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

HEARING

BEFORE THE

SUBCOMMITTEE ON SELECT REVENUE MEASURES

OF THE

COMMITTEE ON WAYS AND MEANS
HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

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

WEDNESDAY, JUNE 13, 2001

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

The Subcommittee met, pursuant to notice, at 10:05 a.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 6, 2001
No. SRM–3

CONTACT: (202) 226–5911

McCrery Announces Third in a Series of Hearings on the Effect of Federal Tax Laws on 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 third hearing on the effect of Federal tax laws on the production, supply, and conservation of energy. **The hearing will take place on Wednesday, June 13, 2001, in the main Committee hearing room, 1100 Longworth House Office Building, beginning at 10:00 a.m.**

Oral testimony at this hearing will be from invited witnesses only. Witnesses will include industry and environmental groups. 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: "This is the third in the series of important hearings on energy. I look forward to hearing from industry and environmental groups about proposals to ease the energy woes we are currently facing."

FOCUS OF THE HEARING:

The hearing will focus on 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 de-

liver 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.

Today's hearing is a continuation of a series of hearings we're having on energy policy vis-a-vis the Tax Code in the United States. Yesterday we heard from about 20 members of Congress who brought to the Subcommittee various ideas for using the Tax Code as an incentive for increased production of oil and gas in the United States, for incentives for conservation of energy in the United States, and also some ideas for using the Tax Code for an incentive to produce new kinds of energy, alternative fuels, renewable fuels, and the Subcommittee was impressed with both the scope and the depth of the suggestions that were made by members of Congress.

Today we are going to hear from witnesses representing industry, business, interest groups that have concerns about the environment, about energy policy, so we look forward to hearing from these folks from outside the Congress to tell us what your ideas are about energy policy in this country and how the Tax Code might establish sensible energy policy.

And with that, I will turn it over to my good friend from New York, Mr. McNulty.

Mr. MCNULTY. Thank you, Mr. Chairman, and thank you again for holding these very important hearings. I am pleased to join with you in this, the third hearing conducted by the Select Revenues Subcommittee on tax incentives for the production, supply, and conservation of energy in our country.

As we consider energy tax issues, it is important to understand that the energy problem is not limited to the high cost of electricity on the West Coast. Indeed, this is a national problem and we should seek a national solution on a bipartisan basis.

The administration, in my opinion, is correct to develop a long-term plan to address our energy needs. However, it would be wrong to ignore the short-term problems of the West Coast and to focus all our attention on production initiatives. The problems of the West Coast can easily grow into the problems of my home State of New York, spreading up and down the East Coast across the Midwest and encompassing the entire country. We need a balanced energy program which reflects appropriate tax initiatives in the area of production, renewable and alternative fuels development, conservation and energy efficiency.

The testimony we will receive today from our distinguished private sector witnesses will be extremely valuable in analyzing and developing pending energy tax legislation. I look forward to this testimony and I welcome each of you.

Mr. Chairman, I also want to express my sincere appreciation for your including Mr. Roger Saillant as a witness. Mr. Saillant is the CEO of Plug Power, which is headquartered in my congressional district. Plug Power is an industry leader in fuel cell technology and is involved in exactly the type of energy saving innovation this Committee should be encouraging.

Now I just want to depart for a moment from my prepared statement to again thank you, Mr. Chairman, for holding these hearings and focusing on this issue. My friend Roger asked me before we started the hearing do I think we will actually do anything this year? And my answer is yes and the reason I gave a positive answer is because of your positive attitude and your focus on this issue. And I think we struck a good chord several times yesterday when we discussed specific legislative proposals by the Members. We will have those issues that we disagree about on Arctic National Wildlife Refuge (ANWR) and price caps and all the rest but I was struck by the number of specific bills before this Committee upon which there is broad bipartisan support.

And I mentioned the old song; I think we ought to live by its words. "Accentuate the positive; eliminate the negative." Let us do what we can do. Let us do what we can agree upon and let us not hold meaningful reform hostage to some of these other issues.

So I think we have, Mr. Chairman, broad bipartisan support on a lot of these issues. I thank you and your Members for the support that you have given to the fuel cell technology issue, which was voiced by many of the members who testified yesterday, and I look forward to working with you in the coming weeks to make sure that we do get a bill on the floor and we do accomplish something this year. 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

I am pleased to join you in this, the third hearing conducted by the Select Revenue Measures Subcommittee on tax incentives for the production, supply and conservation of energy in our country.

As we consider energy tax issues, it is important to understand that the energy problem is not limited to the high cost of electricity on the West Coast. Indeed, this is a national problem and we should seek a national solution on a bipartisan basis.

