulated prices in a market which was vulnerable to abuse and failed to police that abuse once it began. FERC prematurely deregulated price over the objection of many in California. In fact, FERC fought California authorities to assert control over the Independent System Operator (ISO) and then deregulated the price of energy in the California wholesale market, even though its market analysis was fundamentally flawed. This enabled private interests to take advantage of the bad situation that they had helped to create.

FERC failed to reasonably analyze the market before it deregulated. It treated the state as one big market, when it is evident that there are distinct and separate north-south markets because of a capacity constraint. It failed to identify load pockets that would be constrained at peak times. It deregulated ancillary services, even though it was told market power existed in these markets and accepted on faith that “must run” plants would mitigate market power, without any concrete plan to do so.

FERC refuses to responsibly police the markets it has irresponsibly deregulated. It has defended the secrecy of spot market bidding, which appears to have the effect of allowing tight oligopolies of bidders to play their games behind closed doors. It refused to requisition and study bidding records for abusive patterns after the first price spikes in 1998, and the second price spikes in 1999, which emboldened strategic bidders for the really big killing of 2000. It failed to analyze the data once it was collected and has taken over a year to begin to address the problems in the natural gas market. After finding rates were unjust and unreasonable, it failed to adopt mitigation measures that could discipline the market.

FERC approves rates without subjecting them to refund, so that market manipulators know they will never have to disgorge their ill-gotten gains. It even rushed in to allow a hasty reorganization of one of the California utilities to shield its assets from its creditors. As the only dissenting Commissioner put it, if the FERC had exercised more responsibility earlier, “capping spot market prices at variable oper-

ating costs plus a capacity adder \* \* \* there is reason to believe that applicants would not be in such dire straits now.”

#### **EXPLOITATION IN A DYSFUNCTIONAL MARKET**

Premature deregulation led to profit maximization that tightened electricity markets by reducing supplies, limiting reserves, eliminating back up requirements, undercutting conservation programs, and preventing facilities from being built. The small number of suppliers and the tendency for electricity product and geographic markets to be highly restricted in time and space make the exercise of market power and the implementation of gaming strategies that drive prices up easy to execute. Price spikes produce such huge windfalls that suppliers exhibit an OPEC-like (backward bending) supply curve, in which supplies are reduced, not increased, as prices rise.

On any given day during the recent price spikes fossil fuel plants owned or controlled by merchants were producing between 2000 and 6000 megawatts less than their historic average. The same independent generators also opposed long-term contracts, which would have kept utilities out of the volatile spot market. The disappearance of these assets is part of a pattern of resource denial that has the effect of driving up the price of electricity. Whether it is purely strategic, or illegally manipulative, or even collusive, remains to be seen, but there is no doubt that the pursuit of private interests has denied the electricity market in California substantial resources. This profit driven denial of resources equal to between 10 and 20 percent of peak demand had a substantial impact on price and performance.

The CAL-ISO, the sole entity to produce a detailed analysis of bidding behavior, estimated that approximately half of the price increase through November 2000 is attributable to price gouging (offering prices far above costs) or capacity hoarding (physical withholding of supply). This detailed study of actual bidding behavior by every major player in the California market, charged that there had been either price gouging or physical withholding in virtually every hour between May and November (a total of 25,000 bid/hours). Daisy chains of transactions have been developed to avoid regulatory scrutiny. In the colorful language of a new game of consumer abuse we have hockey stick bidding and megawatt laundering, but they all mean the same thing, consumers are being ripped off.

The inevitable result of greed, irresponsibility and mismanagement in a volatile market for a vulnerable commodity is a massive, inefficient and unjustified transfer of wealth from consumers to producers. Worse still this analysis does not even deal with the period after November 2000, when the excessive pricing became vastly more abusive.

The CAL-ISO has asked for refunds of over \$6 billion, but the CAL-ISO analysis does not include the results of any investigation into natural gas prices in the California market and is based on a methodology distorted by a series of erroneous assumptions dictated by the FERC. A detailed and direct comparison of actual costs incurred and prices charged on a plant-by-plant basis, which is the methodology used to order the wholesale electricity market for six decades prior to the deregulation experiments of the 1990s, would inevitably reveal that the abuses are much larger than \$6 billion.

#### **EXCESS PROFITS**

For the purposes of empirically demonstrating excess profits (and the flaw in FERC's recent failed attempts to impose discipline on a dysfunctional market), we analyze evidence in the record for January 2001 (See Exhibit 2). Assuming a least efficient generator using the most expensive inputs for January 2001, FERC's methodology establishes a ceiling price (or market clearing price) of \$273/MWh. Since all generators are allowed to charge up to that level without scrutiny, it appears they fully exploited the artificially high benchmark in determining what to charge in California's dysfunctional market. The average wholesale price in January 2001 was \$307.

However, 99 percent of the generators did not incur costs at that level, since they are much more efficient than that. Consequently, and inevitably the prices they receive are far above their costs. At the average level of efficiency known to exist in California, the actual costs incurred, even assuming the high cost inputs, would have been half the ceiling level. In other words, not only are virtually all generators more efficient than FERC's benchmark, but also the average generator is twice as efficient. While the FERC methodology would allow them to charge \$273/MWh without any scrutiny, the actual costs would be about \$150/MWh. The difference, equal to about \$120/MWh, constitutes a huge windfall and unreasonable level of profit.

The CAL-ISO has estimated that a new generation unit being brought on line with heavy capital costs would be paid off in less than two years. The implicit re-

turn on equity would be approximately 85%. Similarly, the County of San Diego calculated a cost of \$120/MWh for a new generation plant. At the FERC authorized ceiling prices, which are not subject to scrutiny, the plant would be paid off in one year. Such rates of return are historically unprecedented and patently unreasonable.

The above analyses still assume that all producers pay the high, spot price for natural gas and air emission credits. In fact, there are many longer-term contracts for gas at much lower prices and the typical generator in California does not require emissions credits. This creates an even larger gap between actual costs and the FERC's ceiling price benchmark (as shown in Exhibit 2). Using an average cost of gas (assume \$6.25 per MCF [thousand cubic feet]) and assuming the average generator does not pay emissions credits would increase the estimate of overcharges and windfalls by about one third.

The patently unreasonable rates are not simply a one-month aberration. The CAL-ISO analysis shows that by February 2001, even assuming the spot market price of gas and NO<sub>x</sub> credits, the costs of a new plant brought on line when the restructured market commenced in May 1998 in California would have been fully recovered in just three years. The implicit return on equity would be in the range of 30 to 60 percent

More to the point, perhaps, the total estimated revenues above costs, even using spot prices for gas and NONO<sub>x</sub> costs, for Non-Utility Distribution Company generators subject to FERC jurisdiction since the start of restructuring in May 1998, is approximately \$3.1 billion. This is approximately equal to the total capital paid by merchant generators to acquire the fossil plants of the utilities. In other words, by abusing their market power, these entities have, at a minimum, recovered all of their capital in approximately three years. If actual input costs were used, the full cost recovery would have occurred even earlier. The return on equity based on actual costs would fall in the range of 40 to 80 percent.

These direct estimates of price cost margins are confirmed by the bottom line profit figures of the power generators who are selling into California. Comparing the first quarter of 2001 to the first quarter of 2000, just prior to the meltdown of the California market began; we observe a tripling of operating profits for the largest fossil fuel generators and marketers, as the first quarter financial results, focusing on wholesale or trading business segments and operating results, shows.

#### PROFITS IN MILLIONS OF DOLLARS

	1Q2001	1Q2000
Enron: Wholesale Services (IBIT) .....	\$755	\$429
Duke: Energy Services (EBIT) .....	428	139
MIR: With California contingency (NI) .....	420	95
REI: Wholesale, (operating income) .....	216	(22)
Dynegy: Marketing & Trade (NI) .....	100	50
Williams: Marketing and Trading (NI) .....	485	78
<b>TOTAL</b> .....	<b>2404</b>	<b>769</b>

Sources: Quarterly reports and Wall Street briefings.

Although the companies do not break their profits down by state, there is no doubt that California and the western United States are primarily where the profits accrued.

#### TAXING AWAY WINDFALL PROFITS AND MONOPOLY RENTS DOES NOT HARM ECONOMIC EFFICIENCY

California has paid a heavy price in economic rents—scarcity rents and monopoly rents. An economic rent is “a payment to a factor in excess of what is necessary to keep it at its present occupation.” More importantly, “in perfect competition, no rents are made by any factor, because changes in supply bid prices of inputs and labor down to the level just necessary to keep them employed.”

It is well established in the economic literature that scarcity rents can be taxed away without harming economic efficiency (see Exhibit 3). Since supply of a fixed asset does not respond to price changes, there is little or no dead weight loss. As Taylor, puts it,

Economic rent is the price of anything that has a fixed supply. Economic rent is also sometimes called *pure rent*. Economic rent is a significant concept in economics precisely because the quantity supplied does not depend on the price. Thus, a tax on economic rents would not change the amount supplied; it would not affect economic efficiency or cause a deadweight loss.

Monopoly rents should be eliminated to promote economic efficiency. In fact, producers do not even have an interest in delivering existing capacity. Indeed, when windfalls become as massive as they have been in California, they distort economic incentives. Producers make more by withholding supplies than by increasing output. Having learned how to manipulate the market, the primary interest of producers is to keep it tight. Exorbitant prices do not elicit efficient supply responses, they reward and create an incentive for more effective gaming. There is a formal theory of this in economics. It is called a backward bending supply curve. It has been extensively applied to labor markets and, not surprisingly, to the OPEC cartel.

To state the concept in layman's terms, you make so much money by running the price up that you are much better off by cutting back production than by increasing output, which would lower the price. You can only get away with this when demand is inelastic (since that creates huge economic rents) and the supply beyond your control cannot be easily expanded in the short-term (since competition would dissipate the rents).

Claims that the market needs electricity priced in the hundreds of dollars per MWh to elicit efficient supply-sided responses are absurd on their face. Neither empirical reality nor economic theory supports this claim. Hundreds of power plants were financed and placed under construction across the country and including California long before anyone dreamed that prices would rise so high. Payback periods of a couple of years for facilities with useful lives that are decades long are unprecedented and unnecessary in a workably competitive market to create adequate supply.

Given the situation in the California electricity market, a windfall profits tax would play the useful role of taking the fun and profit out of market manipulation. It corrects part of the market failure (as described in Exhibit 3), although it does not fully accomplish the same outcome as cost-based rates.

#### EXHIBIT 1 SUMMER 2000 SUPPLY CURVE

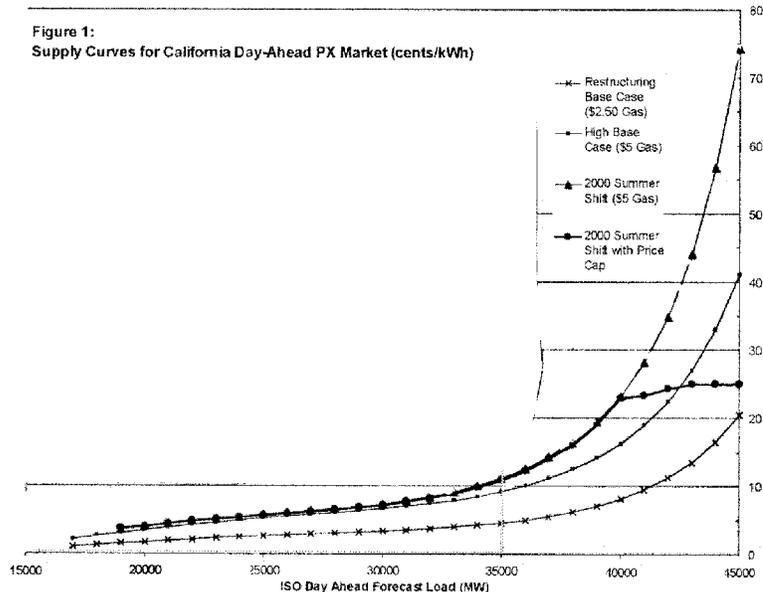
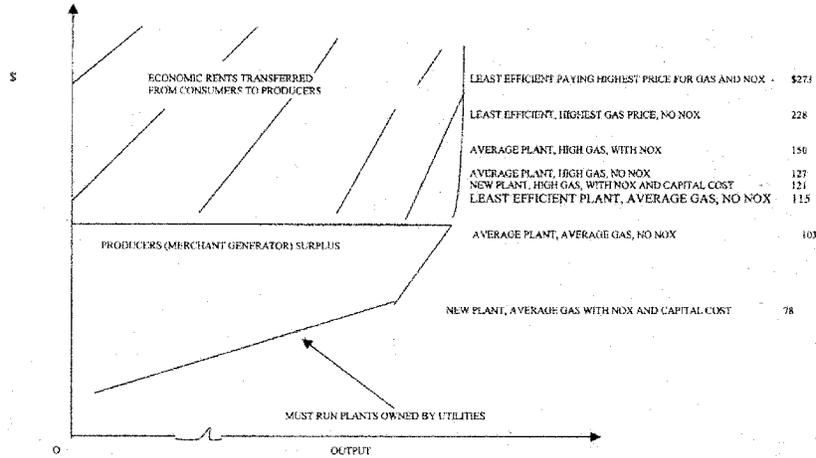


EXHIBIT 2

ABUSIVE PRICING OF ELECTRICITY IN CALIFORNIA

APPROVED BY THE FEDERAL ENERGY REGULATORY COMMISSION

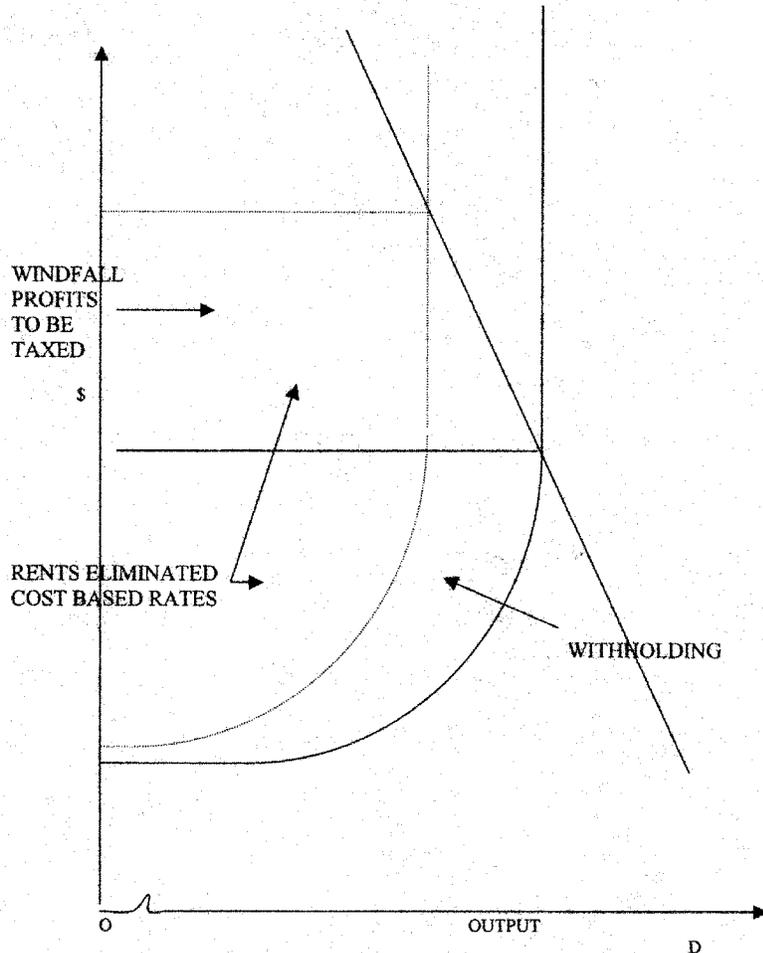
(Based on January 2001 "Caps")



SOURCE: Request for Rehearing on Behalf of The County of San Diego, Comment of the California Independent System Operator Corporation on Staff's Recommendation on Perspective Market Monitoring and Mitigation for the California Wholesale Electric Power Market, *San Diego Gas & Electric Company v. Seller of Energy and Ancillary Service Into Markets Operated by the California Independent System Operator and the California Power Exchange*, Docket No. EL00-95-017, March 22, 2001.

## EXHIBIT 3

SCARCITY RENTS MONOPOLY PROFITS GENERATED BY WITHHOLDING  
AND WINDFALL PROFITS TAXES COMPARED TO COST BASED RATES



Scarcity rents and taxation of windfalls adapted from Rutherford, Donald, *Dictionary of Economics* (Routledge: London, 1992), p. 138 and Taylor, John, B., *Economics* (Houghton Mifflin, Boston, 1998), p. 350).

Chairman MCCREERY. Thank you, Mr. McDermott, and thank all the Members of the panel for your testimony.

With respect to the gentleman's request for the Consumers Union to testify, the request did come rather late. We planned this hearing for some time, and we had our witness panels set, and had we had time to get somebody to respond specifically to those asser-

tions by the Consumers Union, we would have gladly heard from them.

We do have some panelists that will probably hit on some of the same themes, so I don't think the gentleman will be totally disappointed in the array of witnesses that we have. Plus the fact that some of the assertions that are made are not really within the jurisdiction of this Committee, although the one solution offered by the gentleman from Washington certainly would be, the windfall profits tax or the cancelation of the depreciation.

And, as I said to the Minority Leader, who was here before you arrived, Mr. McDermott, we heard a lot of testimony today from Republicans and Democrats that gives me hope that there is much more common ground on the issue of energy policy in this country than there is disagreement. So I am hopeful that we will be able to come up with a tax bill that can include and will include those areas of common ground. I am not sure that the windfall profits tax rises to that status just yet, but the gentleman can certainly keep working on it with some members of the Committee. But I think there is a lot of common ground.

I appreciate very much the testimony of all of you. You have brought up some very interesting approaches to energy policy, and we look forward to working with you to craft those in the form of legislation to help give this country a sensible energy policy. Mr. McNulty.

Mr. McNULTY. Thank you, Mr. Chairman. I thank you for holding these hearings, and I agree with your assessment of them.

I think that the Democratic leader struck a very positive note today, and I think he was correct in pointing out all of the common ground that exists on many of these issues. Matter of fact, there is an old song that many people in this room are too young to remember, but it is "accentuate the positive, eliminate the negative." There are a lot of things that we don't agree on, and I think we ought to put them in the background, as Mr. Gephardt suggested, and work on the things that we agree on. And there are many of those things that we agree on that can result in the development of a very positive energy policy for the future of this country, and I am committed to doing that. I know the chairman is.

I thank all of the Members for their very positive input.

Chairman MCCRERY. I thank my Ranking Member for participating in today's hearing and helping us put together the panel for tomorrow's hearing.

Once again, thank all of you. We look forward to working with you to craft a sensible energy policy for the United States. Thank you.

[Whereupon, at 4:32 p.m., the hearing was adjourned.]