The Administration is correct in seeking to develop a long-term plan to address our energy needs. However, it would be wrong to ignore the short-term problems of the West Coast, and to focus all our attention on production incentives. The problems of the West Coast can easily grow into problems of my home state of New York, spreading up and down the East Coast, across the Midwest, and encompassing the entire country.

We need a balanced energy program which reflects appropriate tax incentives in the areas of production, renewable and alternative fuels development, conservation, and energy efficiency.

The testimony we will receive today from our distinguished private sector witnesses will be extremely valuable in analyzing and developing pending energy tax legislation. I look forward to this testimony and welcome each of you.

Mr. Chairman, I appreciate your including Mr. Roger Saillant as a witness. Mr. Saillant is CEO of Plug Power, which is headquartered in my Congressional District. Plug Power is an industry leader in fuel-cell technology innovation, and is involved in exactly the type of energy-saving innovation this Committee should be encouraging.

Thank you.

Chairman MCCRERY. Thank you, Mr. McNulty. And I do look forward to working with you and Members on both sides of the aisle to accomplish some very positive things for energy policy this year.

This morning our first panel is composed of a number of distinguished representatives from the private sector. We have Joseph Cooper, who is president and chief executive officer of Alliance of Automobile Manufacturers; Daniel R. Robinson, president and CEO of Placid Refining Company in Dallas, Texas; Roger Saillant, president and CEO of Plug Power, Inc. on behalf of the Fuel Cell Advocates, Latham, New York; Robert Murray, president and CEO of Murray Energy Corporation on behalf of the National Mining Association; and Howard Geller, executive director emeritus, American Council for an Energy Efficient Economy on behalf of the Sustainable Energy Coalition.

Welcome, everyone. Your written testimony will be submitted in its entirety for the record. We ask you though to summarize that testimony in 5 minutes. You will notice before you there is a little machine there that will light up in just a minute. As long as the green light is on, you are in good shape. When the yellow light comes on, start wrapping up. And when the red light comes on, we expect you to conclude.

So now we will proceed and begin with Ms. Cooper.

STATEMENT OF JOSEPHINE S. COOPER, PRESIDENT AND CHIEF EXECUTIVE OFFICER, ALLIANCE OF AUTOMOBILE MANUFACTURERS

Ms. COOPER. Thank you, Mr. Chairman. On behalf of the 13 members of the Alliance of Automobile Manufacturers, it is a pleasure to be here today to provide the Subcommittee with our position on the role of cars and light trucks in our national energy policy. Today I would like to make three basic points.

First, existing energy policies are not delivering anticipated results. That is why we are all sitting here today.

Second, to be successful, we must maintain a consumer focus because consumers determine fuel economy every day through their purchasing decisions on dealers' lots.

And third, with your help we can increase the fuel economy of the fleet and meet consumer demands by accelerating the introduction of advanced technology fuel efficient vehicles.

Let me expand. We are a mobile society. Today transportation accounts for nearly two-thirds of all oil consumption and is almost 97-percent dependent on petroleum. Federal fuel economy requirements are established by a 25-year-old regulatory program known as Corporate Average Fuel Economy or CAFE. In 1992 the National Academy of Sciences called CAFE a flawed program in need of review. At the direction of Congress, the academy is once again reviewing CAFE and will issue a report this summer. This report may well focus on how CAFE only addresses the supply side of the equation but I am not here to dwell on the inefficiencies of the CAFE program, which are well documented and included in my written statement.

I am not here today, either, to focus on the future of CAFE. Congress has already acted in that regard. Congress does not need to set new standards or change the structure of the CAFE program. Current law requires the Department of Transportation to promulgate new light truck standards; that is, fuel economy standards for pick-ups, sport utility vehicles, mini-vans and vans at the maximum level possible when considering certain criteria. We will be working with the department to ensure appropriate standards are set.

Meanwhile, we continue to work on increasing fuel efficiency. Auto manufacturers have consistently increased the fuel efficiency of their models since the 1970s. According to Environmental Protection Agency (EPA) data, fuel efficiency has increased steadily at nearly 2 percent a year on average from 1975 to 2001 for both cars and light trucks. This fuel efficiency is a measure of how effectively a vehicle uses energy from fuel.

While car and light truck fuel efficiency continues to increase, their combined fuel economy has stabilized for one reason: consumers are in the driver's seat when it comes to determining fuel economy. This is the demand side of the equation.

Today you are in the role of policy-makers but you are also consumers and like millions of consumers nationwide, you may also value advanced safety features, passenger room, towing capacity, cargo-carrying capacity, utility, comfort and performance when you

buy a vehicle. In fact, most consumers want it all. In surveys, consumers indicate they want greater fuel economy but in their purchases they do not want to sacrifice size, safety, cargo room, acceleration or other vehicle attributes to get it.

Today manufacturers offer more than 50 models with fuel economy ratings above 30 miles per gallon. We also offer vehicles that get more than 40 miles per gallon or greater but these highly fuel efficient vehicles account for less than 2 percent of sales.

So here we are. CAFE only addresses the supply side of fuel economy and to be successful we must maintain a consumer focus, a focus on the demand side.

We all want greater fuel economy but how do we get there from here? The auto industry strongly believes that technology will allow us to address energy conservation goals and still provide consumers with vehicles that meet their family and their business needs. That is why we support the alternative fuel and advanced technology provisions in Vice President Cheney's national energy policy.

We also support the tax credit provisions in Congressman Camp's bill, H.R. 1864, which you all heard about yesterday, the Clean Efficient Automobiles Resulting from Advanced Car Technologies Act. The CLEAR Act would provide tax incentives for fuel cells, hybrid electric vehicles, battery electric vehicles and dedicated alternative fuel vehicles, along with alternative fuel and alternative fuel infrastructure incentives.

The CLEAR Act is timely legislation. New technologies have set the stage for transforming the auto industry. Today you can purchase alternative fuel vehicles from subcompacts to SUVs to pick-ups. Alliance Members are developing and introducing hybrid electric cars, SUVs and pick-ups that can increase city fuel economy by up to 200 percent.

Mr. Chairman, we support consumer tax credits. As a result, the manufacturers can increase production and lower costs for consumers. Consumers will have more fuel efficient vehicles with the vehicle attributes that they desire, and the policy-makers will see increases in fuel economy.

In conclusion, let us not try to fix CAFE. Let the program as it stands continue. Second, as we go forward, we must maintain consumer focus. And lastly, tax credit will accelerate the market penetration of highly fuel efficient vehicles that consumers will buy. Thank you, Mr. Chairman.

[The prepared statement of Ms. Cooper follows:]

Statement of Josephine S. Cooper, President and Chief Executive Officer, Alliance of Automobile Manufacturers

Thank you for the opportunity to testify before your Subcommittee regarding energy policy issues. My name is Josephine S. Cooper and I am President and CEO of the Alliance of Automobile Manufacturers, a trade association of 13 car and light-truck manufacturers. Our member companies include BMW of North America, Inc., DaimlerChrysler Corporation, Fiat, Ford Motor Company, General Motors Corporation, Isuzu Motors of America, Mazda, Mitsubishi, Nissan North America, Porsche, Toyota Motor North America, Volkswagen of America, and Volvo.

Alliance member companies have more than 620,000 employees in the United States, with more than 250 manufacturing facilities in 35 states. Overall, a recent University of Michigan study found that the entire automobile industry creates more than 6.6 million direct and spin-off jobs in all 50 states and produces almost $243 billion in payroll compensation annually.

The Alliance supports efforts to create an effective energy policy based on broad, market-oriented principles. Policies that promote research development and deployment of advanced technologies and provide customer based incentives to accelerate demand of these advanced technologies set the foundation. This focus on bringing advanced technologies to market leverages the intense competition of the automobile manufacturers worldwide. Incentives will help consumers overcome the initial cost barriers of advanced technologies during early market introduction and increase demand, bringing more energy efficient vehicles into the marketplace.

This year, there has been increased attention on vehicles and their fuel economy levels with particular discussion of the Corporate Average Fuel Economy (CAFE) program. Rather than simply engage in an exercise updating a 26-year-old program with all of its flaws, Congress needs to consider new approaches for the 21st century. The Alliance and its 13 member companies believe that the best approach for improved fuel efficiency is to aggressively promote the development of advanced technologies—through cooperative, public/private research programs and competitive development—and incentives to help pull the technologies into the marketplace as rapidly as possible. We know that advanced technologies with the potential for major fuel economy gains are possible. As a nation, we need to get these technologies on the road as soon as possible in an effort to reach the national energy goals as fast and as efficiently as we can.

The Alliance is pleased that Vice President Cheney's National Energy Policy report recommends and supports a tax credit for advanced technology vehicles (ATVs). Specifically, it proposes a tax credit for consumers who purchase a new hybrid or fuel cell vehicle between 2002 and 2007. In addition, the report supported the broader use of alternative fuel and alternative vehicles. This is consistent with the Alliance's position of supporting enactment of tax credits for consumers to help offset the initial higher costs of advanced technology and alternative fuel vehicles until more advancements and greater volumes make them less expensive to produce and purchase.