[Submissions for the record follow:]

**Statement of the U.S. Department of the Treasury, Office of Tax Policy**

Mr. Chairman, Mr. McNulty, and Members of the Subcommittee:

It is the goal of this Administration to pursue an energy policy that protects America's economic, security, and environmental interests. As you know, in May the President's National Energy Policy Development (NEPD) Group released its report entitled "Reliable, Affordable, and Environmentally Sound Energy for America's Future." The report sets forth three basic features of a National Energy Policy:

The Policy is a long-term, comprehensive strategy. Our energy crisis has been years in the making, and will take years to put fully behind us.

The Policy will advance new, environmentally friendly technologies to increase energy supplies and encourage cleaner, more efficient energy use.

The Policy seeks to raise the living standards of the American people, recognizing that to do so our country must fully integrate its energy, environmental, and economic policies.

In that context, the Office of Tax Policy appreciates the opportunity to present testimony on tax incentives to promote energy conservation and increase domestic production of oil and gas.

### **Energy Efficiency and Alternative Energy Sources**

Incentives for energy efficiency and alternative energy sources are essential elements of national energy policy. The continuing strength of our economy over the past two years, despite oil price rises, underscores the dramatic improvements in energy efficiency we have achieved over the past quarter century, as well as the changing economy. While past oil shortages have taken a significant toll on the U.S. economy, the recent increases in oil prices have not affected the economy much. Increased energy efficiency in cars, homes, and manufacturing has helped insulate the economy from these short-term market fluctuations. In 1974, we consumed 15 barrels of oil for every \$10,000 of gross domestic product. Today we consume only 8 barrels of oil for the same amount (in constant dollars) of economic output.

#### **Current law tax incentives for energy efficiency and alternative fuels**

Tax incentives currently provide an important element of support for energy-efficiency improvements and increased use of renewable and alternative fuels. Current incentives are estimated to total \$1.2 billion for fiscal years 2002 through 2006. They include a tax credit for electric vehicles and expensing for clean-fuel vehicles (\$20 million), a tax credit for the production of electricity from wind or biomass and a tax credit for certain solar energy property (\$590 million), and an exclusion from gross income for certain energy conservation subsidies provided by public utilities to their customers (\$580 million).<sup>1</sup>

#### *Electric and clean-fuel vehicles and clean-fuel vehicle refueling property*

A 10-percent tax credit is provided for the cost of a qualified electric vehicle, up to a maximum credit of \$4,000. A qualified electric vehicle is a motor vehicle that is powered primarily by an electric motor drawing current from rechargeable batteries, fuel cells, or other portable sources of electric current, the original use of which commences with the taxpayer, and that is acquired for use by the taxpayer and not for resale. The full amount of the credit is available for purchases prior to 2002. The credit begins to phase down in 2002 and does not apply to vehicles placed in service after 2004.

Certain costs of qualified clean-fuel vehicles and clean-fuel vehicle refueling property may be deducted when such property is placed in service. Qualified electric vehicles do not qualify for the clean-fuel vehicle deduction. The deduction begins to phase down in 2002 and does not apply to property placed in service after 2004.

#### *Energy from wind or biomass*

A 1.5-cent-per-kilowatt-hour tax credit is provided for electricity produced from wind, "closed-loop" biomass (organic material from a plant that is planted exclusively for purposes of being used at a qualified facility to produce electricity), and poultry waste. The electricity must be sold to an unrelated person and the credit is limited to the first 10 years of production. The credit applies only to facilities placed in service before January 1, 2002. The credit amount is indexed for inflation after 1992.

#### *Solar energy*

A 10-percent investment tax credit is provided to businesses for qualifying equipment that uses solar energy to generate electricity, to heat or cool or provide hot water for use in a structure, or to provide solar process heat.

#### *Ethanol and renewable source methanol*

An income tax credit and an excise tax exemption are provided for ethanol and renewable source methanol used as a fuel. In general, the income tax credit is 53 cents per gallon for ethanol and 60 cents per gallon for renewable source methanol. As an alternative to the income tax credit, gasohol blenders may claim an equiva-

<sup>1</sup>*Analytical Perspectives, Budget of the United States Government, Fiscal Year 2002*, U.S. Government Printing Office, Washington, DC, 2001, p. 63.

lent gasoline tax exemption for each ethanol and renewable source methanol that is blended into qualifying gasohol.

The income tax credit expires on December 31, 2007, and the excise tax exemption expires on September 30, 2007. In addition, the ethanol credit and exemption are each reduced by 1 cent per gallon in 2003 and by an additional 1 cent per gallon in 2005. Neither the credit nor the exemption applies during any period in which motor fuel taxes dedicated to the Highway Trust Fund are limited to 4.3 cents per gallon. Under current law, the motor fuel tax dedicated to the Highway Trust Fund will be limited to 4.3 cents per gallon beginning on October 1, 2005.

#### *Energy conservation subsidies*

Subsidies provided by public utilities to their customers for the purchase or installation of energy conservation measures are excluded from the customers' gross income. An energy conservation measure is any installation or modification primarily designed to reduce consumption of electricity or natural gas or to improve the management of energy demand with respect to a dwelling unit.

### **Administration budget proposals**

The Administration's budget proposals for fiscal year 2002 include tax incentives for renewable energy resources. The budget also proposes to modify the tax treatment of nuclear decommissioning funds. The Administration's proposals are described below.<sup>2</sup>

#### *Electricity from wind and biomass*

The Administration proposes to extend the credit for electricity produced from wind and biomass for three years to facilities placed in service before January 1, 2005. In addition, eligible biomass sources would be expanded to include certain biomass from forest-related resources, agricultural sources, and other specified sources. Special rules would apply to biomass facilities placed in service before January 1, 2002. Electricity produced at such facilities from newly eligible sources would be eligible for the credit only from January 1, 2002, through December 31, 2004. The credit for such electricity would be computed at a rate equal to 60 percent of the generally applicable rate. Electricity produced from newly eligible biomass co-fired in coal plants would also be eligible for the credit only from January 1, 2002, through December 31, 2004. The credit for such electricity would be computed at a rate equal to 30 percent of the generally applicable rate.

#### *Residential solar energy systems*

The Administration proposes a new tax credit for individuals that purchase solar energy equipment used to generate electricity (photovoltaic equipment) or heat water (solar water heating equipment) for use in a dwelling unit that the individual uses as a residence. The credit would be available only for equipment used exclusively for purposes other than heating swimming pools. The proposed credit would be equal to 15 percent of the cost of the equipment and its installation. The credit would be nonrefundable and an individual would be allowed a lifetime maximum credit of \$2,000 per residence for photovoltaic equipment and \$2,000 per residence for solar water heating equipment. The credit would apply only to solar water heating equipment placed in service after December 31, 2001, and before January 1, 2006, and to photovoltaic systems placed in service after December 31, 2001, and before January 1, 2008.

#### *Nuclear decommissioning funds*

The Administration proposes to repeal the current law provision that limits deductible contributions to a nuclear decommissioning fund to the amount included in the taxpayer's cost of service for ratemaking purposes. Thus, unregulated taxpayers would be allowed a deduction for amounts contributed to a qualified nuclear decommissioning fund. The Administration also proposes to permit funding of all decommissioning costs (including pre-1984 costs) through qualified nuclear decommissioning funds. Contributions to fund pre-1984 costs would be deductible except to the extent a deduction (other than under the qualified fund rules) or an exclusion from income has been previously allowed with respect to those costs. The Administration's proposal would clarify that any transfer of a qualified nuclear decommissioning fund in connection with the transfer of the power plant with which it is associated would be nontaxable and no gain or loss will be recognized by the transferor or transferee as a result of the transfer. In addition, the proposal would permit

<sup>2</sup>For a more detailed description, see *General Explanations of the Administration's Fiscal Year 2002 Tax Relief Proposals*, Department of the Treasury, April 2001.

taxpayers to make deductible contributions to a qualified fund after the end of the nuclear power plant's estimated useful life and would provide that nuclear decommissioning costs are deductible when paid.

### **NEPD Group Proposals**

The Report of the NEPD Group also included tax incentives for renewable energy resources and for more efficient energy use. The NEPD Group proposals are described below.<sup>3</sup>

#### *Fuel from landfill methane*

The NEPD Group proposes to extend the section 29 credit for fuel produced from landfill methane produced at a facility (or portion of a facility) that is placed in service after December 31, 2001. Fuel produced at such facilities would be eligible for the credit through December 31, 2010. The proposal would also expand the credit by permitting the credit for fuel used by the taxpayer to produce electricity. The credit for fuel produced at landfills subject to EPA's 1996 New Source Performance Standards/Emissions Guidelines would be limited to two-thirds of the otherwise applicable amount. In the case of landfills with facilities that currently qualify for the section 29 credit, this limitation would not apply until after 2007.

#### *Ethanol and renewable source methanol*

The NEPD Group proposes to extend the income tax credit and excise tax exemption for ethanol and renewable source methanol through December 31, 2010. The current law rule providing that neither the credit nor the exemption applies during any period in which motor fuel taxes dedicated to the Highway Trust Fund are limited to 4.3 cents per gallon would be retained. As under current law, the credit and the exemption would each be reduced by 1 cent per gallon in 2003 and by an additional 1 cent per gallon in 2005.

#### *Hybrid and fuel cell vehicles*

The NEPD Group proposes to provide temporary tax credits for certain hybrid and fuel cell vehicles.

A credit of \$250 to \$4,000 would be available for purchases of qualifying hybrid vehicles after December 31, 2001, and before January 1, 2008. A hybrid vehicle is a vehicle that draws propulsion from both an on-board internal combustion or heat engine using combustible fuel and an on-board rechargeable energy storage system. To qualify for the minimum credit, a hybrid vehicle would be required to derive at least 5 percent of its maximum available power from the rechargeable energy storage system. Larger credits would be available for vehicles that derive larger percentages of power from the rechargeable energy storage system and for vehicles that meet specified fuel economy standards.

A credit of \$1,000 to \$8,000 would be available for the purchase of qualifying fuel cell vehicles after December 31, 2001, and before January 1, 2008. A fuel cell vehicle is a motor vehicle propelled by power derived from one or more cells that convert chemical energy directly into electricity by combining oxygen with on-board hydrogen (including hydrogen produced from on-board fuel that requires reformation before use). To qualify for the minimum credit, a fuel cell vehicle would be required to meet a minimum fuel economy standard for its weight class. Larger credits would be available for vehicles that achieve higher fuel economy standards.

#### *Combined heat and power systems*

To encourage more efficient energy usage, the NEPD Group proposes to provide a 10-percent investment credit for qualifying combined heat and power (CHP) systems. CHP systems are used to produce electricity (and/or mechanical power) and usable heat from the same primary energy source. To qualify for the credit, a system would be required to produce at least 20 percent of its total useful energy in the form of thermal energy and at least 20 percent in the form of electrical and/or mechanical power and would also be required to satisfy an energy efficiency standard. The credit would apply to CHP equipment placed in service after December 31, 2001, and before January 1, 2007.

### **Increasing Domestic Oil and Gas Production**

Before turning to a discussion of the present tax treatment of oil and gas activities, we would like to provide a brief overview of this sector.

<sup>3</sup>For a more detailed description, see the attachments to this testimony.

### Overview

Oil is an internationally traded commodity with its domestic price set by world supply and demand. Domestic exploration and production activity is affected by the world price of crude oil. Historically, world oil prices have fluctuated substantially. From 1970 to the early 1980s, there was a fivefold increase in real oil prices. World oil prices fell sharply in 1986 and were relatively more stable from 1986 through 1997. During that period, average refiner acquisition costs ranged from \$14.91 to \$23.59 per barrel in real 1992 dollars. In 1998, however, oil costs to the refiner declined to \$12.52 per barrel in nominal dollars (\$11.14 per barrel in 1992 dollars), their lowest level in 25 years in real terms. Since 1998, the decline has reversed with refiner acquisition costs (in nominal dollars) rising to \$17.51 per barrel in 1999 and \$27.69 per barrel in 2000 (the price has since dropped to \$23.89 per barrel in April 2001, the latest month for which composite figures are available). The equivalent prices in 1992 dollars are \$15.31 per barrel in 1999, \$24.28 per barrel in 2000, and \$20.20 per barrel in April 2001.

Domestic oil production has been on the decline since the mid-1980s. From 1978 to 1983 oil consumption in the United States also declined, but increasing consumption since 1983 has more than offset this decline. In 2000, domestic oil consumption was 28 percent higher than in 1970. The decline in oil production and increase in consumption have led to an increase in oil imports. Net petroleum (crude and product) imports have risen from approximately 38 percent of consumption in 1988 to 52 percent in 2000.

A similar pattern of large recent price increases and increasing dependence on imports has occurred in the natural gas market. During the second half of the 1990s, spot prices for natural gas exceeded \$4.00 per million Btu (MMBtu) in only one month (February 1996). The spot price again exceeded \$4.00 per MMBtu in May 2000, rose above \$5.00 per MMBtu in September 2000, and exceeded \$10.00 per MMBtu for several days last winter. Since last winter the price has fallen sharply. The current spot price is approximately \$3.71 per MMBtu.<sup>4</sup>

The United States has large natural gas reserves and was essentially self-sufficient in natural gas until the late 1980s. Since 1986, natural gas consumption has increased by more than 30 percent but natural gas production has increased by only 17 percent. Net imports as a share of consumption nearly quadrupled from 1986 to 2000, rising from 4.2 percent to 15.6 percent. Natural gas from Canada makes up nearly all of the imports into the United States.

### Current law tax incentives for oil and gas production

Although the Administration's energy plan contains no new tax incentives for oil and gas production, the Internal Revenue Code includes a variety of measures to stimulate domestic exploration and production. They are generally justified on the ground that they reduce vulnerability to an oil supply disruption through increases in domestic production, reserves, exploration activity, and production capacity. The tax incentives contained in present law address the drop in domestic exploratory drilling that has occurred since the mid-1950s and the continuing loss of production from mature fields and marginal properties.

Incentives for oil and gas production are estimated to total \$9.8 billion for fiscal years 2002 through 2006.<sup>5</sup> They include the nonconventional fuels (i.e., oil produced from shale and tar sands, gas produced from geopressured brine, Devonian shale, coal seams, tight formations, or biomass, and synthetic fuel produced from coal) production credit (\$2.4 billion), the enhanced oil recovery credit (\$4.4 billion), the allowance of percentage depletion for independent producers and royalty owners, including increased percentage depletion for stripper wells (\$2.3 billion), the exception from the passive loss limitation for working interests in oil and gas properties (\$100 million), and the expensing of intangible drilling and development costs (\$640 million). In addition to those tax expenditures, oil and gas activities have largely been eliminated from the alternative minimum tax. These provisions are described in detail below.

#### *Percentage depletion*

Certain costs incurred prior to drilling an oil—or gas-producing property are recovered through the depletion deduction. These include costs of acquiring the lease or other interest in the property, and geological and geophysical costs (in advance of actual drilling). Any taxpayer having an economic interest in a producing property may use the cost depletion method. Under this method, the basis recovery for

<sup>4</sup> All price references are to the spot price at the Henry Hub and are in nominal dollars.

<sup>5</sup> *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2002*, U.S. Government Printing Office, Washington, DC, 2001, p. 6.

a taxable year is proportional to the exhaustion of the property during the year. The cost depletion method does not permit cost recovery deductions that exceed the taxpayer's basis in the property or that are allowable on an accelerated basis. Thus, the deduction for cost depletion is not generally viewed as a tax incentive.

Independent producers and royalty owners (as contrasted to integrated oil companies)<sup>6</sup> may qualify for percentage depletion. A qualifying taxpayer determines the depletion deduction for each oil or gas property under both the percentage depletion method and the cost depletion method and deducts the larger of the two amounts. Under the percentage depletion method, generally 15 percent of the taxpayer's gross income from an oil—or gas-producing property is allowed as a deduction in each taxable year. The amount deducted may not exceed 100 percent of the net income from that property in any year (the "net-income limitation").<sup>7</sup> Additionally, the percentage depletion deduction for all oil and gas properties may not exceed 65 percent of the taxpayer's overall taxable income (determined before such deduction and adjusted for certain loss carrybacks and trust distributions).<sup>8</sup>

A taxpayer may claim percentage depletion with respect to up to 1,000 barrels of average daily production of domestic crude oil or an equivalent amount of domestic natural gas. For producers of both oil and natural gas, this limitation applies on a combined basis. All production owned by businesses under common control and members of the same family must be aggregated; each group is then treated as one producer for application of the 1,000-barrel limitation.

Special percentage depletion provisions apply to oil and gas production from marginal properties. The statutory percentage depletion rate is increased (from the general rate of 15 percent) by one percentage point for each whole dollar that the average price of crude oil (as determined under the provisions of the nonconventional fuels production credit of section 29) for the immediately preceding calendar year is less than \$20 per barrel. In no event may the rate of percentage depletion under this provision exceed 25 percent for any taxable year. The increased rate applies for the taxpayer's taxable year which immediately follows a calendar year for which the average crude oil price falls below the \$20 floor. To illustrate the application of this provision, the average price of a barrel of crude oil for calendar year 1999 was \$15.56; thus, the percentage depletion rate for production from marginal wells was increased by four percent (to 19 percent) for taxable years beginning in 2000. The 100-percent-of-net-income limitation has been suspended for marginal wells for taxable years beginning after December 31, 1997, and before January 1, 2002. The Administration's budget for fiscal year 2002 proposes a one-year extension of this provision. Under the Administration proposal, marginal wells would continue to be exempt from the limitation during taxable years beginning in 2002.

Marginal production is defined for this purpose as domestic crude oil or domestic natural gas which is produced during any taxable year from a property which (1) is a stripper well property for the calendar year in which the taxable year begins, or (2) is a property substantially all of the production from which during such calendar year is heavy oil (i.e., oil that has a weighted average gravity of 20 degrees API or less corrected to 60 degrees Fahrenheit). A stripper well property is any oil or gas property for which daily average production per producing oil or gas well is not more than 15 barrel equivalents in the calendar year during which the taxpayer's taxable year begins.<sup>9</sup> A property qualifies as a stripper well property for a

<sup>6</sup>An independent producer is any producer who is not a "retailer" or "refiner." A retailer is any person who directly, or through a related person, sells oil or natural gas or any product derived therefrom (1) through any retail outlet operated by the taxpayer or related person, or (2) to any person that is obligated to market or distribute such oil or natural gas (or product derived therefrom) under the name of the taxpayer or the related person, or that has the authority to occupy any retail outlet owned by the taxpayer or a related person. Bulk sales of crude oil and natural gas to commercial or industrial users, and bulk sales of aviation fuel to the Department of Defense, are not treated as retail sales for this purpose. Further, a person is not a retailer within the meaning of this provision if the combined gross receipts of that person and all related persons from the retail sale of oil, natural gas, or any product derived therefrom do not exceed \$5 million for the taxable year. A refiner is any person who directly or through a related person engages in the refining of crude oil, but only if such person or related person has a refinery run in excess of 50,000 barrels per day on any day during the taxable year.

<sup>7</sup>By contrast, for any other mineral qualifying for the percentage depletion deduction, the deduction may not exceed 50 percent of the taxpayer's taxable income from the depletable property.

<sup>8</sup>Amounts disallowed as a result of this rule may be carried forward and deducted in subsequent taxable years, subject to the 65-percent-of-taxable-income limitation for those years.