In reviewing House legislation that has been crafted to spur the sale of advanced technology fuel-efficient vehicles, the Alliance is in general agreement with H.R. 1864 introduced by Congressman Camp. Automakers would like to see some minor, technical changes made to the hybrid-electric vehicle section of the bill and would also support the inclusion of tax credits for advanced lean burn technology. The Alliance believes that the overall concepts and provisions found in H.R. 1864 are the right approach and would benefit American consumers.

The bill would ensure that advanced technology is used to improve fuel economy. Performance incentives tied to improved fuel economy are incorporated into the legislation in order for a vehicle to be eligible for the tax credits. These performance incentives are added to a base credit that is provided for introducing the technologies into the marketplace.

Specifically, H.R. 1864 has a number of important provisions addressing various types of advanced technologies. These include:

Fuel Cell Vehicles

The most promising long-term technology offers breakthrough fuel economy improvements, zero emissions and a shift away from petroleum-based fuels. A $4,000 base credit is included along with performance based fuel economy incentives of up to an additional $4,000. The credit is available for 10 years to accelerate introduction—extremely low volume production is expected to begin in the 2005–2007 timeframe.

Hybrid Vehicles

Electronics that integrate electric drive with an internal combustion engine offer near term improvements in fuel economy. A credit of up to $1,000 for the amount of electric drive power is included along with up to $3,000 depending upon fuel economy performance. The credit is available for 6 years to accelerate consumer demand as these vehicles become available in the market and set the stage for sustainable growth. To be eligible for the credit, hybrid vehicles must meet or beat the average emission level for light duty vehicles.

Dedicated Alternative Fuel Vehicles

Vehicles capable of running solely on alternative fuels, such as natural gas, LPG, and LNG, promote energy diversity and significant emission reductions. A base credit of up to $2,500 is included with an additional $1,500 for vehicles certified to "Super Ultra Low Emission" standards (SULEV).

Battery Electric Vehicles

Vehicles that utilize stored energy from "plug-in" rechargeable batteries offer zero emissions. A base credit of $4,000 is included (similar to the fuel cell—both have full electric drive systems) and an incremental $2,000 is available for vehicles with extended range or payload capabilities.

Alternative Fuel Incentives

Alternative fuels such as natural gas, LNG, LPG, hydrogen, B100 (biomass) and methanol are primarily used in alternative fueled vehicles and fuel cell vehicles. To encourage the installation of distribution points to support these vehicle applications, a credit of $0.50 for every gallon of gas equivalent is provided to the retail distributor. This credit is available for 6 years and will support the distribution of these fuels as vehicle volume grows and may be passed on to the consumer by the retail outlet. Note that ethanol is not included in these provisions due to the existing ethanol credit.

Alternative Fuel Infrastructure

Complementary to the credit for the fuel itself, the existing $100,000 tax deduction for infrastructure is extended for 10 years and a credit for actual costs up to $30,000 for the installation cost of alternative fuel sites available to the public is included. One of the key hurdles to overcome in commercializing alternative fuel vehicles is the lack of fueling infrastructure. For nearly a century, infrastructure has focused primarily on gasoline and diesel products. These infrastructure and fuel incentives will help the distributors overcome the costs to establish the alternative fuel outlets and support distributors during initial lower sales volumes as the number of alternative fuel vehicles increases.

Automobile manufacturers believe that CAFE, however well-intended, has not achieved its desired goals and has had a number of unintended consequences. Meeting CAFE standards is not something that manufacturers can do by themselves. Because the standards are a sales-weighted fleet average, the ultimate outcome depends on what the consumer purchases. If not enough customers purchase the higher fuel economy models of a given manufacturer, then the fleet average for that automaker may not achieve the CAFE standard. Since manufacturers have widely varying fleet mixes and product offerings, the CAFE program has had widely disparate impacts on automakers and has afforded some manufacturers with significant competitive advantages at times.

Increasing CAFE standards will only exacerbate these problems. Higher standards may result in vehicles that are less attractive to customers in terms of meeting their needs for work and family. If consumer demand is not aligned with manufacturers' production, there is the potential for significant negative impact on employment throughout the industry. Ultimately, any fuel savings that result will come at high cost to consumers, manufacturers and the economy. In short, automakers need to produce vehicles that appeal to customers. CAFE acts as a market intrusion that over time will create distortions and unintended adverse consequences.

Recent sales figures support this position. The top ten most fuel-efficient vehicles account for less than 2% of total sales. The ultimate goal for any business is to provide products consumers want to buy. Increasing CAFE standards will require automakers to produce less of the products that American consumers are actually purchasing today and more of the products that are in lower demand.

Fuel economy standards only address the supply side of the equation. The Alliance believes, however, that Congress does not need to set new standards or change the structure of the program as the law requires the Department of Transportation (DOT) to promulgate new light truck standards (pickups, SUVs, minivans and vans) at the maximum level taking into consideration certain criteria. Automakers will be working with the DOT to ensure appropriate standards are set.

In the industry, CAFE regulations affect each Alliance member differently. Manufacturers whose fleets are comprised primarily of larger, lower fuel economy vehicles are more constrained in their product planning by CAFE standards than manufacturers with fleets comprised mainly of smaller, higher fuel economy vehicles. As each manufacturer attempts to design, produce and sell vehicles in their target markets, CAFE operates, for some manufacturers, as a roadblock to supplying their vehicles to the market.

The domestic/non-domestic passenger car fleet distinction is another important matter. While originally designed to keep small car production in the U.S. and protect American jobs, this distinction has inhibited some manufacturers from increasing the procurement of U.S. parts and materials. The domestic/non-domestic distinction has had widely disparate impacts on automakers. The requirement for separate

fleets serves as a clear example of CAFE's market distorting effects, which then have a negative impact on the U.S. economy.

Another consequence of CAFE has been the downsizing of the passenger car fleet. Weight and size reductions remain one of the prime means of achieving improved fuel efficiency. The basic laws of physics dictate that smaller, lighter vehicles fare worse in accidents than larger, heavier vehicles, all things being equal.

To reiterate, a better way to improve vehicle and fleet fuel economy, and one that is more in tune with consumer preferences, is to encourage the development and purchase of advanced technology vehicles (ATVs). Consumers are in the driver's seat and most independent surveys show that Americans place a high priority on performance, safety, space and other issues with fuel economy ranking much lower even with today's gas prices. ATVs hold great promise for increases in fuel efficiency without sacrificing the other vehicle attributes consumers desire. Just as important, the technology is transparent to the customer.

Member companies of the Alliance have invested billions of dollars in research and development of more fuel-efficient vehicles. Automobile companies around the globe have dedicated substantial resources to bringing cutting-edge technologies—electric, fuel cell, and hybrid electric vehicles as well as alternative fuel vehicles and powertrain improvements—to the marketplace. These investments will play a huge role in meeting our nation's energy and environmental goals.

These advanced technology vehicles are more expensive than their gasoline counterparts during early market introduction. As I mentioned earlier, the Alliance is supportive of Congressional legislation that would provide for personal and business end-user tax incentives for the purchase of advanced technology and alternative fuel vehicles. Make no mistake: across the board, tax credits **will not** completely cover the incremental costs of new advanced technology. However, it will make consumers more comfortable with accepting the technology and begin to change purchasing behavior. In short, tax credits will help bridge the gap towards winning broad acceptance among the public leading to greater volume and sales figures throughout the entire vehicle fleet. This type of incentive will help "jump start" market penetration and support broad energy efficiency and diversity goals.

Enabling consumers to make more effective fuel-efficient choices rather than mandating government standards makes more sense to achieve the desired outcome. After all, the industry already spends a significant amount on compliance with government regulations while investing large sums in capital improvements and competitive designs.

Some of the discussion today has centered on the vehicles of the automobile manufacturers. But it is important not to forget about a vital component for any vehicle—the fuel upon which it operates. As automakers looking at the competing regulatory challenges for our products—fuel efficiency, safety and emissions—and attempting to move forward with advanced technologies, we must have the best possible and cleanest fuels. EPA has begun to address gasoline quality but it needs to get even cleaner. This is important because gasoline will remain the prevalent fuel for years to come and may eventually be used for fuel cell technology.

Beyond gasoline, the auto industry is working with a variety of suppliers of alternative fuels. In fact, the industry already offers more than 25 vehicles powered by alternative fuels. More than 1 million of these vehicles are on the road today and more are coming. Today, we find vehicles that use:

- Natural gas, which reduces carbon monoxide emissions by 65 to 90 percent;
- Ethanol, which produces fewer organic and toxic emissions than gasoline with the longer term potential to substantially reduce greenhouse gases;
- Liquefied petroleum gas (propane), the most prevalent of the alternative fuels, which saves about 60% VOC emissions; and
- For the future, hydrogen, which has the potential to emit nearly zero pollutants.

The Alliance has submitted comments to the DOT in support of an extension of the dual fuel vehicle incentives through 2008. Current law provides CAFE credits—up to 1.2 mpg—for manufacturers that produce vehicles with dual fuel capability. These vehicles can operate on either gasoline or domestically produced alternative and renewable fuels, such as ethanol. However, the dual fuel credits end in model year 2004 unless extended via rulemaking by the National Highway Traffic Safety Administration. The Alliance believes an extension is important so that these vehicles continue to be produced in high volume to help encourage the expansion of the refueling infrastructure and giving consumers an alternative to gasoline.