<sup>9</sup>Equivalent barrels is computed as the sum of (1) the number of barrels of crude oil produced, and (2) the number of cubic feet of natural gas produced divided by 6,000. If a well produced

Continued

calendar year only if the wells on such property were producing during that period at their maximum efficient rate of flow.

If a taxpayer's property consists of a partial interest in one or more oil—or gas-producing wells, the determination of whether the property is a stripper well property or a heavy oil property is made with respect to total production from such wells, including the portion of total production attributable to ownership interests other than the taxpayer's. If the property satisfies the requirements of a stripper well property, then each owner receives the benefits of this provision with respect to its allocable share of the production from the property for its taxable year that begins during the calendar year in which the property so qualifies.

The allowance for percentage depletion on production from marginal oil and gas properties is subject to the 1,000-barrel-per-day limitation discussed above. Unless a taxpayer elects otherwise, marginal production is given priority over other production for purposes of utilization of that limitation.

Because percentage depletion, unlike cost depletion, is computed without regard to the taxpayer's basis in the depletable property, cumulative depletion deductions may be far greater than the amount expended by the taxpayer to acquire or develop the property.

#### *Intangible drilling and development costs*

In general, costs that benefit future periods must be capitalized and recovered over such periods for income tax purposes, rather than being expensed in the period the costs are incurred. In addition, the uniform capitalization rules require certain direct and indirect costs allocable to property to be included in inventory or capitalized as part of the basis of such property. In general, the uniform capitalization rules apply to real and tangible personal property produced by the taxpayer or acquired for resale.

Special rules apply to intangible drilling and development costs ("IDCs").<sup>10</sup> Under these special rules, an operator (i.e., a person who holds a working or operating interest in any tract or parcel of land either as a fee owner or under a lease or any other form of contract granting working or operating rights) who pays or incurs IDCs in the development of an oil or gas property located in the United States may elect either to expense or capitalize those costs. The uniform capitalization rules do not apply to otherwise deductible IDCs.

If a taxpayer elects to expense IDCs, the amount of the IDCs is deductible as an expense in the taxable year the cost is paid or incurred. Generally, IDCs that a taxpayer elects to capitalize may be recovered through depletion or depreciation, as appropriate; or in the case of a nonproductive well ("dry hole"), the operator may elect to deduct the costs. In the case of an integrated oil company (i.e., a company that engages, either directly or through a related enterprise, in substantial retailing or refining activities) that has elected to expense IDCs, 30 percent of the IDCs on productive wells must be capitalized and amortized over a 60-month period.<sup>11</sup>

A taxpayer that has elected to deduct IDCs may, nevertheless, elect to capitalize and amortize certain IDCs over a 60-month period beginning with the month the expenditure was paid or incurred. This rule applies on an expenditure-by-expenditure basis; that is, for any particular taxable year, a taxpayer may deduct some portion of its IDCs and capitalize the rest under this provision. This allows the taxpayer to reduce or eliminate IDC adjustments or preferences under the alternative minimum tax.

<sup>10</sup> 10 barrels of crude oil and 12,000 cubic feet of natural gas, its equivalent barrels produced would equal 12 (i.e.,  $10 + (12,000/6,000)$ ).

<sup>10</sup> IDCs include all expenditures made by an operator for wages, fuel, repairs, hauling, supplies, etc., incident to and necessary for the drilling of wells and the preparation of wells for the production of oil and gas. In addition, IDCs include the cost to operators of any drilling or development work (excluding amounts payable only out of production or gross or net proceeds from production, if the amounts are depletable income to the recipient, and amounts properly allocable to the cost of depreciable property) done by contractors under any form of contract (including a turnkey contract). Such work includes labor, fuel, repairs, hauling, and supplies which are used in the drilling, shooting, and cleaning of wells; in such clearing of ground, draining, road making, surveying, and geological works as are necessary in preparation for the drilling of wells; and in the construction of such derricks, tanks, pipelines, and other physical structures as are necessary for the drilling of wells and the preparation of wells for the production of oil and gas. Generally, IDCs do not include expenses for items which have a salvage value (such as pipes and casings) or items which are part of the acquisition price of an interest in the property.

<sup>11</sup> The IRS has ruled that if an integrated oil company ceases to be an integrated oil company, it may not immediately write off the unamortized portion of the IDCs capitalized under this rule, but instead must continue to amortize those IDCs over the 60-month amortization period.

The election to deduct IDCs applies only to those IDCs associated with domestic properties.<sup>12</sup> For this purpose, the United States includes certain wells drilled offshore.<sup>13</sup>

Intangible drilling costs are a major portion of the costs necessary to locate and develop oil and gas reserves. Because the benefits obtained from these expenditures are of value throughout the life of the project, these costs would be capitalized and recovered over the period of production under generally applicable accounting principles.

*Nonconventional fuels production credit*

Taxpayers that produce certain qualifying fuels from nonconventional sources are eligible for a tax credit (“the section 29 credit”) equal to \$3 per barrel or barrel-of-oil equivalent.<sup>14</sup> Fuels qualifying for the credit must be produced domestically from a well drilled, or a facility treated as placed in service before January 1, 1993.<sup>15</sup> The section 29 credit generally is available for qualified fuels sold to unrelated persons before January 1, 2003.<sup>16</sup>

For purposes of the credit, qualified fuels include: (1) oil produced from shale and tar sands; (2) gas produced from geopressured brine, Devonian shale, coal seams, a tight formation, or biomass (i.e., any organic material other than oil, natural gas, or coal (or any product thereof); and (3) liquid, gaseous, or solid synthetic fuels produced from coal (including lignite), including such fuels when used as feedstocks. The amount of the credit is determined without regard to any production attributable to a property from which gas from Devonian shale, coal seams, geopressured brine, or a tight formation was produced in marketable quantities before 1980.

The amount of the section 29 credit generally is adjusted by an inflation adjustment factor for the calendar year in which the sale occurs.<sup>17</sup> There is no adjustment for inflation in the case of the credit for sales of natural gas produced from a tight formation. The credit begins to phase out if the annual average unregulated wellhead price per barrel of domestic crude oil exceeds \$23.50 multiplied by the inflation adjustment factor.<sup>18</sup>

The amount of the section 29 credit allowable with respect to a project is reduced by any unrecaptured business energy tax credit or enhanced oil recovery credit claimed with respect to such project.

As with most other credits, the section 29 credit may not be used to offset alternative minimum tax liability. Any unused section 29 credit generally may not be carried back or forward to another taxable year; however, a taxpayer receives a credit for prior year minimum tax liability to the extent that a section 29 credit is disallowed as a result of the operation of the alternative minimum tax. The credit is limited to what would have been the regular tax liability but for the alternative minimum tax.

The provision provides a significant tax incentive (currently about \$6 per barrel of oil equivalent or \$1 per thousand cubic feet of natural gas). Coalbed methane and gas from tight formations currently account for most of the credit.

<sup>12</sup>In the case of IDCs paid or incurred with respect to an oil or gas well located outside of the United States, the costs, at the election of the taxpayer, are either (1) included in adjusted basis for purposes of computing the amount of any deduction allowable for cost depletion or (2) capitalized and amortized ratably over a 10-year period beginning with the taxable year such costs were paid or incurred.

<sup>13</sup>The term “United States” for this purpose includes the seabed and subsoil of those submerged lands that are adjacent to the territorial waters of the United States and over which the United States has exclusive rights, in accordance with international law, with respect to the exploration and exploitation of natural resources (i.e., the Continental Shelf area).

<sup>14</sup>A barrel-of-oil equivalent generally means that amount of the qualifying fuel which has a Btu (British thermal unit) content of 5.8 million.

<sup>15</sup>A facility that produces gas from biomass or produces liquid, gaseous, or solid synthetic fuels from coal (including lignite) generally will be treated as being placed in service before January 1, 1993, if it is placed in service by the taxpayer before July 1, 1998, pursuant to a written binding contract in effect before January 1, 1997. In the case of a facility that produces coke or coke gas, however, this provision applies only if the original use of the facility commences with the taxpayer. Also, the IRS has ruled that production from certain post-1992 “recompletions” of wells that were originally drilled prior to the expiration date of the credit would qualify for the section 29 credit.

<sup>16</sup>If a facility that qualifies for the binding contract rule is originally placed in service after December 31, 1992, production from the facility may qualify for the credit if sold to an unrelated person before January 1, 2008.

<sup>17</sup>The inflation adjustment factor for the 2000 taxable year was 2.0454. Therefore, the inflation-adjusted amount of the credit for that year was \$6.14 per barrel or barrel equivalent.

<sup>18</sup>For 2000, the inflation adjusted threshold for onset of the phaseout was \$48.07 (\$23.50 x 2.0454) and the average wellhead price for that year was \$26.73.

*Enhanced oil recovery credit*

Taxpayers are permitted to claim a general business credit, which consists of several different components. One component of the general business credit is the enhanced oil recovery credit. The general business credit for a taxable year may not exceed the excess (if any) of the taxpayer's net income tax over the greater of (1) the tentative minimum tax, or (2) 25 percent of so much of the taxpayer's net regular tax liability as exceeds \$25,000. Any unused general business credit generally may be carried back one taxable year and carried forward 20 taxable years.

The enhanced oil recovery credit for a taxable year is equal to 15 percent of certain costs attributable to qualified enhanced oil recovery ("EOR") projects undertaken by the taxpayer in the United States during the taxable year. To the extent that a credit is allowed for such costs, the taxpayer must reduce the amount otherwise deductible or required to be capitalized and recovered through depreciation, depletion, or amortization, as appropriate, with respect to the costs. A taxpayer may elect not to have the enhanced oil recovery credit apply for a taxable year.

The amount of the enhanced oil recovery credit is reduced in a taxable year following a calendar year during which the annual average unregulated wellhead price per barrel of domestic crude oil exceeds \$28 (adjusted for inflation since 1990).<sup>19</sup> In such a case, the credit would be reduced ratably over a \$6 phaseout range.

For purposes of the credit, qualified enhanced oil recovery costs include the following costs which are paid or incurred with respect to a qualified EOR project: (1) the cost of tangible property which is an integral part of the project and with respect to which depreciation or amortization is allowable; (2) IDCs that the taxpayer may elect to deduct;<sup>20</sup> and (3) the cost of tertiary injectants with respect to which a deduction is allowable, whether or not chargeable to capital account.

A qualified EOR project means any project that is located within the United States and involves the application (in accordance with sound engineering principles) of one or more qualifying tertiary recovery methods which can reasonably be expected to result in more than an insignificant increase in the amount of crude oil which ultimately will be recovered. The qualifying tertiary recovery methods generally include the following nine methods: miscible fluid displacement, steam-drive injection, microemulsion flooding, in situ combustion, polymer-augmented water flooding, cyclic-steam injection, alkaline flooding, carbonated water flooding, and immiscible non-hydrocarbon gas displacement, or any other method approved by the IRS. In addition, for purposes of the enhanced oil recovery credit, immiscible non-hydrocarbon gas displacement generally is considered a qualifying tertiary recovery method, even if the gas injected is not carbon dioxide.

A project is not considered a qualified EOR project unless the project's operator submits to the IRS a certification from a petroleum engineer that the project meets the requirements set forth in the preceding paragraph.

The enhanced oil recovery credit is effective for taxable years beginning after December 31, 1990, with respect to costs paid or incurred in EOR projects begun or significantly expanded after that date.

Conventional oil recovery methods do not recover all of a well's oil. Some of the remaining oil can be extracted by unconventional methods, but these methods are generally more costly. At current world oil prices, a large part of the remaining oil in place is uneconomical to recover by unconventional methods. In this environment, the EOR credit can increase recoverable reserves. Although recovering oil using EOR methods is more expensive than recovering it using conventional methods, it may be less expensive than producing oil from new reservoirs. Although the credit could phase out at higher oil prices, it is fully effective at present world oil prices.

*Alternative minimum tax*

A taxpayer is subject to an alternative minimum tax ("AMT") to the extent that its tentative minimum tax exceeds its regular income tax liability. A corporate taxpayer's tentative minimum tax generally equals 20 percent of its alternative minimum taxable income in excess of an exemption amount. (The marginal AMT rate for a noncorporate taxpayer is 26 or 28 percent, depending on the amount of its alternative minimum taxable income above an exemption amount.) Alternative minimum taxable income ("AMTI") is the taxpayer's taxable income increased by certain tax preferences and adjusted by determining the tax treatment of certain items in a manner which negates the deferral of income resulting from the regular tax treatment of those items.

<sup>19</sup>The average per-barrel price of crude oil for this purpose is determined in the same manner as for purposes of the section 29 credit.

<sup>20</sup>In the case of an integrated oil company, the credit base includes those IDCs which the taxpayer is required to capitalize.

As a general rule, percentage depletion deductions claimed in excess of the basis of the depletable property constitute an item of tax preference in determining the AMT. In addition, the AMTI of a corporation is increased by an amount equal to 75 percent of the amount by which adjusted current earnings (“ACE”) of the corporation exceed AMTI (as determined before this adjustment). In general, ACE means AMTI with additional adjustments that generally follow the rules presently applicable to corporations in computing their earnings and profits. As a general rule a corporation must use the cost depletion method in computing its ACE adjustment. Thus, the difference between a corporation’s percentage depletion deduction (if any) claimed for regular tax purposes and its allowable deduction determined under the cost depletion method is factored into its overall ACE adjustment.

Excess percentage depletion deductions related to crude oil and natural gas production are not items of tax preference for AMT purposes. In addition, corporations that are independent oil and gas producers and royalty owners may determine depletion deductions using the percentage depletion method in computing their ACE adjustments.

The difference between the amount of a taxpayer’s IDC deductions and the amount which would have been currently deductible had IDC’s been capitalized and recovered over a 10-year period may constitute an item of tax preference for the AMT to the extent that this amount exceeds 65 percent of the taxpayer’s net income from oil and gas properties for the taxable year (the “excess IDC preference”). In addition, for purposes of computing a corporation’s ACE adjustment to the AMT, IDCs are capitalized and amortized over the 60-month period beginning with the month in which they are paid or incurred. The preference does not apply if the taxpayer elects to capitalize and amortize IDCs over a 60-month period for regular tax purposes.

IDC’s related to oil and gas wells are generally not taken into account in computing the excess IDC preference of taxpayers that are not integrated oil companies. This treatment does not apply, however, to the extent it would reduce the amount of the taxpayer’s AMTI by more than 40 percent of the amount that the taxpayer’s AMTI would have been if those IDCs had been taken into account.

In addition, for corporations other than integrated oil companies, there is no ACE adjustment for IDCs with respect to oil and gas wells. That is, such a taxpayer is permitted to use its regular tax method of writing off those IDCs for purposes of computing its adjusted current earnings.

Absent these rules, the incentive effect of the special provisions for oil and gas would be reduced for firms subject to the AMT. These rules, however, effectively eliminate AMT concerns for independent producers.

#### *Passive activity loss and credit rules*

A taxpayer’s deductions from passive trade or business activities, to the extent they exceed income from all such passive activities of the taxpayer (exclusive of portfolio income), generally may not be deducted against other income.<sup>21</sup> Thus, for example, an individual taxpayer may not deduct losses from a passive activity against income from wages. Losses suspended under this “passive activity loss” limitation are carried forward and treated as deductions from passive activities in the following year, and thus may offset any income from passive activities generated in that later year. Losses from a passive activity may be deducted in full when the taxpayer disposes of its entire interest in that activity to an unrelated party in a transaction in which all realized gain or loss is recognized.

An activity generally is treated as passive if the taxpayer does not materially participate in it. A taxpayer is treated as materially participating in an activity only if the taxpayer is involved in the operations of the activity on a basis which is regular, continuous, and substantial.

A working interest in an oil or gas property generally is not treated as a passive activity, whether or not the taxpayer materially participates in the activities related to that property. This exception from the passive activity rules does not apply if the taxpayer holds the working interest through an entity which limits the liability of the taxpayer with respect to the interest. In addition, if a taxpayer has any loss for any taxable year from a working interest in an oil or gas property which is treated pursuant to this working interest exception as a loss which is not from a passive activity, then any net income from such property (or any property the basis of which is determined in whole or in part by reference to the basis of such property) for any succeeding taxable year is treated as income of the taxpayer which is not from a passive activity.

<sup>21</sup>This provision applies to individuals, estates, trusts, personal service corporations, and closely held C corporations.

Similar limitations apply to the utilization of tax credits attributable to passive activities. Thus, for example, the passive activity rules (and, consequently, the oil and gas working interest exception to those rules) apply to the nonconventional fuels production credit and the enhanced oil recovery credit. However, if a taxpayer has net income from a working interest in an oil and gas property which is treated as not arising from a passive activity, then any tax credits attributable to the interest in that property would be treated as credits not from a passive activity (and, thus, not subject to the passive activity credit limitation) to the extent that the amount of the credits does not exceed the regular tax liability which is allocable to such net income.

As a result of this exception from the passive loss limitations, owners of working interests in oil and gas properties may use losses from such interests to offset income from other sources.

#### *Tertiary injectants*

Taxpayers are allowed to deduct the cost of qualified tertiary injectant expenses for the taxable year. Qualified tertiary injectant expenses are amounts paid or incurred for any tertiary injectant (other than recoverable hydrocarbon injectants) which is used as a part of a tertiary recovery method.

The provision allowing the deduction for qualified tertiary injectant expenses resolves a disagreement between taxpayers (who considered such costs to be IDCs or operating expenses) and the IRS (which considered such costs to be subject to capitalization).

This concludes our testimony. We would be pleased to answer any questions the Subcommittee may have.

### **ATTACHMENTS: NEPD GROUP PROPOSALS**

#### **Extend and Modify Credit for Fuel Produced from Landfill Methane**

##### **Current Law**

Taxpayers that produce gas from biomass (including landfill methane) are eligible for a tax credit ("the section 29 credit") equal to \$3 per barrel-of-oil equivalent. For this purpose, a barrel-of-oil equivalent is the amount of gas that has a Btu (British thermal unit) content of 5.8 million. To qualify for the credit, the gas must be produced domestically from a facility placed in service by the taxpayer before July 1, 1998, pursuant to a written binding contract in effect before January 1, 1997. In addition, the gas must be sold to an unrelated person before January 1, 2008.

The amount of the section 29 credit generally is adjusted by an inflation adjustment factor for the calendar year in which the sale occurs. The inflation adjustment factor for the 2000 taxable year was 2.0454, and the inflation-adjusted amount of the credit for that year was \$6.14 per barrel or barrel equivalent. The credit begins to phase out if the annual average unregulated wellhead price per barrel of domestic crude oil exceeds \$23.50 multiplied by the inflation adjustment factor. For 2000, the inflation adjusted threshold for onset of the phaseout was \$48.07 ( $\$23.50 \times 2.0454$ ) and the average wellhead price for that year was \$26.73.

The amount of the section 29 credit allowable with respect to a project is reduced by any unrecaptured business energy tax credit or enhanced oil recovery credit claimed with respect to such project.