In addition to alternative fuels, companies are constantly evaluating fuel-efficient technologies used in other countries to see if they can be made to comply with regulatory requirements in the United States. One such technology is diesel engines, using lean-burn technology, which have gained wide acceptance in Europe and other countries. Automakers have been developing a new generation of highly fuel-effi-

cient clean diesel vehicles—using turbocharged direct injection engines—as a way to significantly increase fuel economy and reduce greenhouse gas emissions. However, their use in the U.S. must be enabled by significantly cleaner diesel fuel.

Earlier this year, EPA promulgated its heavy-duty diesel rule that the Alliance supports, as far as it goes. The rule reduces the amount of sulfur in the fuel. Low sulfur diesel fuel is necessary to enable the new clean diesel technology to be used in future cars and light trucks. Providing cleaner fuels, including lowering sulfur levels in gasoline **and** diesel fuel, will provide emission benefits in existing on-road vehicles. Sulfur contaminates emissions control equipment, such as catalytic converters. Efforts to reduce sulfur content will provide environmental benefits and allow vehicles to operate more efficiently. Unless there are assurances that fuels will be available, companies will not invest in new clean diesel technologies.

As you can tell, the automobile companies—from the top executives to the lab engineers—are constantly competing for the next breakthrough innovation. If I can leave one message with the Subcommittee today, it is to stress that **all manufacturers** have advanced technology programs to improve vehicle fuel efficiency, lower emissions and increase motor vehicle safety. These are not "pie in the sky" concepts on a drawing board. In fact, many companies have advanced technology vehicles in the marketplace right now or have announced production plans for the near future. That's why now is the perfect time for the enactment of tax credits to help spur consumers to purchase these new vehicles which years of research and development have made possible.

Higher CAFE standards, with all of the disparate impacts inherent in that program, would divert limited resources from these ongoing efforts and distort the market for our products. Competition will drive improvements and success in the area of increasing vehicle fuel economy. This powerful market force should be allowed to work where it can and should be enhanced with incentives where they are needed to "prime the pump."

We would urge that public policy decisions focus on the steps that will achieve real improvements in fuel consumption and benefit our environment. We believe that advanced technology vehicles and appropriate tax policy are a better way to increase fuel efficiency than the policy of CAFE that effectively limits consumer choice, adversely affects safety and affordability and creates "winners and losers" within the auto community.

Thank you for the opportunity to testify before the Subcommittee today. I would be happy to answer any questions you may have.

Chairman MCCRERY. Mr. Robinson.

STATEMENT OF DAN ROBINSON, PRESIDENT AND CHIEF EXECUTIVE OFFICER, PLACID REFINING COMPANY LLC, DALLAS, TEXAS

Mr. ROBINSON. Thank you, Mr. Chairman, members of the Subcommittee. I appreciate the opportunity to be here today to testify about the outlook of the small refining industry in the United States.

I represent Placid Refining Co., which is a privately owned independent refiner, a small refiner with the capacity of 50,000 barrels per day. Our plant is located in Port Allen, Louisiana. We produce primarily gasoline, military jet fuel, and diesel fuel suitable for on-road use. I do not represent any other group of small refiners but due to our size, we are fairly representative of small refiners in the United States, which by some standards includes a group of up to 43 companies operating 57 refineries or up to 8.6 percent of our nation's capacity.

We have been seeing over the past 25 years an alarming rate of refinery closures in this country. We have had a loss of from up to 300 plants down to the current level of about 150. Most of these losses admittedly have come from small refineries owned by small

refiners. In fact, Secretary Abraham is quoted as saying over 50 of these refineries have been lost in the last 10 years alone, the most recent being the one in Blue Island, Illinois.

The loss of this capacity has been replaced largely by the expansion of the remaining refineries in the country, primarily the larger ones. The smaller plants, however, have not participated to a great degree in expanding their capacities and we feel that they should be encouraged to do so. Certainly any impediments to expansion of small refineries need to be addressed wherever they are found.

One particular example of this can be found in section 613(a) of the Internal Revenue Code. That particular section provides that any independent producer stands to lose his status as an independent producer if he owns an equity interest in any refinery that refines more than 50,000 barrels per day of crude oil on any single day.

Placid has long opposed this particular test of any single day because it limits the flexibility of a refiner to produce more than 50,000 barrels per day on certain days of the year in order to offset production lost on other days of the year when it has to be shut down for maintenance. We alternatively support a change in this language so that the test would be made on an annual average basis rather than an any single day test.