The section 29 credit may not be used to offset alternative minimum tax liability. Any unused section 29 credit generally may not be carried back or forward to another taxable year; however, a taxpayer receives a credit for prior year minimum tax liability to the extent that a section 29 credit is disallowed as a result of the operation of the alternative minimum tax. The credit is limited to what would have been the regular tax liability but for the alternative minimum tax.

##### **Reasons for Change**

The tax credit helps make fuel produced from landfill methane competitive with other fuels. Extending the credit would continue the important contribution of this renewable energy source to the Nation's long-term energy supply.

##### **Proposal**

The credit would be allowed for fuel produced from landfill methane if the fuel is produced from a facility (or portion of a facility) placed in service after December 31, 2001, and before January 1, 2011, and is sold (or used to produce electricity that is sold) before January 1, 2011. The credit for fuel produced at landfills subject to EPA's 1996 New Source Performance Standards/Emissions Guidelines would be limited to two-thirds of the otherwise applicable amount beginning on January 1, 2008, if any portion of the facility for producing fuel at the landfill was placed in service

before July 1, 1998, and beginning on January 1, 2002, in all other cases. The proposal would clarify, for purposes of determining the extent to which a facility is placed in service after December 31, 2001, that the facility includes the wells, pipes, and related components used to collect landfill methane and that only production attributable to wells, pipes, and related components placed in service after December 31, 2001, is treated as produced from the portion of the facility placed in service after that date.

### **Extension of Tax Incentives for Ethanol**

#### **Current Law**

Current law provides an income tax credit and an excise tax exemption for ethanol and renewable source methanol used as a fuel. In general, the income tax credit for ethanol is 53 cents per gallon, but small ethanol producers (i.e., those producing less than 30 million gallons of ethanol per year) qualify for a credit of 63 cents per gallon on the first 15 million gallons of ethanol produced in a year. A credit of 60 cents per gallon is allowed for renewable source methanol.

As an alternative to the income tax credit, gasohol blenders may claim a gasoline tax exemption of 53 cents for each gallon of ethanol and 60 cents for each gallon of renewable source methanol that is blended into qualifying gasohol.

The income tax credit expires on December 31, 2007, and the excise tax exemption expires on September 30, 2007. In addition, the ethanol credit and exemption are each reduced by 1 cent per gallon in 2003 and by an additional 1 cent per gallon in 2005. Neither the credit nor the exemption applies during any period in which motor fuel taxes dedicated to the Highway Trust Fund are limited to 4.3 cents per gallon. Under current law, the motor fuel tax dedicated to the Highway Trust Fund will be limited to 4.3 cents per gallon beginning on October 1, 2005.

#### **Reasons for Change**

The tax credit and excise tax exemption help make ethanol and renewable source methanol competitive with other fuels. Extending the credit and exemption would continue the important contribution of these renewable energy sources to the Nation's long-term energy supply.

#### **Proposal**

The income tax credit and the excise tax exemption would be extended through December 31, 2010. The current law rule providing that neither the credit nor the exemption applies during any period in which motor fuel taxes dedicated to the Highway Trust Fund are limited to 4.3 cents per gallon would be retained. As under current law, the credit and the exemption would each be reduced by 1 cent per gallon in 2003 and by an additional 1 cent per gallon in 2005.

### **Provide Tax Credit for Certain Hybrid and Fuel Cell Vehicles**

#### **Current Law**

No generally available income tax credit for purchases of hybrid vehicles is available currently. A 10-percent tax credit is provided for the cost of a qualified electric vehicle, up to a maximum credit of \$4,000. A qualified electric vehicle is a motor vehicle that is powered primarily by an electric motor drawing current from rechargeable batteries, fuel cells, or other portable sources of electric current, the original use of which commences with the taxpayer, and that is acquired for use by the taxpayer and not for resale. The full amount of the credit is available for purchases prior to 2002. The credit begins to phase down in 2002 and does not apply to vehicles placed in service after 2004.

Certain costs of qualified clean-fuel property, including clean-fuel vehicles, may be deducted when such property is placed in service. Qualified electric vehicles do not qualify for the clean-fuel vehicle deduction. The deduction begins to phase down in 2002 and does not apply to property placed in service after 2004.

#### **Reasons for Change**

The transportation sector now accounts for 67 percent of U.S. oil consumption. Cars, sport utility vehicles, light trucks, and minivans alone account for 40 percent of U.S. oil consumption, about 20 to 40 percent of all urban smog-forming emissions and 20 percent of greenhouse gas emissions. Almost all of these vehicles use a single gasoline-fueled engine.

Hybrid vehicles, which have more than one source of power on board the vehicle, and electric vehicles have the potential to reduce petroleum consumption, air pollution, and greenhouse gas emissions. The proposed credits will encourage the purchase of highly fuel efficient vehicles that incorporate advanced automotive tech-

nologies and will help to move hybrid and fuel cell vehicles from the laboratory to the highway. These vehicles can significantly reduce oil consumption, emissions of air pollutants, and emissions of carbon dioxide, the most prevalent greenhouse gas.

**Proposal**

The proposal would provide temporary tax credits for certain hybrid and fuel cell vehicles:

(1) *Credit for qualified hybrid vehicles.* A credit, of up to \$4,000, would be available for purchases of qualified hybrid vehicles after December 31, 2001, and before January 1, 2008. The credit would be:

- (a) \$250 if the rechargeable energy storage system provides at least 5 percent but less than 10 percent of the maximum available power;
- (b) \$500 if the rechargeable energy storage system provides at least 10 percent and less than 20 percent of the maximum available power;
- (c) \$750 if the rechargeable energy storage system provides at least 20 percent and less than 30 percent of the maximum available power; and
- (d) \$1,000 if the rechargeable energy storage system provides 30 percent or more of the maximum available power.

If the vehicle's fuel economy exceeds the 2000 model year city fuel economy, the amount of credit shown in (a) through (d) above would be increased by the following amounts:

- (i) \$500 if the vehicle achieves at least 125 percent but less than 150 percent of the 2000 model year city fuel economy;
- (ii) \$1,000 if the vehicle achieves at least 150 percent but less than 175 percent of the 2000 model year city fuel economy;
- (iii) \$1,500 if the vehicle achieves at least 175 percent but less than 200 percent of the 2000 model year city fuel economy;
- (iv) \$2,000 if the vehicle achieves at least 200 percent but less than 225 percent of the 2000 model year city fuel economy;
- (v) \$2,500 if the vehicle achieves at least 225 percent but less than 250 percent of the 2000 model year city fuel economy; and
- (vi) \$3,000 if the vehicle achieves at least 250 percent of the 2000 model year city fuel economy.

(2) *Credit for qualified fuel cell vehicles.* A credit of up to \$8,000 would be available for the purchase of new qualified fuel cell vehicles after December 31, 2001, and before January 1, 2008. The credit would be \$4,000, but, if the vehicle's fuel economy exceeds the 2000 model year city fuel economy, the credit would increase by the following amounts:

- (i) \$1,000 if the vehicle achieves at least 150 percent but less than 175 percent of the 2000 model year city fuel economy;
- (ii) \$1,500 if the vehicle achieves at least 175 percent but less than 200 percent of the 2000 model year city fuel economy;
- (iii) \$2,000 if the vehicle achieves at least 200 percent but less than 225 percent of the 2000 model year city fuel economy;
- (iv) \$2,500 if the vehicle achieves at least 225 percent but less than 250 percent of the 2000 model year city fuel economy;
- (v) \$3,000 if the vehicle achieves at least 250 percent but less than 275 percent of the 2000 model year city fuel economy;
- (vi) \$3,500 if the vehicle achieves at least 275 percent but less than 300 percent of the 2000 model year city fuel economy; and
- (vii) \$4,000 if the vehicle achieves at least 300 percent of the 2000 model year city fuel economy.

The 2000 model year city fuel economy would be the following:

If the vehicle inertia weight class is:	The 2000 model year city fuel economy is:	
	For a passenger automobile:	For a light truck:
1,500 or 1,750 lbs .....	43.7 mpg	37.6 mpg
2,000 lbs .....	38.3 mpg	33.7 mpg
2,250 lbs .....	34.1 mpg	30.6 mpg
2,500 lbs .....	30.7 mpg	28.0 mpg
2,750 lbs .....	27.9 mpg	25.9 mpg
3,000 lbs .....	25.6 mpg	24.1 mpg

If the vehicle inertia weight class is:	The 2000 model year city fuel economy is:	
	For a passenger automobile:	For a light truck:
3,500 lbs .....	22.0 mpg	21.3 mpg
4,000 lbs .....	19.3 mpg	19.0 mpg
4,500 lbs .....	17.2 mpg	17.3 mpg
5,000 lbs .....	15.5 mpg	15.8 mpg
5,500 lbs .....	14.1 mpg	14.6 mpg
6,000 lbs .....	12.9 mpg	13.6 mpg
6,500 lbs .....	11.9 mpg	12.8 mpg
7,000 or 8,500 lbs .....	11.1 mpg	12.0 mpg

The “vehicle inertia weight class” is defined in regulations prescribed by the Environmental Protection Agency for purposes of title II of the Clean Air Act.

A qualifying hybrid vehicle is a motor vehicle that draws propulsion energy from on-board sources of stored energy which are both: (1) an internal combustion engine or heat engine using combustible fuel, and (2) a rechargeable energy storage system. A qualifying fuel cell vehicle is a motor vehicle that is propelled by power derived from one or more cells which convert chemical energy directly into electricity by combining oxygen with hydrogen fuel which is stored on board the vehicle and may or may not require reformation prior to use. A qualifying vehicle must meet all applicable regulatory requirements.

Maximum available power means the maximum value available from the battery or other energy storage device, during a standard power test, divided by the sum of the battery or other energy storage device and the SAE net power of the heat engine.

These credits would be available for all qualifying light vehicles including cars, minivans, sport utility vehicles, and light trucks. Taxpayers would be able to claim only one of the credits per vehicle and taxpayers who claim either credit would not be able to claim the qualified electric vehicle credit or the deduction for clean-fuel vehicle property for the same vehicle. Business taxpayers claiming either credit would be subject to the limitations on the general business credit and would be required to reduce the basis of the vehicle by the amount of the credit.

**Investment Credit for Combined Heat and Power (CHP) Systems**

**Current law**

Combined heat and power (CHP) systems are used to produce electricity (and/or mechanical power) and usable thermal energy from a single primary energy source. Depreciation allowances for CHP property vary by asset use and capacity. Assets employed in the production of electricity used by the taxpayer in an industrial manufacturing process or plant activity (and not ordinarily available for sale to others) have a general cost recovery period of 15 years if rated with total capacity in excess of 500 kilowatts. Electricity production assets of lesser-rated capacity generally are classified with other manufacturing assets and have cost recovery periods of five to ten years. Assets used in the production of electricity for sale have either a 15-year or 20-year recovery period. For assets that are structural components of buildings, however, the recovery period is either 39 years (if nonresidential) or 27.5 years (if residential), and the straight-line method for computing depreciation allowances must be used. For assets with recovery periods of 10 years or less, the 200 percent declining balance method may be used to compute depreciation allowances. The 150 percent declining balance method may be used for assets with recovery periods of 15 or 20 years. No income tax credit is provided currently for investment in combined heat and power property.

**Reasons for change**

Combined heat and power systems utilize thermal energy that is otherwise wasted in producing electricity by more conventional methods. CHP systems achieve a greater level of overall energy efficiency, and thereby lessen the consumption of primary fossil fuels, lower total energy costs, and reduce carbon emissions. An investment tax credit for CHP assets is expected to encourage increased energy efficiency by accelerating planned investments and inducing additional investments in such systems. The increased demand for CHP equipment should, in turn, reduce CHP

production costs and spur additional technological innovation in improved CHP systems.

### **Proposal**

The proposal would establish a 10-percent investment credit for qualified CHP systems with an electrical capacity in excess of 50 kilowatts or with a capacity to produce mechanical power in excess of 67 horsepower (or an equivalent combination of electrical and mechanical energy capacities). CHP property would be defined as property comprising a system that uses the same energy source for the simultaneous or sequential generation of (1) electricity or mechanical shaft power (or both) and (2) steam or other forms of useful thermal energy (including heating and cooling applications). A qualified CHP system would be required to produce at least 20 percent of its total useful energy in the form of thermal energy and at least 20 percent of its total useful energy in the form of electrical or mechanical power (or a combination thereof) and would also be required to satisfy an energy-efficiency standard. For CHP systems with an electrical capacity in excess of 50 megawatts (or a mechanical energy capacity in excess of 67,000 horsepower), the total energy efficiency of the system would have to exceed 70 percent. For smaller systems, the total energy efficiency would have to exceed 60 percent. For this purpose, total energy efficiency would be calculated as the sum of the useful electrical, thermal, and mechanical power produced by the system at normal operating rates, measured on a Btu basis, divided by the lower heating value of the primary fuel source for the system supplied. The credit would be allowed with respect to qualified CHP property only if its eligibility is verified under regulations prescribed by the Secretary of the Treasury.

Investments in qualified CHP assets that are otherwise assigned cost recovery periods of less than 15 years would be eligible for the credit, provided that the taxpayer elected to treat such property as having a 22-year class life. Thus, regular tax depreciation allowances would be calculated using a 15-year recovery period and the 150 percent declining balance method.

The credit would be treated as an energy credit under the investment credit component of the section 38 general business credit, and would be subject to the rules and limitations governing that credit. Taxpayers using the credit for CHP equipment would not be entitled to any other tax credit for the same equipment.

The credit would apply to investments in CHP equipment placed in service after December 31, 2001, but before January 1, 2007.

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### **Statement of the American Soybean Association**

The American Soybean Association (ASA) appreciates the opportunity to present written testimony to the House Ways and Means Subcommittee on Select Revenue Measures regarding our proposal to provide a partial exemption to the diesel fuel excise tax to diesel fuel suppliers who use blends of biodiesel. The amount of the exemption would be three cents for diesel fuel containing two percent biodiesel. We also propose to provide 20 cents for diesel fuel containing twenty percent or higher blends of biodiesel.

This approach is similar to the partial tax exemption for ethanol, which provides a 5.4-cent exemption for gasoline that contains ten percent ethanol. Biodiesel and ethanol are complementary renewable fuels, since they are sold in separate fuel markets.

One of the first concerns with excise tax exemptions is the lost revenue to the Highway Trust Fund. ASA is very sensitive to the needs of highway users, and proposes to reimburse the Trust Fund with USDA's Commodity Credit Corporation (CCC). The cost to the CCC would be offset, at least initially, by savings realized in the cost of the soybean marketing loan program brought about by higher soybean prices from the increased use of soybean oil in biodiesel.

For example, if 100 million gallons of biodiesel were used under this program, it would be blended at two percent per gallon into five billion gallons of diesel fuel. At a cost of three cents per gallon, the cost of the incentive would be \$150 million.

Soybean oil is a primary feedstock for biodiesel production. Assuming soyoil use in our example, reduced soybean oil surpluses will result in higher soybean prices, which will reduce CCC outlays under the soybean marketing loan program. Using a conservative 13 cents per bushel impact on price, the savings for this year's estimated 2.75 billion bushel soybean crop would be \$357 million. Our proposal will save more than two dollars for each dollar it costs.

The Congressional Budget Office (CBO) baseline released in December 2000 estimated that the CCC would incur the following costs (in billions) by fiscal year for the soybean marketing loan program:

FY02	FY03	FY04	FY05	FY06	FY07
\$3.3	\$3.3	\$3.3	\$3.0	\$2.3	\$0.9

These figures indicate that sufficient CCC funds will be available to offset the cost of our proposal to the Highway Trust Fund. It also is clear that stimulating demand for biodiesel through a tax incentive and thereby reducing farm program costs by more than two dollars for every dollar spent under the tax incentive is good fiscal policy. Additionally, development of the biodiesel industry and the further use of biodiesel in fuel will help address our nation's future energy needs.

Mr. Chairman, the biodiesel industry believes that the timing is right for this proposal. For the last ten years U.S. soybean growers have invested in the research, development and commercialization of biodiesel. Biodiesel is a mono-alkyl ester-based oxygenated fuel. It contains no petroleum but can easily be blended with petroleum. Biodiesel is typically blended at the 20% level with diesel or at the 2% or lower levels. It can be used in compression-ignition, diesel engines with no major modifications. Biodiesel in its neat or pure form is biodegradable and nontoxic, and is the first and only alternative fuel to meet EPA's Tier I and II health effects testing standards. Biodiesel is renewable and domestically produced from agricultural resources, including soybean oil.

Biodiesel has many environmental and operational benefits. However, I would like to highlight the fuel's lubricity benefits. Even at very low blends, biodiesel contributes operational and maintenance benefits to diesel engines. This is even more significant when using ultra-low sulfur diesel.

The Administration has decided to move forward with an EPA proposal to reduce the sulfur content of highway diesel fuel by over 95%, from its current level of 500 parts per million to 15 ppm. Biodiesel has no sulfur or aromatics, and tests have documented its ability to increase fuel lubricity significantly when blended with petroleum diesel fuel, even at less than one percent.

Soybean growers began to invest in biodiesel because of the economics of the soybean industry. Soybeans are widely produced for the protein feed provided by in soybean meal. It is the plant protein of choice in the pork and poultry industries, leaving soybean oil as a valuable but abundant co-product. Because of large supplies of vegetable oils in the world market, we have a large surplus of soybean oil in the domestic market, which depresses the price of the whole soybean.

Several years ago, ASA recognized that the traditional approach of riding out a depressed market by storing surplus soybean oil until better times was not going to work. The industry had to do more. It needed to be proactive and aggressive in developing new markets. Through our state and national check off programs soybean growers began investing in the development of new uses of soybean oil. Several of the products are widely accepted in the marketplace, such as soy ink, and others are just reaching acceptance, such as biodiesel, solvents, lubricants and other fluids.

While biodiesel as a fuel is relatively new to our country, it is widely accepted and utilized in Europe, where motorists consume 250 million gallons annually. Our biodiesel industry leaders have worked closely with the European industry by sharing research, performance data and consumer information. The European biodiesel industry is strongly supported by government and by agribusiness. In fact, several major U.S. oilseed processors are producing biodiesel in Europe.

While biodiesel offers environmental, energy security, and economic development benefits, it is not yet cost-competitive in the U.S. Public support is needed to help the industry develop. ASA strongly believes that our nation needs an aggressive energy policy that includes renewable fuels and power generation as well as significant domestic production of oil and natural gas.

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**Statement of the Hon. Susan A. Davis, a Representative in Congress from  
the State of California**

Mr. Chairman, Distinguished Members of the Subcommittee:

Thank you for the opportunity to present my forthcoming bill, the Renewable Energy Act for Credit on Taxes.

This is a tax credit to be given for investments in renewable energy systems based on solar, wind, or fuel cells providing up to \$4.50 per Watt of electricity produced,

capped at the lesser of 35% of the cost of the system or \$6000 for residences and \$50,000 for commercial enterprises. It would sunset in four years.

I would like to answer six key questions about this proposal:

1. Why renewable energy?
2. Why now?
3. Why residential and small commercial?
4. Why solar, wind, and fuel cell?
5. Why this method and these numbers?
6. What else is needed to make this program effective?

The recent ABC poll showed that 90% of the public support increased investment in renewable energy sources. In its National Energy Policy the administration has identified the need for investment in renewable sources. Clearly, a large number of members of Congress, including those from whom you have heard today, have given a great deal of thought to this issue and have constructed programs which they believe will meet this public policy goal.

I do not need to reiterate the importance of weaning America from its dependence on fossil fuels or to make the argument about pollution of the atmosphere. There is a common belief that we will need more energy, more readily available at peak times throughout our country in the near future. However, development of long term fossil fuel sources is not a strategy to address the short or near-term needs for energy supplies.

I offer an alternative focus, partly because I have been working on this issue steadily in California for the last year, and I believe it should be clear that responding to the shape of this supply-side need requires actions that will supply more energy at peak periods in the short run. Our experience in California has been that, without increasing the demand for energy during the peak periods of the year, we suddenly found ourselves with an inadequate supply of energy. The reasons that existing energy plants were not producing energy when needed is not the focus here. The issue is that one has to provide more peak load resources.

One of the problems encountered last summer was that when the normal pattern failed, the ability to transfer power between states was inadequate. There were also transfer points within the state that prevented power available in Southern California to be shared with needs in Northern California. There has been a general call to build additional transmission lines. However, these are both costly and time-consuming to site, and in the long run the need may be reduced and perhaps avoided. I understand that a number of companies are nearing commercial application of new transmission cabling technology that will increase the capacity of presently sited transmission lines.

Not only are there transmission capacity and transfer problems, but it appears that the very complex system of grids nationally and the oversight, financing, and regulatory responsibility are in need of major review and improvement to meet near-term as well as long-term needs. This issue merits study and solution, but it also makes clear that in the short and near term we must increase that production of power where it will be used.

I believe it is clear that America needs a multi-faceted approach to meeting our energy needs, targeted to different time frames and using different resources. New, full-sized plants must be built, but they take several years to come on line. Co-generation plants can be built much more quickly and are currently cost competitive. They must be encouraged for large sites, such as college campuses and large office buildings. Although they supply power on the site used and avoid transmission congestion, most plants rely on natural gas as a supply. This further exacerbates the existing supply/cost and pipeline capacity problem. In addition, energy efficient buildings must be promoted both in new construction and in retrofitting. In particular, schools and government buildings should lead in this effort. Finally, conservation of all sorts must be practiced. Not only are 90% of citizens supportive of conservation, but also in California the record of 11% reduction in demand in May shows that citizens will take action.

All of these methods are helpful, but, in the near term, it is evident that we need to give additional incentives to power sources that can be put into operation relatively quickly, locally, produce power at peak times and use renewable energy sources. The administration's National Energy Policy states, "Photovoltaic solar distributed energy is a particularly valuable energy generation source during times of peak use of power." [p. 6-10] I believe that this source meets all four policy goals; therefore, I have focused on increasing locally produced solar energy.

Under-used locations for increased production of power are homes and businesses. Owners have not invested in personal energy systems in part because they did not have an energy pricing incentive to do so as the systems themselves may have been too costly to provide a reasonable return on the investment. I believe that this gap

can be bridged by using tax incentives to motivate additional private investment in power based on renewable resources and provide energy where it will be used in order to reduce demand on the current transmission systems, particularly at peak load times. The key concepts are “on-site” production and “environmentally sound sources.” The benefit is a continuing stream of power without continued cost for purchase of fuel.

One type, solar power for water heating, has been used extensively in the West over many years because it has been a good investment. Although solar water heating also removes energy load from the system, alone it has not made a large dent in over-all demand. Yet, it demonstrates the willingness of owners to make this investment in appropriate circumstances.

Now, newer materials and more reliable systems have become available to make individual photovoltaic systems attractive as well. In April a solar demonstration home was built on the Washington Mall that not only incorporated many energy saving designs but also employed a solar energy system with back-up batteries. The system was designed to meet the household’s energy needs (facilitated, to be sure, by the energy efficient design of the building and choice of Energy Star appliances and lighting which would decrease the demand.) The additional cost for the solar system for this large, three-bedroom, two story home was given as \$30,000.

As a newly built home, after being moved to another site, the cost would become part of the value of the house and could be included in the mortgage an owner would obtain. Clearly, it is possible for a great many new homes to be built in this way. The question is how to motivate a buyer to choose this house over a similar one without the solar energy but at a price \$30,000 less. Although future energy savings will pay back the investment over enough years, additional incentives would be needed to make it a sound investment today. A refundable tax credit that would convey to the original purchaser of the house can fill that margin. An owner of an existing home or business could also be encouraged to invest in a renewable energy system, although the opportunity for funding through a second mortgage or line of credit may be somewhat more costly.

Is a federal tax credit enough to encourage a homeowner to make this investment? Here is a possible financial scenario. Under my bill, the owner of an existing home comparable to the Mall home could invest in a similar system providing 4 kWh of electricity per year, with battery back-ups. Based on that amount of output, under my bill allowing for \$4.50 per kWh, the system would qualify for \$18,000 of the cost; however, the proposed cap in my bill would be the lesser of 35% of the cost or \$6,000, leaving \$24,000 of uncovered cost.

Although there would be price savings over time, it might not be a prudent investment. However, some states and municipalities have additional rebates. California, for example, has a rebate program also measured at the \$4.50 per kWh rate—but capped at 50% of the cost; it would rebate approximately \$15,000 in this case. Thus, the California homeowner combining the two programs would be paying only \$9,000 of that cost. Without the California rebate, however, a homeowner could buy a system of half the capacity at \$15,000 and have approximately \$9,750 net cost.

Just how attractive this investment would be has many variables based on the current local cost of power, the cost of credit, and the individual’s monthly energy use that affect the length of time required for the investment to pay for itself. In the California house comparable to the Mall demonstration house, depending on other energy efficiency attributes, that household might use more power than provided by a system that size. Nonetheless, the owner could potentially reduce current electricity costs by 50% to 100% and provide a full return of that investment in five to ten years, depending on the cost of power where it was located. In a state without a rebate program, the homeowner choosing a system half the size supplying half as much power would of course require twice the time for return on the investment.

For businesses in non-rebate localities, the difference would be that with a cap of \$50,000 the owner could purchase about 20 kWh of electricity for an additional \$100,000. Again, the attractiveness depends on interest costs and local prices.

The advantage of a solar solution in terms of public policy is that in many locations the solar energy is most available when it is most needed—in the summer in the middle of the day. Obviously, not every climate makes this investment worthwhile, nor does every home or business have the appropriate roof size facing the required direction for currently available applications.

Because of regional variations in weather, I have also included wind systems. Presently, a new generation of larger, more efficient and cheaper commercial systems are available for wind farms. Assuming that the current program that expires December 31 is reauthorized, a rebate of 1.7 cents per kWh produced is given at the end of the year. At the present time, the net price is competitive with other types of power sold in the western market. Entrepreneurial businesses are putting

together funding mechanisms and equipment to build additional wind farms. These will add to long-term needs, but applicable sites are limited and often require extensive time for permitting.

For individuals, the production tax credit is not an attractive financial incentive since the owner is using the product not selling it. Thus, a tax credit on the system's cost is the appropriate mechanism. There are applications available suitable for residences and businesses, not all of which require a tower and wind turbine system. Wind machines that look like a typical roof top vent can also create wind power, although each one may supply only one kWh of power, and several would be required. Once again, this is not a system that can necessarily take over all of the needs of a household or business because in most locations wind power is not a constant. However, it is a potential addition to the nation's energy supply that has the two key attributes—on-site generation and a renewable, non-polluting energy source.

Finally, I have included fuel cells for this funding. At the present time, these are marginally available for home application. However, again, the technology is in process, and fuel cells can provide a non-polluting source of on-site energy.

Regarding the financing mechanisms in this bill, I have chosen a tax credit rather than a grant program as providing a less bureaucratically complicated funding mechanism that is readily understood by and accessible to a taxpayer. I have made it a refundable credit, as it is the policy to create incentives for an investment that decreases demand. The details of a particular individual's tax obligation is unrelated to meeting that policy goal. I have given a sunset to the bill in the belief, first, that our need is immediate and that the home or business owner should consider this as an option that requires current action. Second, any program should be reviewed after a reasonable time for its success and appropriate renewal.

Basing the payment on a verified, standards-based kilowatt/hour output assures that the funds are buying a desired quantity of generation. The amount is chosen to be comparable to the rates for the California program and to bear a cost-based relation to commercial prices for these types of systems per kilowatt hour. The cap was selected from the perception that they would be sufficient to motivate an owner to make a decision that he was not otherwise financially able to choose purely out of a desire to add to the nation's renewable energy sources.

To make these self-supplied energy sources viable, some additional mechanisms are required. I am aware that they are covered in other bills that have been submitted, and I have signed as a co-author. First, there must be a net metering system required for all jurisdictions. One of the greatest disincentives to providing individual renewable energy systems has been the unwillingness of commercial utilities to allow individuals to come onto their system and reduce their use of the utility's product. Charging high prices for the connection has been their practice. Reasonable charges for connection and for transmission must be a basis for fair pricing and must be both monitored and controlled by the appropriate agencies.

The value, particularly of solar energy systems, is that a personal system not only supplies power to its household, but it may have an oversupply which is then given to the grid (net metering) in return for possible use from the grid when the solar system may not be fully operative and back-up batteries are insufficient—at night and in bad weather. Utilities may, but have not been required to, pay an individual where this net metering system results at the end of the month in a surplus added to the grid. From a policy standpoint, the producer even of this excess supply should be valued at some level.

In sum, right now and as our population grows, more energy generation will be needed, particularly at peak-load times. For the next decade or so, energy providers may need to continue building low-polluting generating plants using non-renewable sources, in part to decommission older, more polluting plants. During that time and with government investment in Research, Development, and Demonstration, we need to achieve economically viable technologies based on renewable sources. However, we will also benefit both now and in the future by giving financial incentives to individuals both in their residences and in their businesses to meet at least some of their energy needs in the short term through personal systems. We will benefit from having on-site energy production that can be installed in a short time frame, produces energy at times of peak use, does not require transmission, and is based on non-polluting, renewable sources.

Thank you for the opportunity to appear before you today to present this proposal. I appreciate your time and attention.

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**Statement of the Hon. Martin Frost, a Representative in Congress from the State of Texas**

Thank you Mr. Chairman for allowing me the opportunity to testify before you today. I appreciate the fact your Subcommittee is holding this hearing in order to explore the many tax proposals introduced by Members relating to the discovery, production, transportation, generation, and end-use of power. Given the current focus on these issues as a result of the West Coast electricity situation, and the President's own description of the national "crisis" we are facing, these hearings are indeed timely.

As Chairman of the Democratic Caucus, I have over the last 18-months chaired the Democratic Caucus Task Force on Energy. Our Task Force is composed of Members from all parts of the country representing a diverse spectrum of political views. While we all do not necessarily agree on all aspects of energy policy, there is a strong agreement in our Caucus that this Nation's energy needs can be met through a combination of increased production, use of alternative and renewal energy sources, and through energy efficiency and conservation. We believe national polls have shown that the American people agree with our focus on a balanced approach to solving our Nation's energy needs in the 21st Century.

Last month our Caucus released a report prepared by the Caucus Energy Task Force that outlines our view of what energy policy should look like. While not everyone agrees with every part of the report, I believe, on balance it represents a good starting point for any discussion of how we should be addressing the energy problems we currently face. Please notice I have termed the current situation as a problem and not as a crisis, as has President Bush. While he and I both hail from Texas, a major energy producing state, I cannot agree with him that we are facing a crisis. And I do not believe most of my colleagues from Texas or other oil patch states would agree we are in a crisis mode. We do believe however, along with our colleagues from the North, the West, the Midwest, and the South, that the Congress, working with the Administration and the private sector, can find solutions to problems that might become crises if they are not addressed adequately and if they are not addressed in the short-term with long-term results in mind.

Our report calls for very specific actions that will lead to increased energy supply as well as increases in conservation and energy efficiencies. We do not believe energy problems can be solved without concentrating on both supply and demand. We also reject the notion that the environment must be sacrificed in order to maximize production and generation. As stated in our report, "Democrats strongly object to President Bush's assertions that the substantial improvements made in cleaning the air we breathe, cleaning the water we drink, or improving our public health must be sacrificed in order to ensure adequate energy will be available to fuel our industries, heat or cool our homes and businesses, and keep motorists on the road \* \* \*". Democrats support a plan that recognizes the need for new energy production and generation, and will at the same time save consumers money, continue the important work to cut pollutants that affect the health of every American, create real jobs, and will reduce the percentage of imported foreign oil we need to keep our economy strong and to protect our national security." (*Principles for Energy Prosperity: Helping Consumers, Promoting Growth & Protecting the Environment*, House Democratic Caucus, May 15, 2001)

Our report calls for several tax incentives that will promote both increased domestic energy production as well as enhanced conservation and energy efficiency in homes and businesses.

First, we believe the independent domestic oil and gas industry needs greater market stability in order to maintain and increase domestic production of oil and gas resources. We endorse a number of tax incentives for the domestic industry embodied in H.R. 805, a bill sponsored by my Republican colleague from Texas, Mac Thornberry as well as my colleagues Ralph Hall, Charlie Stenholm, and Max Sandlin. These targeted tax incentives are designed to insure that the domestic production of oil and gas does not suffer long-term damage in times when the price of a barrel of oil drops so low it is impossible for small producers to continue to explore and produce. When these producers are forced to cap wells, lay off their crews and cannibalize their equipment, it becomes extremely difficult for them to retool or re-open their wells once the price rises to more profitable levels. The President and the Vice President, both veterans of the oil industry, should understand the difficulties small producers experience in times of price swings, yet the President's energy plan contains no tax provisions that will help smaller domestic producers continue

to produce oil and gas domestically. We believe this Committee should give the Thornberry bill every consideration when forming a legislative proposal.

Secondly, we have called for the creation of a Best Energy Saving Tax Credit (BEST Credit) which would help consumers by providing a flexible tax credit of up to \$4,000 for new homes meeting certain energy efficiency criteria, up to 20 percent of cost up to \$4,000 for the retrofitting of existing homes or the replacement of existing heating and cooling systems, appliances, lighting, windows, doors, and insulation that meet or exceed federal guidelines; and a credit of up to \$4,000 for the purchase of vehicles utilizing new technologies or alternative fuel engines.

We also call for assisting American businesses reduce their energy costs and thus increase their profitability through the creation of a Structure and Vehicle Efficiency Tax Incentive (SAVE Incentives). Our plan would create an investment tax credit of up to 30 percent of the cost of the purchase of renewable energy generation, including wind turbines, co-generation, solar water heating and photovoltaic panels, fuel cells, geothermal technologies and other similar energy efficient technologies. We would create a business deduction of up to \$2.25 a square foot for property improvements that reduce energy use by 50 percent below defined standards. Finally, the SAVE Incentives would provide a 20 percent investment tax credit for the purchase of cars and/or light trucks/SUV's/minivans equipped with fuel-saving new technology or alternative fuel engines.

Democrats understand that coal is currently the source for over 50 percent of America's electricity generation, but at the same time we remain concerned about the emissions coming from coal-fired plants. While there have been encouraging strides made to reduce those emissions, we have called for the creation of an EXCEED Tax Credit which would provide a ten percent investment tax credit for the cost of clean air control technology for utilities that lead a power plant to exceed mandatory emissions reductions levels for pollutants regulated under Title I of the Clean Air Act, or for significant early compliance with clean air emissions reduction target dates. We would also extend this credit to those technologies that cap their CO2 emissions at 2000 levels. And, important to rural America, we would permit public utilities and coops to trade these credits or use them as offsets against debt or obligations.

Also very important to rural America and the farming industry, we support an investment tax credit of up to ten percent for modifications made to existing coal plants to allow the use of biomass and/or synthetic liquid or gaseous fuels form coal, in combination with coal to produce at least five and up to 15 percent of a plant's fuel requirements.

Finally, our report calls for continued investments tax credits for renewable energy sources. We support increasing the existing investment credit for renewable energy infrastructure to 20 percent for solar and geothermal, and extending the credit to wind, biomass, and other energy produced from renewable resources. We also call for increasing the current tax credit for producing electricity to 2 cents per kilowatt hour for electricity produced from wind and biomass, and for extending the credit to solar and geothermal.

Mr. Chairman, many of the proposals called for the Democratic Caucus energy plan are already embodied in legislation introduced by both Republican and Democratic Members of the House. Some of these proposals can be found in the President's energy plan. These are all good places to start any discussion of energy policy and I believe we can develop a meaningful energy policy that will benefit all Americans through a cooperative and deliberative legislative process. Certainly none of these proposals will solve the current problems consumers and businesses are experiencing in the West, but by working together it is possible to fashion an energy policy that will benefit all Americans, an energy policy that will create jobs for American workers, an energy policy that will protect the health of all Americans, and, most importantly, protect our national security in the years ahead.

Again, thank you for the opportunity to appear before you today. On behalf of the Democratic Caucus, I look forward to working with you as you develop proposals to be incorporated into an overall energy policy for the 21st Century.

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**Statements of the Hon. Wally Herger, a Representative in Congress from  
the State of California**

Mr. Chairman and Members of the Subcommittee.

I would like to make a few comments to underline the importance of recognizing and providing strong support to the nation's solid-fuel biomass power industry. This

unique asset provides both reliable electricity and an extraordinary range of public benefits including measurable reduction in the risk and severity of wildfires, waste management services to agriculture, improved air quality, and a solid base of rural employment across the nation.

The biomass power industry converts more than 20 million tons of wood waste and other organic residuals into clean electricity every year. It makes productive use of materials that would otherwise be an environmental liability. Unfortunately, the industry has been destabilized by the volatility in our energy markets and rising costs. The productivity of our industry is diminishing and the public benefits provided are increasingly at risk.

I have introduced legislation (HR 1657) to remedy this situation by providing a much-needed production tax credit to this important industry, and I am heartened by the growing list of bipartisan cosponsors who have joined me in this important effort.

Independent research sponsored by the U.S. Department of Energy recently confirmed that the monetary value of the environmental and economic benefits of the biomass power industry—separate from the renewable electricity itself—is approximately 11.4 cents per kilowatt hour of electricity produced. I recommend that the committee recognize the singular importance of this finding which is quite significant and far in excess of the public benefits generated by any other energy technology. It tells us two things.

First, we learn that the value of the industry's environmental and economic benefits are nearly double the cost of the electricity it produces. In other words, the public receives an environmental and economic reward when biomass power is generated. Second—and equally important—the value of the public benefits are more than six times greater than the 1.7 cent cost of the tax credit proposed in my legislation. From a public policy perspective, Congress would be well served by approving a tax credit that delivers such an extraordinary rate of return.

I would like to emphasize the fact that the nation's biomass power industry is dependably producing clean electricity right now at a time when we are confronted with electricity shortages, in my state and elsewhere, that threaten our economy, our public health and our safety. While other renewable energy technologies may also make meaningful contributions to our electricity supply over time, few are as important in the present. We simply cannot afford to see a decline in biomass energy output and its inherent public benefits at a time when we have a clear responsibility to provide the American people with an uninterrupted supply of much needed electricity.