This is not a new proposal. It has been around for a while. The Ways and Means Committee has considered this measure in 1999 when the 1999 tax bill was under consideration. The Committee adopted this proposal, incorporated it into the tax bill and, as we all know, it was later vetoed by President Clinton.

The measure continues to have broad bipartisan support. It has currently been readopted into two bills, Senator Murkowski's energy bill, S. 389, and Representative Thornberry's bill, H.R. 805, and we urge the Committee to once again give us favorable consideration on this issue when it comes before you.

But in light of the opinions stated by President Bush, Vice President Cheney, Secretary Abraham and others that we need to make a national priority of expanding refining capacity in this country, we think it is entirely appropriate now to address the 50,000 barrel issue itself. This standard was instituted in 1975 into the Code and it has remained unchanged at that 50,000 barrel level for over 25 years. Other agencies on the Hill considered that higher standards are probably more reasonable for small refiners. The Small Business Administration, for example, uses a standard of 75,000 barrels per day. The Environment Protection Agency recently adopted 155,000 barrels per day as its standard for small refiners.

We urge the Committee to consider favorably any legislation that would come forward in the near future regarding the changing of these limits from 75,000 to higher levels, which will encourage small refiners to increase their production.

Before I close I would like to mention one other quick issue that is a particular concern to small refiners regarding Environmental Protection Agency (EPA's) current regulations to reduce sulphur limits in gasoline and diesel fuel dramatically. This is going to affect all refiners in the United States but in particular, small refiners are going to be particularly affected because the level of invest-

ments that are going to be required of these plants in some cases will exceed the entire market value of their refineries.

Given the fact that small refiners have limited resources, limited access to capital, and armed with the knowledge that investments that have been made traditionally in the past to produce cleaner fuels have yielded little, if any, return, there are going to be some very serious decisions that are going to have to be made in the board rooms of small refineries.

In order to soften the blow, some refiners have formed a loose ad hoc committee to explore whether tax credits or expensing of investments to meet these investments that are going to be required to produce these lower sulphur fuels might be appropriate. These proposals are currently being developed and being discussed on the Hill and there is not a particular proposal ready to go right now but we think that there will be one soon and we urge the Committee to keep in mind this need when any legislation that might come from these efforts will come before you.

We thank you very much for your patience today.

[The prepared statement of Mr. Robinson follows:]

Statement of Dan Robinson, President and Chief Executive Officer, Placid Refining Company, LLC, Dallas, Texas

REGARDING THE ROLE OF SMALL REFINERS IN THE NATIONAL ENERGY PICTURE

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to appear before you today to discuss the outlook for the small refining industry in the United States.

Placid Refining Company LLC is a privately owned independent refiner. The company owns and operates a refinery located in Port Allen, Louisiana with a rated capacity of 50,000 barrels per day. This facility produces roughly 50% of its output as gasoline and another 40% as military jet fuel and diesel fuel suitable for on-road use. The company is not engaged in retail marketing. Rather, it wholesales its fuel production throughout the Southern and Southeastern regions of the United States. Placid is certified as a small refiner under both the Small Business Administration (SBA) and the Environmental Protection Agency (EPA) guidelines.

Under the SBA guidelines Placid is representative of 36 small refining companies operating 40 refineries, and having total refining capacities of 75,000 barrels per day or less. While this group owns about 26% of the nation's operable refineries they represent only about 5.5% of the total national refining capacity.

Under the EPA small refiner guidelines Placid is representative of 43 small refining companies, which have a total refining capacity of 155,000 barrels per day or less. This group owns and operates 57 refineries or about 38% of the nation's operating refineries, comprising about 8.6% of the total national capacity.

The Challenges for Small Refiners

These refineries are located in diverse regions all over the United States. Some are located in remote areas and serve as the nearest and best source of fuels for the regional inhabitants; some are specially designed to refine the specific grades of crude oil produced in their immediate locales; some produce specialty products and solvents; some produce asphalt; some concentrate on lube oils. Many provide reliable supplies of jet fuel for the United States armed forces, and most contribute to the nation's fuel supplies. All are important to the economy of our nation and the closure of any would be an irretrievable loss.

Yet, if the history of the last twenty-five years tells us anything it is that more closures are virtually inevitable. Since 1975 the number of operable refineries in the United States has dwindled from about 300 to about 150. Most of these casualties were small refineries owned by small refiners. According to U.S. Energy Secretary Abraham, about 50 U.S. refineries have closed in the last 10 years alone, the most recent being the Premcor refinery in Blue Island, Illinois. Not coincidentally, this 10-year period commenced with the enactment of the Clean Air Act of 1990. Massive investments have been required of the refining industry to produce cleaner burning fuels and to reduce stationary source emissions.