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Mr. Chairman and Members of the Subcommittee:

No discussion of the effect of the federal tax laws on production, supply and conservation of energy would be complete without acknowledging the significant role that capital cost recovery rules play in this regard. The electric power industry is one of the most capital-intensive industries in this country. The ability to recoup investment costs, including the depreciation and amortization of assets, is of critical importance to its viability and the nation's access to reliable power.

The electric industry is rapidly changing to one in which generation is becoming fully competitive at a time when there is a growing need for new energy supply. However, the capital recovery rules that have applied in the past under a regulatory framework are now inadequate. Generating companies are no longer guaranteed a specified rate of return on their investment, and current tax law serves as a disincentive to upgrading and building more generation capacity at a time of increasing demand.

To efficiently meet our nation's energy needs through adequate and reliable power, the electric supply industry requires the same ability that other industries have to more rapidly depreciate assets for Federal income tax purposes. I have introduced legislation, H.R. 1802, the "National Energy Security Act of 2001," that would amend the Federal income tax laws to allow electric generation facilities to be depreciated over seven years. Identical provisions are included in comprehensive legislation (S. 389) introduced by Senator Frank Murkowski (R-AK) in the Senate.

*The Nation's Inadequate Energy Supply Underscores the Need for New Investment.*

The need for new investment to meet growing demand, to maintain the reliability of the electric system, and to ensure adequate energy supply across the nation has become clear. The energy crunch in California, preceded by spikes in the price for spot power in the Midwest, and power outages in cities such as New York and Chicago, has visibly underscored the need for new generation. Real events, supported

by numerous studies, identify regions that will have dangerously narrow capacity margins within the next decade. The ability to obtain cost recovery must be provided to encourage the construction of new or improved electric generation facilities.

*Other Capital-Intensive Industries Are Given Shorter Lives.*

In stark contrast to the 15- or 20-year depreciation lives for electric generation assets, facilities for other capital-intensive manufacturing processes, such as pulp and paper mills, steel mills, lumber mills, foundries, automobile plants, shipbuilding, and even cigarette manufacturing plants are depreciable for Federal income tax purposes over seven years. Chemical plants and facilities for the manufacture of electronic components and semiconductors can be depreciated over five years.

There is no sound justification for these types of distinctions in today's competitive environment. For example, according to tax law, investment in pollution control equipment at other types of manufacturing facilities have shorter depreciable lives, but not at electric generation facilities. As the electricity industry evolves and becomes competitive, it is important for it to have the same types of tax incentives to encourage modernization and increase productivity as those available to other industries.

*New Investments Are Required to Comply with Environmental Laws.*

New environmental requirements for electric generating facilities may impair the value and useful life of existing assets. For example, clean air compliance requirements, such as those relating to the Clean Air Act amendments, new source performance review, state implementation plans, National Ambient Air Quality Standards, and the Environmental Protection Agency's toxic release inventory, are requiring significant new investment in environmental mitigation technologies. In some cases, existing plants will have to be effectively abandoned and new generation plants constructed. This will require new capital investment, investment that the tax laws should encourage, not discourage as under current law.

*Upgrades to Existing Generation Facilities Will Be Accelerated.*

The current fleet of generating facilities must run to their full advantage during this period of potential energy shortfalls. To optimize their capabilities, these plants must be maintained and in many cases, upgraded to become more efficient and cleaner. For example, an existing facility may be retrofitted with new turbine blades to increase conversion efficiencies and production output. And some facilities must be upgraded to comply with new environmental requirements. Revisions in the tax law will accelerate the necessary maintenance and enhancement of critical facilities.

*Deregulation Is Fostering Innovation and Efficiency.*

Deregulation of electric generation is already fostering innovation. The preponderance of new generation facilities constructed a generation ago were nuclear or coal-fired facilities. Today, most new power plants are gas turbine facilities, often operated in combined-cycle or as co-generation facilities that produce steam for sale as well as electricity. These new state-of-the-art combined cycle generators operate at energy conversion efficiency levels of 70% compared to 40%-50% a decade ago. However, tax laws discourage the construction of these more efficient units—while regular gas turbine facilities are depreciable over 15 years, combined cycle units are depreciable over 20 years.

In addition, new developments, such as distributed generation, could render longer-lived generation assets functionally obsolete. Distributed generation is electricity produced on a customer's site using fuel cells, micro turbines, or other small scale generating equipment that can displace power generated by a central station generating unit. With these types of rapid changes in the electric industry, it is unlikely that electric generation facilities will have the same useful lives as they have had in the past.

*Cost Recovery of Existing Plants Is Uncertain.*

Congress suggested in the legislative history to the Tax Reform Act of 1986 that one reason why electric assets are depreciated over longer periods is because of the certainty of cost recovery through rates. As the market for electric energy becomes competitive, this rationale becomes obsolete—there will be no more such certainty. Investors will demand a competitive return on their investments over much shorter periods of time. This new reality is inconsistent with the current tax rules that allow cost recovery only over 15-20 years.

Just as the electric industry is rapidly changing, there is a need for a legislative solution to cost recovery for electric generation assets. A robust electric power industry must have the same ability as other competitive, market-based industries to rap-

idly depreciate assets for Federal income tax purposes. The Federal tax laws should be changed to allow electric generation facilities to be depreciated over 7 years.

\* \* \*

Mr. Chairman and Members of the Subcommittee:

As a representative of a state which has a good deal at stake in the ongoing energy debate, I am pleased to have the opportunity to discuss aspects of the tax code that hinder or help the production and distribution of energy resources. The provision that I am going to focus on in this testimony is one that many have overlooked with regard to its potential effect on our energy needs. In my opinion, however, this is an area where a small change in the tax law could reap substantial benefits by providing capital for the energy infrastructure necessary to gather, process, and store energy products such as crude oil, natural gas, natural gas liquids, refined petroleum products and propane, and to transport them from the areas where they are produced to the areas throughout the country where they are needed.

Many of those in the energy business have long raised capital through partnerships, which allowed investors to have a direct stake in both the risks and the rewards of the business, including the tax benefits that have been placed in the Code to encourage energy production. Back in the early 1980s, searching for a way to reach a broader class of investors and make the partnership a more efficient form of raising capital, the Apache Oil Company created the first publicly traded partnership (PTP). Others soon followed suit, not only in the energy industry, but in real estate and other industries that used partnerships as well. PTPs, also referred to as master limited partnerships or MLPs, were a way not only to reach new investors but to finance business expansion without resorting to debt and to spin off undervalued assets and let them reach their full market value.

PTPs, as their name suggests, are simply partnerships the interests in which, known as "units," are traded on public stock exchanges. Traditional, nontraded partnerships required limited partners to invest a substantial amount of money, and it was very hard to dispose of a partnership interest. This meant that partnership investment was limited to affluent individuals who could afford to tie up a large amount of money for several years. The development of PTPs, with interests divided into liquid, affordable units, has opened partnership investment to the average, middle-class investor, thus broadening the base of individuals from whom partnerships could raise capital. For the individual investor, PTP units provide a steady stream of income through quarterly, tax deferred distributions, and, particularly in the energy partnerships, the potential for growth both in income and in value.

There are currently about 50 PTPs on the market, operating primarily in natural resource and real estate related industries as well as a smattering of others. The most exciting story is to be found in the energy sector: although those PTPs are only about half the total number, they represent, according to their 10-Ks for 2000, close to two-thirds of PTP market capital, 71% of total assets owned by PTPs, and 90% of total revenue earned by PTPs. Several PTP equity offerings early in 2001 have probably raised these figures. Every new PTP to enter the market in the past few years has been in the energy business.

These PTPs are helping to address the current energy situation. They are exploring and developing offshore oil and gas supplies. They are gathering, storing, transporting, and marketing crude oil, refined petroleum products, natural gas, and natural gas liquids. They are operating refineries, fractionation plants, and natural gas processing plants. They are building pipelines and transporting a range of petroleum products through them from energy-producing areas to virtually every state in the union. They are marketing, distributing, and selling propane and propane-related products and services at both the wholesale and the resale level.

So what's the problem? It is this: PTPs could be doing far more of all these activities, developing more energy infrastructure and sending far more products through the system, but are prevented from doing so by a small provision of the tax code. In order to engage in all these activities to their maximum potential, PTPs need to raise equity capital, and under current tax law they are limited to raising it from the individual, or "retail" investors. While access to these investors has been part of the engine that drives PTPs, the individual segment of the market is not, in itself, large enough to provide the capital that these energy companies need.

One of the sources that PTPs would like to tap is mutual funds, which are becoming an ever more important part of the capital markets. 15 years ago, only about 6% of equity securities were held by mutual funds; now the figure is 20%. According to the Investment Company Institute, almost \$7 trillion in capital is currently invested through mutual funds.

Mutual funds, however, are very reluctant to invest in PTPs—not because they are not a good investment, but because of the tax code. In order to maintain its tax status under the Regulated Investment Company (RIC) rules, a mutual fund must receive 90% of its gross income from specific sources. Income from a partnership (whether it be the share of partnership income allocated for tax purposes or the cash distributions) is not on the qualifying list. This means that if a mutual fund receives more than 10% of its income from PTPs (along with other “nonqualifying” income), it will lose its RIC status. Faced with this possibility, as well as the burden entailed in keeping track of income percentages, most mutual funds turn away from PTPs.

This, combined with the lack of institutional investment caused by the UBIT rules, forces PTPs to raise capital almost exclusively from individual investors. And while these investors are certainly a sizeable share of the market, they do not make the large share purchases that mutual funds and institutions do. Moreover, individual investors are increasingly making their investments through mutual funds. The result is that PTPs, compared other equity issuers, are extremely limited in the amount they can raise in any one offering and in the frequency with which they can go to the market.

Recently I had the opportunity to speak with several executives of these partnerships. They talked about the frustration they feel in trying to raise the large amounts of capital needed to expand and build new energy infrastructure when they can raise only limited amounts of equity capital in any one offering and don't want to increase their debt burden. These companies have done a lot with the capital they have raised, but they all feel they could do much more if they were freed from this constraint.

There is no policy reason for PTPs to be treated any differently than any publicly traded security when it comes to mutual fund eligibility. The reason that partnerships were left off the qualifying income list was that before PTPs emerged, partnerships were highly illiquid, often risky investments, not the sort that was appropriate for a mutual fund. It was also felt that a mutual fund might be too closely involved with a nontraded partnership's business. None of these concerns applies to PTPs—they are liquid, they are safe—fully regulated by the SEC, filing the same reports as corporations—and the mutual fund, as a PTP investor, would be one of tens of thousands of unitholders, not a manager of the business.

For all these reasons, I am pleased to be the sponsor this year of legislation that was introduced by Chairman Thomas in the 105th and 106th Congresses. The Publicly Traded Partnership Equity Act (H.R. 1463) simply adds income derived from a PTP to the list of qualifying income sources under the RIC rules. This bill has cosponsors from both parties, including some members of this Subcommittee. During the 106th Congress it was approved by both the House and the Senate as part of the Taxpayer Refund and Relief Act of 1999, which was subsequently vetoed by the President.

It is time that we freed these energy companies to do what they do best—build and operate the infrastructure that will deliver needed energy supplies to communities across the country. This is a simple, low-cost, and effective way to increase the capital flowing into the energy industry. It is an appropriate part of any energy bill that may come out of this Subcommittee and the Committee as a whole, and I urge that it be included.

ITRON INC.  
Spokane, Washington 99216  
*June 18, 2001*

To: The Honorable Jim McCrery  
Members of the Subcommittee on Select Revenue Measures of the Committee on Ways and Means

From: LeRoy Nosbaum, President and CEO, Itron Inc.

Subject: Testimony supporting advanced metering technology

Thank you for the opportunity to submit this testimony to your committee. My company, Itron Inc., based in Spokane, Washington, is a technology provider and source of knowledge to the energy and water industry. We enable utilities to collect, analyze and apply critical data about the usage of electricity, gas and water through the use of radio and telephone based technology that automatically collects information from meters. Currently, over 18 million “smart meters” have been automated with Itron technology in the U.S. and Canada.

The current energy situation and skyrocketing prices have brought energy policy to the forefront of our country's political agenda, and along with it, many innovative

ideas to help deal with the problem have been put forward. The long-term solution, balancing supply with overall demand, is easier said than done. Despite efforts to increase supply through generation capacity, solutions are years out and are going to be expensive.

This leads us to the demand side of the energy equation, where there are dramatic opportunities to impact the problem in the near term. Others will undoubtedly speak to you about the need to improve our traditional conservation efforts, and those actions are important. There is also a need to manage demand in a more efficient manner. While there have been incremental advances in technologies to improve generation, transmission and distribution of energy over the years, our current energy delivery system and information structure does not operate much differently than it did when it was first established in 1935.

To manage demand more effectively and empower conservation efforts that will have a significant impact on the overall demand for electricity, utility distribution companies, energy providers and their customers need much more timely access to detailed energy usage data that empowers them to take charge of energy distribution and consumption.

This is where advanced metering technology can be used. “Smart meters” are able to collect reliable, timely and detailed knowledge about how much energy people and businesses need, how much they use, when they use it, and most importantly, how much can be saved if given the incentives to do so. This works because it successfully exposes customers to the cost savings and efficiency benefits of reducing consumption or shifting electricity demand to off-peak hours. The economic upside to renewing our energy information infrastructure by putting the power of technology to work through advanced metering systems is tremendous.

This technology is not new, nor is Itron Inc. the only provider of such technology. Puget Sound Energy, another Washington State-based corporation, recently earned The Edison Award, the electric industry’s highest honor, for pioneering the use of real-time electricity pricing and metering. We congratulate our fellow Washingtonians on earning this prestigious award and appreciate that the industry recognized their innovation.

This technology is proven, affordable and available on the market. But adoption of this technology by utilities and energy providers has been limited, due mainly to regulatory uncertainty and fear of stranded costs.

Congresswoman Jennifer Dunn’s HR 1797 attempts to address these fears with incentives, including the provision of tax credits for investments in “smart meter” technology. We encourage you to consider this bill as you help shape our country’s energy policies.

We believe the use of advanced metering technology will provide an immediate positive impact on the current energy situation. Thus, it’s important that not only are smart meters in place, but that utilities, energy providers and customers have the ability in real time to use the information they are getting back from the meter.

I’ve included a copy of our report, which was submitted to the U.S. Department of Energy, which fully describes advanced metering or “smart meter” technology and its role in optimizing energy delivery and efficiency. Among the most important aspects this technology allows are the following:

- Real-time data to balance supply and demand
- Enhanced load management and control capacity
- Accurate demand forecasts for long-term power purchases
- Proactive demand reduction to avoid rolling blackouts
- Data for businesses and consumers to manage energy use
- Empowerment of conservation measures

Thank you again for allowing me to comment today. Itron Inc. is appreciative this committee is looking at new technologies to help deal with our current energy situation, and we look forward to working with others to be part of the solution. If you have any questions or require additional information, please contact me at 509-924-9900. You may also learn more by viewing our company website at [www.itron.com](http://www.itron.com).

### **The Critical Role of Advanced Metering Technology in Optimizing Energy Delivery and Efficiency**

A Report to the U.S. Department of Energy

#### *Today’s Real-Time Business Cycle*

Imagine the futility of trying to grow an investment portfolio using nothing more than month-old reports of the Dow Jones 30 Industrials Average. Or think of what a recipe for disaster it would be for a manufacturing company to maintain only intermittent monthly contact with its supply chain and distribution network. What

a step backward it would be if consumers had to manage their bank accounts today without the aid of automatic teller machines, the Internet or automated telephone banking services? Instead they must rely only on monthly bank statements that arrive in the mail and in-person visits to the branch office between 9 a.m. and 3 p.m. to balance their checkbooks or move money from one account to another.

In this age of e-commerce, automated transactions and real-time information exchange, scenarios such as those listed above would represent the height of inefficiency and inconvenience, not to mention a clear impediment to economic growth. Yet as absurd as these examples might sound, they represent, by and large, exactly how our country's energy marketplace and infrastructure continue to operate at the beginning of the 21st century.

In fact, though there have been incremental advances in the technologies to improve generation, transmission and distribution of energy over the years, our energy delivery system and information structure doesn't really operate much differently from the time the Public Utility Holding Company Act was passed in 1935, establishing the basic parameters of the vertically integrated, highly regulated utility industry that has defined energy delivery in the U.S. to this day. Specifically, the nation's current metering system—the cash register, data source and link to the customer—is unsuited to meet the dynamic needs of energy providers and energy consumers in the years to come.

While proven and affordable advanced metering and automation technologies have been available on the market for nearly a decade, adoption of the technology by utilities and energy providers has been limited thus far. One of the primary reasons for this slow adoption is that many utilities have been hobbled by regulatory uncertainty and fear of stranded costs.

#### *New Requirements*

The times, requirements and stakes are changing. Plans to deregulate and restructure the electricity market are approved or underway in some 34 states. Deregulation of the natural gas market, particularly at the wholesale level, and more recently at the retail level, is well underway and gaining momentum. Energy prices continue to spiral upward—hitting consumers and businesses hard in the pocketbook and undermining economic growth. And the continuing energy crisis in California provides a sobering harbinger of things to come if steps are not taken to realign—much more precisely—energy supply with demand, and enable market forces to exert their proper influence in stabilizing energy prices.

Despite these clear challenges and recent wake-up calls, neither California nor other areas of the country are well positioned to unleash the true benefits of competition in the energy marketplace. This is because, until now, utilities and energy providers have not had sufficient incentive or need to deploy the necessary data collection and management systems that will be required to ensure that the new energy marketplace functions in an efficient, reliable, safe and less volatile manner. Advanced metering systems and technology will provide the foundation for businesses and consumers to make choices about their energy supplier and about their energy use on the basis of cost and pricing signals from the marketplace.

Relative to other vital infrastructure systems that have evolved to meet new challenges and requirements in recent years—transportation, banking and finance, telecommunications, law enforcement and emergency services, even national defense—the nation's energy delivery system has not adopted and made use of advanced data collection, data management and communication technologies that will be required to meet the needs of the dynamic energy marketplace. And while no single analogy can adequately capture all the nuance and interdependencies of the nation's energy delivery system, we're driving in the dark with the lights off when it comes to collecting and capturing the full value of timely, accurate and detailed energy usage data. As the crisis in California is showing us, we do so at the imperilment of our economic well-being and consumer needs for safe, reliable and competitively priced energy.

#### *The Metering Status Quo*

The vast majority of utility customers throughout the United States still receive a monthly visit from their utility's meter reader. This meter reader visually reads the electric and/or gas meter, records the amount of energy used for the past month, and forwards that information to the utility's billing office to generate a monthly consumption bill. If the meter reader is unable to access the meter because it's located in the basement and the consumer is not home, or because the backyard gate is locked and a dog is standing post right behind it, most utilities will proceed to estimate the gas or electricity consumption based on previous usage, recent weather patterns, and then use that estimate as the basis for the next bill.

In fact, in an age of rapidly increasing energy prices, it's not at all uncommon for utilities—particularly those in higher-density urban areas—to estimate 10 percent, 20 percent, even 30 percent or more of the meter reads each month for billing purposes. This practice leads to inaccurate billing, increased customer complaints, and higher costs for utilities to investigate and resolve those complaints. How would consumers feel if their local gas station estimated how much gas they put in their tank when filling up, or if long distance carriers and credit card companies began estimating their customers' usage and bills?

#### *Meter Tampering and Energy Theft*

Another area of growing concern for utilities, regulators and consumers (who end up footing the bill) related to metering and meter reading is energy theft. Nationwide, theft of energy services costs utilities, their shareholders and consumers billions of dollars each year. The consensus estimate among most industry groups and analysts is that energy theft in the U.S. stands between .5 percent and 3.5 percent of annual gross revenues. With U.S. electricity revenues at \$280 billion in the late 1990s, theft of electricity alone would equate to between \$1 billion and \$10 billion annually. A recent article in the Wall Street Journal estimated the nationwide electricity theft figure at \$4 billion per year. That doesn't include natural gas. And with energy prices increasing sharply nationwide, theft of energy services is only likely to increase as consumers struggle to pay energy bills that have doubled or tripled over the past year.

In addition to costing consumers, meter tampering and theft of electricity and natural gas service create significant public safety issues. A consumer tampering with a gas meter may cause that meter to leak, creating a risk of explosion or fire. An electric meter that is tampered with poses the risk of electrocution or other serious injury. Technology is currently available and in use that is capable of automatically detecting tampering with the meter, which would provide a crucial asset in efforts to improve public safety and deter energy theft.

If the current crisis in California is any indication, the billing, customer service and theft problems perpetuated by traditional manual meter reading operations today will pale in comparison to the problems caused by a complete dearth of accurate, timely and reliable information about energy use and demand in the highly dynamic and interdependent energy markets of the 21st century. Without this automated metering technology, energy providers and consumers have no access to detailed and timely energy use data that would allow them to reduce energy consumption and reduce load when available power is in short supply, prices are high or distribution system conditions make it necessary to reduce load.

#### *What is Advanced Metering Technology?*

While systems differ from vendor to vendor, most advanced metering solutions involve retrofitting an existing electric, gas or water meter with a data recording and communications device, called a meter module. The meter module is attached to the existing meter or is installed on a new meter. The meter module device automatically monitors and then transmits energy use data to nearby collection devices or communications networks, which in turn forward the information to a database at the utility or energy service provider. The average cost of a meter module, that is attached to an existing meter, is approximately \$50 for a meter on a residential home and \$500 for commercial or industrial facilities. More than 85% of meters in the U.S. can be retrofitted with these meter modules and not require the purchase and installation of a new meter.

In addition to more frequent and accurate consumption information, many of these automated advanced metering systems are capable of collecting a variety of other data, such as power outage and restoration alerts, and meter tampering data to detect theft of services. These advanced metering systems also serve as the foundation to enable an array of new content value management applications that will support greater consumer choice and control capabilities with regard to their energy use both now and in the years to come.

Many companies have developed different approaches for their advanced metering technology solutions. Despite the diversity of approaches, the vast majority of systems deployed thus far make use of either public and private wireless communications networks or some combination of the two. These data collection systems, which integrate hardware, software and communications systems, provide a wide range of functionality and sophistication.

The array of systems comprise radio-equipped handheld computers, vehicle-based mobile collection systems and advanced "fixed network" systems that deliver real-time data and are deployed over geographic areas that can range in size from a small neighborhood or apartment complex to a large metropolitan area. Other ad-

vanced metering technologies make efficient use of existing telephone and cellular communication networks to communicate with the meter and send the data to the utility. Some systems are better suited for residential metering, while others feature more advanced functionality ideally suited to meeting the more complex needs of larger commercial and industrial energy customers.

Depending on the type of solution deployed, advanced metering technology efficiently and cost-effectively delivers a wealth of critical data to the utility, its energy customers and other players in the deregulated energy market. In addition to automatically delivering basic energy usage data for customer billing, advanced metering systems are capable of gathering and delivering real-time and near real-time energy use data from all types of energy customers in all types of service environments.

#### *The Value of Advanced Metering Data*

The automated collection of advanced or "interval" energy use data is necessary to enable energy market participants to more closely match energy supply with demand. Balancing energy supply and demand will become increasingly important to making the new competitive energy marketplace work in a cost effective and reliable manner.

To manage the demand-side of the equation, advanced metering and energy data allows energy market participants to more accurately forecast the required energy load, negotiate long-term power purchase contracts, perform proactive energy load management and control, establish demand-side management programs and incentives to reduce energy use, develop more dynamic rate structures to shave peak loads, and put into place knowledge-driven conservation programs and content value management innovations that empower consumers to take charge of and reduce their energy use. By collecting more advanced metering data, a utility can build a body of knowledge to develop an entirely new portfolio of dynamic rate structures and incentive programs, real-time pricing packages and interruptible rates that can be targeted to specific customers to significantly improve load management capabilities and reduce peak demand when distribution system conditions become critical.

These energy management and load control capabilities would help prevent extreme crisis management measures such as the costly rolling blackouts initiated by the California Independent System Operator (ISO) earlier this year. These blackouts are hugely disruptive and costly to consumers and businesses; they also pose a serious threat to public safety. These data-driven capabilities can also insulate utilities and their customers from the volatile whims of today's wholesale energy market by providing the means to forecast future demand more precisely. The utility or energy service provider can then use this knowledge to negotiate longer-term power purchasing contracts at much more competitive prices. Without detailed, real-time energy usage delivered by advanced metering systems, this type of precise planning, management and control is unachievable.

By combining advanced metering technology with the Internet and new load management and demand side management technologies, businesses and consumers can take charge of their energy consumption to reduce their costs. Businesses can monitor their energy consumption much more closely, and alter production schedules or equipment start-up sequences to take advantage of off-peak hours. Consumers can adjust their thermostats while they're away from home, or use the data in concert with new technologies from the home automation and control sector to monitor energy consumption by appliance to create a new model for home energy efficiency in the 21st century. For small businesses owners, large increases in energy costs can put their business in jeopardy, while the ability of American companies to compete in the global economy is undermined. Ultimately, increased energy costs are passed on to consumers and with the current metering infrastructure, they have little or no means and little or no knowledge to do anything about it.

Furthermore, by using automated metering systems to collect advanced energy usage data from strategic numbers and segments of energy customers on a daily, hourly or 15-minute interval basis, utilities and energy service providers gain knowledge necessary to optimize their own load forecasting accuracy, which reduces the risk of hugely expensive spot-market energy purchases that have led at least two large California utilities to the brink of bankruptcy.

On the supply-side of the equation, accurate energy use forecasting supports the precise planning of supply or generation requirements, which reduces frantic and costly searches for available power supply when energy reserves are near emergency levels.

*Safety and Reliability*

In addition to delivering real-time consumption data, many advanced metering systems provide other types of information that improve energy delivery while also improving consumer safety and distribution system reliability. Even today, customer phone calls continue to be the utility's primary source of information about power outages. Many advanced metering systems provide immediate outage detection and restoration notification capability to remove the guesswork and inference from the outage management equation. The systems provide precise, immediate and reliable data—all the way down to individual customers' homes and businesses—that enable utilities to reduce the duration of power outages and improve the reliability of their distribution system. Furthermore, automatic outage detection, improved outage response and restoration times, and improved system reliability have significant economic ramifications. As we saw during the recent rolling blackouts in California, outages cost businesses large amounts of money in ruined product and lost productivity. According to the Department of Energy's own figures, power outages and fluctuations cost U.S. businesses and consumers \$30 billion each year. Yet that estimate may be very conservative in today's information—and technology-driven economy. As this year's energy crisis in California revealed, power outages at large, high-tech manufacturing companies with energy-sensitive production methods can cost just a single company millions of dollars per hour.

When outages and system reliability issues do arise, advanced metering systems enable a utility to quickly identify and isolate the problem, efficiently dispatch maintenance resources with pinpoint precision, and they can provide customers with much more reliable and timely information concerning restoration of service. More frequent data collection of advanced metering combined with outage information also enables utilities to identify trouble spots in their distribution system, replace or resize equipment, improve outage response and restoration times and overall distribution system reliability and safety. These safety benefits are not limited to electricity delivery. By recording and reporting abnormal gas consumption patterns, the technology also helps to identify potential gas leaks before they turn into safety hazards that threaten property and consumer safety.

*Adoption of Technology Has Been Slow*

While proven and affordable advanced metering and automation technologies have been available on the market for nearly a decade, adoption of the technology by energy providers has been limited thus far. According to recent statistics compiled by Chartwell, a leading energy industry research group and publisher, more than half of utilities nationwide are installing or piloting advanced metering technology. However, the majority of those are doing so only on a limited basis to this point. Overall penetration of advanced metering and automation technology currently stands at about 8 percent of electric, gas and water meters in the U.S., according to the most recent industry statistics available. More than nine out of every 10 electric, gas and water meters nationwide are still read manually once each month by a meter reader who must physically access the customer's house and property.

One of the primary reasons for the slow adoption of advanced metering technology is that many utilities have been hobbled by regulatory uncertainty and fear of stranded costs. Stranded costs and investments refer to assets that were purchased to serve customers under the traditional regulated model and their costs were recovered in the utility's ratebase. Those assets may become "stranded" if regulatory decisions "unbundle" those assets from utility ownership before their cost is recovered, or if asset cost exceeds its market-driven value in a deregulated market. With one foot forward in a new business model of a competitive marketplace, and one foot stuck fulfilling the obligations of the traditional business model, investments in advanced metering and automation technology and other infrastructure improvements still seem risky to many utilities. As a result, some utilities have postponed, delayed, downsized or altogether shelved their plans for investment in advanced metering technologies until this cloud of uncertainty clears.

In the end, those delays cost everyone: utilities, their shareholders, businesses, consumers, and they delay further our nation's ability to move toward an efficient energy delivery model that is characterized by consumer choice among energy providers, competitively priced energy and energy services, and a highly efficient and reliable energy delivery system that enhances consumer safety and provides a strong foundation economic growth.

*Lack of Enterprise-Wide Perspective*

To this point, virtually all utilities have appraised advanced meter reading technology in relative isolation. In the view of most utilities thus far, the technology delivers value merely by automating meter reading and reducing or eliminating many

of the operations costs associated with a manual meter reading operation. Advanced metering technology delivers some further value to utilities by eliminating meter access problems, estimated reads and improving meter reading accuracy, which results in improved billing accuracy, fewer customer complaints, reduced call center traffic and improved customer service. Because they eliminate the need for large utility vehicle fleets associated with traditional meter reading operations, automated metering systems also reduce gas consumption, and vehicle emissions.

As mentioned earlier, many systems on the market today also feature automatic meter tampering detection to detect and deter theft of services and improve revenue assurance. That's about as far as many utility project teams will take their business case. And this limited view has made it very challenging, many industry experts say, to develop a compelling business case to justify the technology's widespread deployment.

However, when comparing the operational costs associated with meter reading and revenue cycle services to the overall cost of delivering energy, there's a persuasive case to be made that meter data collection technology, by virtue of the information it delivers, provides an even stronger return on investment to the utility's distribution system operations and business development initiatives. Yet many utilities, for many different reasons, have difficulty seeing the value of advanced metering technology beyond automation of the meter reading function.

#### *Performance-based Drivers*

Some electric and natural gas utilities are working with regulators to implement an innovative new regime of Performance-Based Regulation (PBR) aimed at providing utilities with strong financial incentives to ensure that consumer needs for reliable and competitively priced energy services are maintained.

As energy markets "regionalize" and become increasingly interdependent, the efficacy of a federal mechanism establishing basic performance-based regulation increases significantly. This innovative and proven regulatory approach would provide utilities and energy service providers with clear financial incentives to ensure that consumer needs for safe, reliable and competitively priced energy services are maintained.

This approach strikes a desirable balance between the benefits of competition and the vital interests of consumers, and is gaining significant momentum in the energy industry as it transitions from a highly regulated, monopolized model to a competitive one. With these incentives in place, energy providers would have a strong opportunity to mitigate risk and achieve a higher return on investment in advanced metering technology while meeting the vital needs of businesses and consumers.

These important objectives can be achieved with minimal government intrusion and regulation by instituting a new regime of performance-based incentive programs at the federal level that will provide utilities nationwide with the impetus to invest in new technology to optimize energy delivery. These performance-based incentives should focus on critical distribution and customer service functions such as system reliability; outage response and restoration times; meter reading, estimated reads and billing accuracy; as well as call center operations and customer complaint resolution. These incentives could also focus on conservation and demand-side management programs to trim overall demand for energy. With reliability, energy costs and customer service high on the minds of regulators nationwide, uniform performance-based regulation has opened a window of opportunity to address critical energy distribution issues and consumer needs through automation technology in a manner that minimizes costs and strengthens shareholder value.

#### *The California Crisis*

When it comes to issues facing the energy and utility industry, the California energy crisis rightly deserves top-of-mind billing for both state and federal policymakers. The California energy crisis is a multidimensional problem that doesn't lend itself to easy answers. Blaming "deregulation" is overly simplistic. While there are important lessons to be learned from California's early deregulation initiative, the fundamental premise that competition in the energy industry will ultimately benefit consumers is hardly disproved. Deregulation of electricity markets in other states is proceeding without the price volatility and supply problems seen in California. Instead, it is a mosaic of circumstances that have put the power supply in California so wildly out of step with rapidly increasing demand. Many in the industry have dubbed California's energy crisis "the perfect storm," and they're right.

Most industry experts predict that the state will be unable to muster the necessary mega wattage to make it through the summer without persistent service interruptions and widespread rolling blackouts. Some predict a deficit of 4,000 to 8,000 megawatts during peak summer load, or enough energy to power approxi-

mately 800,000 homes. The stakes are huge. California represents the sixth largest economy in the world and is home to many of the high-tech companies that are driving the new economy. When the power goes out, it can cost large companies with energy-sensitive operations and production methods millions of dollars an hour in lost productivity, not to mention the impact rising energy prices have on the overall cost of doing business. Many of these companies have already made it clear to the state's politicians that they have no intention of expanding their presence in the state without being assured of a reliable supply of competitively priced power. Add in the costs, difficulties and uncertainties for the state's agriculture, manufacturing and tourism sectors, and the adverse economic effects of a protracted power crisis will likely ripple far beyond the California border.

Yet this seemingly dark period in the evolution of the competitive energy marketplace will likely be looked back upon as a trial-and-error period, a time in which utilities, regulators, politicians and other market participants corrected the course and trimmed the sails. At the same time consumers, despite current regulatory rate caps that insulate them from the law of supply and demand in California, are slowly coming to grips with the fact that electricity is not an inexhaustible resource.

The ultimate solution to the problems plaguing California is to balance—much more precisely—the supply of electricity with overall demand. This, of course, can be achieved in two ways: increase supply or decrease demand. Ultimately, as new power plants are constructed, more portable or “distributed generation” technology proliferates (such as back-up generators and fuel cells), and existing power plants that are currently idle return to service, supply shortages will ease. Despite expedited efforts to speed up power plant siting, approval and start-up, it will take three to five years before appreciable generation assets to serve the California market will go on line, and it could be nearly a decade before generation capacity catches up with California's again-booming economy, which has brought with it a 25 percent increase in energy demand over the past five years that no one seemed to anticipate. Clearly, addressing this problem on the supply side of this unbalanced equation represents a longer-term and very expensive strategy.

#### *An Opportunity in Disguise*

That leads us to the demand side of the equation, where, through the application of advanced metering systems and technology, we find dramatic opportunities to put a big dent in this problem in the near term. To manage demand more effectively and empower a new regime of conservation and demand management efforts, utility distribution companies and their customers need access to much more timely and detailed energy usage data that empowers them to manage energy distribution and consumption much more effectively. What's required to solve today's energy problems in California and meet tomorrow's requirements is an infrastructure that empowers businesses and people to take control of their energy use and costs. What a golden opportunity California has to establish a new model of effective load management, energy efficiency and conservation for the 21st century.

But to meet this challenge, energy providers require better data, which they can turn into valuable knowledge for themselves and their customers. As previously discussed, the automated collection of advanced metering data would enable utilities and energy service providers in California to more closely match energy supply with demand through precision load forecasting, effective load management and control, demand-side management programs and incentives, development of more dynamic rate structures, and knowledge-driven conservation programs. For example, if the large utilities in California were to move aggressively to deploy advanced meter data collection capability for their commercial and industrial customers, they could conceivably have the data collection and management infrastructure in place to proactively manage as much as 60 percent of their load in relatively short order. Whether it could happen in time to provide some relief from the looming summer crisis would depend on a number of variables. But the technology is there and ready to go.

#### *Policy Solutions*

One of the most cost-effective, potent and yet measured public policy solutions to these problems in the near term would be for regulators and legislators, at both the state and federal levels, to enact tax incentives and/or asset recovery mechanisms to encourage all forms of investment in this country's energy infrastructure as part of a comprehensive national energy policy.

This public policy effort should not only include new generation facilities and energy exploration to increase energy supply and reduce our dependence on foreign energy sources, but should also include advanced metering systems and data management technology to increase distribution system efficiency and reliability while em-

powering businesses and consumers to take control of their energy consumption in response to market forces and price signals. It's time to remove uncertainty. Remove obstacles. Remove risk. But this calls for nothing less than a revolutionary retooling of the energy infrastructure at a level and sense of purpose comparable to what the Interstate Highway System did for transportation and commerce in the 1950s and the 1960s.

*Conclusion*

In the long-term, the solution to the problem posed by volatile energy markets requires a carefully balanced prescription of increased energy supply and reduced demand. If we focus only on increasing supply through expanded generation capacity, the solution to our problems will be much more expensive than it needs to be. We will achieve our energy management objectives most cost-effectively if we also deploy the technology to collect reliable, timely and detailed knowledge about how much energy people need, how much they use, when they use it, and most importantly, how much can be saved if people are given incentives and the means to do so. The economic upside to renewing our energy information infrastructure by putting the power of technology to work through advanced metering systems is tremendous; the downside is very steep.

In that light, the crisis before us in California is really an opportunity. It is an opportunity to invest in new technology that will enable us to put the power of information to work in our energy delivery infrastructure. The result will be improved public safety, improved reliability and greater price stability. An affordable, reliable energy supply is critical to economic growth in our knowledge-driven economy of the 21st century. Increasing energy supply is part of the answer to the nation's energy needs. Stimulating investment in technology and information that empower utilities, businesses and consumers to more effectively manage the demand side of the equation is an equally important component to any long-term energy policy. In the end, advanced metering technology is vital to keeping the lights on and keeping energy prices affordable. Incentives to implement this technology and make full use of the data it delivers offer the fastest, most cost-effective way to restore balance between energy supply and demand. Ultimately that capability will enable the nation's energy providers to deliver safer, more reliable and competitively priced supply of energy to businesses and consumers today, and well into the future.

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**Statement of the Hon. James R. Langevin, a Representative in Congress  
from the State of Rhode Island**

Chairman McCrery, Ranking Member McNulty, and esteemed members of the Committee, I appreciate the opportunity to join you today in addressing the need for a national energy strategy, and I thank you for convening this hearing.

The rolling blackouts in California and the high price of gasoline have focused national attention on the need for a comprehensive energy policy for the United States. We must ensure that a national strategy addresses short-term energy problems such as rising costs, while encouraging the development of clean and diverse energy supplies to meet our growing need for power. Through a variety of tax incentives, we can foster conservation efforts and encourage the production of clean, renewable energy.

Most importantly, we must dispel the myth that the energy situation in the Western United States is not a national problem. I am concerned by repeated statements from the Administration that energy shortfalls are attributable to faulty state laws and should therefore be left to the California legislature for resolution. As the fifth largest economy in the world, California is inextricably tied to the rest of the nation, and any state economic downturn will certainly spill beyond her borders and have disastrous effects across our nation and among our neighbors. Even Rhode Island residents are keeping a watchful eye on other energy markets. While New England is expected to have a sufficient supply of electricity from diverse sources this summer, any shortfalls in New York may have adverse effects on our residents through increased prices. Congress has a unique opportunity to address our existing energy concerns while laying the groundwork for a national strategy that meets our future needs.

One of the simplest methods to prevent skyrocketing energy consumption in the United States is to promote conservation efforts among residential and business customers. Congress should pursue tax credits to encourage both the construction of new energy-efficient homes and buildings as well as the purchase of efficient appliances, heating and cooling equipment, lighting, windows and doors, and other de-

vices. Additionally, Congress should support conservation efforts by providing tax credits for the purchase of fuel-efficient vehicles. The automobile industry has the technology to bring high-efficiency and alternative fuel vehicles to market, and we should provide incentives to increase the use of such vehicles in the U.S. Ideally, vehicle tax credits should be coupled with an increase in corporate average fuel efficiency (CAFE) standards, so that our nation's vehicle fleet will help reduce, not exacerbate, our consumption of fossil fuels.

However, I recognize that conservation will not meet all of our nation's energy needs, and I support tax credits to encourage the production of clean and renewable energy sources. Most importantly, we must extend the existing investment credit for wind and biomass energy, and expand the credit for solar and geothermal energy. By encouraging further development and production of these sources, we can make them competitive with fossil fuels, and will ultimately diversify our nation's energy supply. Additionally, Congress must promote responsible fossil fuel production, and develop existing oil and gas fields before even considering exploration in new areas.

When major nationwide concerns about energy first arose, I saw that the situation in California presented an opportunity for Congress and the Administration to develop a forward-looking, comprehensive energy policy for the United States. Now, however, I question the future of these efforts in light of the \$1.35 trillion tax cut that was recently signed into law. Whereas three months ago, Congress had the resources to initiate fundamental changes to our energy policy through tax incentives, the meager sums remaining in our coffers make any new energy investments more daunting. I sincerely hope that those benefiting most from the tax cut recognize the importance of conservation, renewable and alternative fuels, and energy infrastructure and invest their rewards accordingly.

It is incumbent on Congress to work actively on this issue and to find the resources needed to implement a national energy strategy. We should target our immediate efforts to working- and middle-class families to help them address rising energy costs through conservation and efficiency efforts. Programs such as the Low Income Home Energy Assistance Program (LIHEAP) and the Weatherization Assistance Program (WAP) have been effective tools in mitigating the high cost of energy for low-income households and seniors, and Congress must continue its strong commitment to these initiatives.

I know that the people of Rhode Island are looking to the federal government for leadership on this issue, and I am eager to work with you to develop legislation that meets our current and future energy needs in an environmentally and fiscally responsible manner.

Thank you.

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**Statement of the Hon. Scott McInnis, a Representative in Congress from  
the State of Colorado**

I appreciate the opportunity to share my thoughts with the Members of the Subcommittee on Select Revenue Measures on this very important issue, and would like to thank Chairman McCreery for giving Members the opportunity to discuss this issue. Between 1992 and 2000, America's dependence upon foreign oil rose 56%. Each year, billions of tax dollars are spent to maintain an already strained transportation infrastructure. Congestion on the nation's highways is at an all time high and our ever-increasing consumption of energy is taking a toll on the environment. These hearings are not only timely, but they are desperately needed. In addition, Mr. Chairman, I wholeheartedly agree with the statement you made during the first hearing of this Subcommittee that in order to avoid the mistakes of the past, it is important that we examine all angles of America's energy policy.

There is no single solution to our energy challenges. Our national energy policy should address the production, efficient use, as well as the conservation of energy. Today I will focus on the conservation of energy, and I will also propose legislation that will take steps toward not only reducing energy consumption, but that will also improve the environment and address other key policy initiatives.

At the first hearing of this Subcommittee, Mary Hutzler of the U.S. Department of Energy provided some sobering statistics on our nation's projected consumption and supply of energy as well as the impact that that consumption will have on our environment. Per Ms. Hutzler's testimony, even with projected efficiency gains, the consumption of petroleum for transportation uses is expected to far exceed domestic production and supplies by 2020, resulting in net imports of petroleum to increase from 51 percent to 64 percent of domestic petroleum demand. In other words, absent

any unexpected breakthroughs in domestic petroleum production, developments in alternative energy sources, or significant strides in conservation efforts, America's dependence upon foreign oil will continue to grow.

I believe that our federal tax laws should continue to promote domestic exploration and production of oil, gas, and other energy sources. The Department of Treasury provided this Subcommittee with an excellent overview of existing tax incentives and their role in our national energy policy. But I also believe that our tax laws should be more proactive in promoting energy conservation measures. Specifically, I urge this Subcommittee to consider tax incentives to promote widespread participation in teleworking, also referred to as telecommuting. In short, teleworking is an arrangement whereby advanced communications technology is used to replicate or completely eliminate the "traditional" workplace—thereby eliminating the commute to and from that workplace, reducing overall energy consumption, and improving the environment. Consider the following:

- It is estimated that staying at home to work requires 3 times less energy consumption than commuting to work;
- According to a George Mason study, for each 1% of the regional workforce that teleworks, there is a 3% reduction in traffic congestion;
- It was recently reported that if 10 to 20 percent of commuters switched to teleworking:
  - 1,800,000 tons of regulated pollutants would be eliminated,
  - 3,500,000,000 gallons of gas would be saved,
  - 3,100,000,000 hours of personal time would be freed up, and
  - maintenance and infrastructure costs would decrease by \$500,000,000 annually because of reduced congestion and reduced vehicle miles traveled.

Teleworking is also a superior choice as a conservation measure since it does not infringe upon an individual's recreational travel time. Instead, it seeks to eliminate or substantially reduce the daily commute to and from work—a drudgery that all of us would rather avoid.

The benefits of teleworking do not end with energy conservation, reduced congestion and transportation infrastructure costs, and a cleaner environment. Studies have shown that teleworking can provide significant benefits to both employers and employees. For employers, teleworking results in a more satisfied and efficient workforce resulting in greater productivity, reductions in real estate costs and employee turnover and related costs, and serves as an important tool to attract and retain employees. For employees, teleworking results in better work and family balance, greater productivity, a better attitude toward the employer, greater career satisfaction, and more personal time due to a reduced commute.

Despite all of these positive attributes, broad employer and employee participation in teleworking will not occur unless individuals have remote access to broadband communication technologies. To that end, I suggest that the Subcommittee consider *The Broadband Deployment and Telework Incentive Act of 2001*, a bill that I will be introducing with Congressman John Tanner. This legislation represents a fresh and comprehensive approach to addressing several important policy objectives: conserving energy, improving the environment, and closing the nation's growing digital divide. By offering modest tax incentives to both providers and potential users of broadband services, this bill will stimulate investment in the broadband technologies that will in turn stimulate greater telework participation.

As I mentioned earlier, there is no single solution to our energy challenges. We should always promote exploration of new and alternative energy sources and development of more efficient ways to use energy sources. We should also promote intelligent conservation of those sources. While the positive impacts of alternative sources and efficient uses of energy can take years to become reality, conservation measures—such as teleworking—offer an effective and timely solution to our energy challenges and should be an integral part of our national energy policy. Also, by promoting good conservation habits now, we will maximize the future effectiveness of all other energy policy initiatives.

Thank you once again for this opportunity.

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**Statement of the Hon. Mark Udall, a Representative in Congress from the State of Colorado**

I want to join Rep. Jay Inslee to speak in support of the Clean Energy Incentives Act, a bill he will soon introduce with my support and with the support of a number

of other Members who are interested in seeing a broad range of incentives provided for the development of clean energy technologies.

Increasing the contributions of clean energy technologies to our energy mix requires a combination of policy tools. For best effect, we should implement a number of tools simultaneously. At the most basic level, we should increase funding for the Department of Energy's research and development programs for renewable energy and energy efficiency technologies. To increase the integration of these technologies into the marketplace, we should require that a certain percentage of power generation come from new renewable technologies such as wind, solar thermal, photovoltaic, geothermal, or biomass. To encourage their broad adoption among the public, we should hold up the federal government as a role model and require that it purchase an ever-growing portion of its energy needs from renewables. To ensure the development of these technologies isn't blocked by transmission obstacles, we should push the Federal Energy Regulatory Commission to integrate alternative energy sources into the electric utility grid.

Finally, perhaps the most important policy tool to help accelerate commercialization of clean energy technologies is the tax credit. By creating incentives for the development and purchase of these technologies, we can generate environmental benefits, provide reliable sources of power for business as well as homeowners, reduce our nation's dependence on foreign oil supplies, help commercialize clean technology, enhance U.S. technology leadership, and create economic benefits for the nation.

I joined Rep. Inslee and a number of other Members in working to craft a bipartisan and comprehensive clean energy tax package. We've finally done that in the Clean Energy Incentives Act. The legislation covers all the bases, from renewables to efficiency technologies. The bill would expand the renewable resource tax credit to include more alternative energy sources; encourage the use of alternative fuel vehicles and alternative fuels and related infrastructure; promote energy efficient technologies for certain commercial and industrial property, new and existing homes, and appliances; and encourage the use of demand management technologies and investment in distributed energy generation powered by renewable energy and fuel cells.

In drafting the legislation, we consulted closely with clean energy advocates representing a spectrum of technologies. After months of meetings, we are confident we have compiled a package of incentives that best addresses the needs of the various clean energy sectors and the needs of this country to move toward a new energy future. We feel that our approach is comprehensive and that it should serve as the basis for any energy tax package that this Committee considers.

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**Statement of the Hon. Wes Watkins, a Representative in Congress from the State of Oklahoma**

Mr. Chairman, I thank you for the opportunity to submit testimony today. I also applaud your efforts on holding this series of hearings on the effects of federal tax laws on the production, supply and conservation of energy.

As you know, I have always stressed the need for a national energy policy. The world is operating with a small supply of petroleum and the U.S. is facing tight natural gas supplies. We now depend on foreign nations for nearly 60 percent of the oil we use—and that figure is growing rapidly. From 1986 to 1997 (before the latest price crisis) domestic oil production dropped by 2 million barrels per day—roughly 25 percent of 1986 capacity.

The fact is that the United States is now dependent on foreign countries—some who have unfriendly dictators—for the very life-blood (oil) of our Nation.

Now is the time to clearly address a national energy policy and build a program that is needed to meet future demand. I believe a clear national energy policy will stabilize the roller coaster energy prices and make the U.S. more energy self-sufficient.

It is very important to recognize that the domestic oil and natural gas industry has changed significantly over the last fifteen years. Independent producers of both oil and natural gas have grown in their importance. They account for 85 percent of the wells drilled in the U.S., produce 40 percent of the oil—60 percent in the lower 48 states onshore—and produce 65 percent of the natural gas.

Tax incentives are critical to help the energy economy survive the peaks and valleys of energy prices. Because oil and natural gas exploration and production are capital intensive and high-risk operations that must compete for capital against

more lucrative investment choices, much of its capital comes from cash flow. The federal tax code is a key factor in defining how much capital will be retained.

Therefore, I believe we must enact provisions designed to encourage new production, maintain existing production, and put a safety net under the most vulnerable domestic production—marginal wells.

I have authored and cosponsored legislation in the past that is designed to preserve production of independent oil and gas producers' marginal wells, and to protect this high-risk sector of the economy from volatile world price fluctuations.

Two fundamental tax incentives are the suspension or elimination of the net income limitation on percentage depletion and the marginal well tax credit.

The net income limitation severely restricts the ability of independent producers to use percentage depletion, particularly with respect to marginal wells. Percentage depletion is already subject to many limitations. First, its allowance may only be taken by independent producers and royalty owners and not by integrated oil companies. Second, depletion may only be claimed up to specific daily production levels of 1,000 barrels of oil or 6,000 Mcf of natural gas. Third, depletion is limited to the net income from the property. Fourth, the deduction is limited to 65% of net taxable income. The net income limitation requires percentage depletion to be calculated on a property-by-property basis. It prohibits percentage depletion to the extent it exceeds the net income from a particular property.

This provision is extremely important for marginal oil wells. These wells account for approximately 20 percent of domestic oil production. The U.S. is the only country with significant production from marginal wells. Once wells are plugged, it becomes nearly impossible to reclaim the remaining oil or gas. Eliminating the net income limitation on percentage depletion would encourage producers to keep marginal wells in production and enhance optimum oil and natural gas resource recovery.

As you know, I worked to include a two-year suspension of the net income limitation on percentage depletion in the Taxpayer Relief Act of 1997. The suspension has been extended through 2001. We must act to extend or eliminate the suspension before it expires at the end of this year.

To help preserve our domestic production and energy security, we must create a counter-cyclical marginal well tax credit. Essentially establish a sliding scale tax credit that kicks in for marginal well producers when prices are low, as they were in 1998 and 1999. A marginal well is defined as an oil well producing less than 15 barrels a day or a gas well producing less than 90 cubic feet per day. The tax credit would be phased in and out in equal increments as prices for oil and natural gas fall and rise. The tax credit will protect during down turns and helps marginal wells to keep producing during low price cycles.

In addition, two other tax incentives allow taxpayers to expense (a) delay rentals and (b) geological and geophysical expenses. Delay rental payments are contractual payments made by an oil and gas producer to the mineral owner in the event mineral production is delayed. Geological and geophysical ("G&G") expenses are costs incurred by an oil and gas producer for the purpose of obtaining and accumulating data that will serve as a basis for the acquisition and retention of oil or gas properties. In both cases, these are out-of-pocket expenses incurred by taxpayers in the oil and gas drilling business.

Again, I thank you for this opportunity to testify before your subcommittee. I look forward to working with you and the Committee to structure the Federal tax code so it encourages increased domestic energy production; therefore, as a Nation, we can declare our independence from foreign oil and gas.

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**Statement of the Hon. Ed Whitfield, a Representative in Congress from the State of Kentucky**

Mr. Chairman and Members of the Committee, I am pleased to offer my testimony on the effects of federal tax laws on the production, supply and conservation of energy.

The National Academy of Engineering recently identified "Electrification—the vast networks that power the developed world" as the single most important achievement of the 20th century. The economy of the 21st century will require increased amounts of reliable, clean and affordable electricity. Coal, the nation's most abundant energy resource, can help meet these requirements *if* new technologies are developed and deployed to convert this resource to electricity more efficiently and cleanly. I hope to soon introduce the National Electricity and Environmental Technology Act, which would make such a venture possible.

By the year 2020, U.S. electricity consumption is projected to grow 35% and worldwide electricity is projected to grow by 70%. Today, more than half of that U.S. electricity is generated from abundant, low-cost domestic coal. In fact, coal constitutes more than 85% of U.S. fossil fuel resources, enough to last more than 250 years at current rates of consumption.

Not only does an ample supply of coal exist, but the electricity it produces is significantly cheaper than other sources of power. For example, on average the cost of electricity from coal is less than one-half the cost of electricity generated from natural gas or oil, and it also costs less than nuclear power. Additionally, even though electricity produced from coal has tripled since 1970, overall emissions from U.S. coal-based generating plants have been reduced by one-third.

Despite the benefits of using coal to produce electricity, uncertainty about new environmental requirements and electricity deregulation, as well as optimistic projections about natural gas prices, has led generators to rely heavily on natural gas for new electric generating capacity. Consumption of natural gas for electricity is projected to triple by 2020.

Such widespread use of an expensive resource could prove detrimental to many Americans. Average wellhead prices for natural gas in 2000 exceeded \$9.00/mcf, well above the \$3.66/mcf price DOE forecasted for 2020. Large-scale conversion to natural gas generation could double retail electric prices—creating a significant hardship for low and fixed income consumers. It would also eliminate an advantage the U.S. enjoys in the world marketplace.

Currently, only expensive retrofit technologies can achieve the more stringent emissions limits being considered for existing coal-based generating facilities. Advanced technologies for converting coal into electricity could effectively eliminate health-based pollutants and substantially improve efficiency in new power generating facilities. Unfortunately, initial commercial deployment of new coal generating technologies entails significant risk which generators are unwilling to accept in a newly competitive electricity market.

The National Electricity and Environmental Technology Act provides a measure of burden-sharing to cushion the cost of improving the environmental performance of existing coal-based generating facilities. It also stimulates deployment of advanced technologies to further reduce emissions and improve efficiency in new generating facilities, allowing our most abundant domestic energy resource to help meet the nation's growing need for clean, reliable and affordable electricity.

Title I of the bill provides for an accelerated technology research and development program for new and existing coal-based generation facilities. The Secretary of Energy, in consultation with the private sector, is authorized to establish R&D cost and performance goals that can be achieved by 2007, 2015 and 2020 by existing and new coal-based generating facilities. The bill authorizes the Secretary to study the technologies capable of achieving the performance goals and make recommendations for the programs required to develop those technologies. It also authorizes the appropriations necessary to carry out the R&D program to advance the technologies identified in the study as being capable of achieving the cost and performance goals. The Secretary will be authorized to carry out a power plant improvement initiative that will demonstrate commercial applications to new and existing plants of coal-based technologies that will advance the efficiency, environmental performance and cost competitiveness beyond that of facilities in service or demonstrated to date. The bill allows for 50% of the private sector cost-sharing along with the use of uncommitted Clean Coal Technology program funds to provide the federal share of the demonstration projects.

Title II makes the provisions for tax credits for emission reductions and efficiency improvements in **existing** coal-based generating facilities. It establishes a 10% investment tax credit for investments in systems of continuous emissions controls retrofitted to existing coal-based electricity generating units. Additionally, it creates a production tax credit (0.34 cents/kWH) for the first 10 years of electricity output from existing coal-based generation units that are repowered with qualifying clean coal technologies.

Title III makes the provisions for tax credits for early commercial applications of advanced coal-based generating technologies. It establishes a 10% investment tax credit for investment in qualifying advanced coal-based generating technologies for use in new or repowered units. It establishes an efficiency-based production tax credit for electricity generated during the first 10 years of operation of a new or repowered unit using qualified advanced coal-based generation technologies. In subsequent years, eligible technologies must achieve increasingly higher levels of efficiency to qualify for the credits. Finally, it establishes a risk pool amounting to 5% of the cost of the new technologies to help defray the cost of any modifications necessary to achieve design performance levels.

Title IV provides credits for certain exempt organizations and government units. Additionally, it establishes an offset against payments required as an annual return on appropriations by the Tennessee Valley Authority.