Unfortunately these investments have proved to produce little or no return and have served to drain resources away from the other more economically productive endeavors. The recent enactment of ultra-low sulfur regulations for both diesel fuel and gasoline by the EPA portend more of the same, which is of particular concern to small refiners who have less resources and more limited access to capital than the larger refining companies.

During the last 25 years, not a single new refinery has been constructed in the United States due to insufficient economic justification and increasingly onerous permitting requirements. Instead, the capacity lost by these refinery closures has been replaced solely by expanding the remaining refineries. This strategy may not be sustainable indefinitely, but it appears to be the only near term practical way to increase refinery capacity in this country.

The remaining operating refineries should be encouraged to employ their resources for the purpose of expansion. Certainly, any impediments to such expansion should be addressed wherever they are encountered. At the present, it is becoming apparent that refinery capacity in the United States, which was once abundant, is now becoming severely strained. The demand for transportation fuels can now only be met when the industry is operating at full capacity. There is little room for unexpected shutdowns without creating local supply disruptions, which can result in or contribute to regional price spikes.

Small refiners face a number of formidable challenges, which must be successfully met if this trend is to be halted. The refining industry has proven to be a low return business over the past twenty-five years. By virtue of their size alone, small refiners are at a competitive disadvantage to their larger peers in the struggle to capture a share of these already thin margins.

Since economies of scale take on a particular importance in the refinery industry, small refiners see the need to focus their attention and resources on expansion of both capacity and complexity in order to improve their competitive position and insure their survival. However, certain regulatory impediments and requirements are posing challenges to this focus. In addition, low profitability and limited access to capital force small refiners to be very judicious with their investment strategies. I would like to focus on two particular areas where tax legislation might be constructive in preserving this vital segment of the refining industry. The first of these addresses the capacity limitations imposed in Section 613A of the Internal Revenue Code, and the second addresses tax relief related to the capital investments required to comply with the newly enacted EPA regulations for the reduction of sulfur in gasoline and diesel fuels.

Internal Revenue Code Section 613A

While larger refiners are moving forward with efforts to expand their refineries some small refiners face a serious impediment to doing the same due to a limitation imposed in Section 613A of the Internal Revenue Code. Section 613A allows an independent producer to claim percentage depletion on an annual average daily production of up to 1,000 barrels of oil per day, and to expense certain intangible drilling costs, provided that the producer meets certain tests. Included among these tests is the requirement of having little or no ownership in a refinery which runs more than 50,000 barrels of crude oil "on any single day" during the taxable year. The effect of the "on any single day" language is to prohibit a small refiner from using any excess capacity to replace production lost from planned or unplanned outages. It is proposed that the language be modified to provide that the 50,000 barrel per day limit be imposed on a "annual average" basis rather than on an "any single day" basis.

In order to meet the "on any single day" test, a refiner must run less than 50,000 barrels per day every day to allow for inadvertent errors in metering and gauging. In addition, refiners must shut down or reduce runs during certain days of the year for scheduled or unscheduled maintenance. The requirement that refinery runs cannot exceed 50,000 barrels per day "on any single day" does not allow the refiner any flexibility to recover from its lost runs. The effect of this limitation is that small refiners must process on average, significantly less than 50,000 barrels per day in order to avoid the loss of independent producer status to its owners and affiliates. Consequently, a small refiner capable of processing up to or more than 50,000 barrels per day is discouraged from the most efficient use of its assets.

We gratefully acknowledge that this proposal was supported by the Ways and Means Committee in 1999, by way of bills introduced by Chairman McCrery from the House of Representatives and by Senator Breaux from the Senate that were incorporated into the larger 1999 tax bill, subsequently vetoed by President Clinton. We also are grateful that this initiative has recently been incorporated into both Senator Murkowski's National Energy Security Act of 2001 (S.389) and Congress-

man Thornberry's Independent Energy Production Act of 2001 (H.R.805), and urge the Committee to once again pass this measure when it comes before you for review.

However, in light of the views publicly expressed by President Bush, Vice President Cheney, and Secretary Abraham, and shared by many in Congress, that expansion of refining capacity in the United States should be a national priority, we believe it is appropriate that the 50,000 barrel per day threshold in Section 613A should be raised to a higher level. Raising this limit would remove an important impediment to expansion of refineries owned by independent producers.

Section 613A was enacted in 1975. Since that time the trend has been for refineries to grow by expanding existing capacity. As noted earlier, many small refineries have been closed and those that cannot expand face increasing competitive pressures from those that can. Other regulatory bodies have recognized that ceilings higher than 50,000 barrels per day are now appropriate for defining a small refiner. The Small Business Administration has adopted a definition, which requires a small refiner to have a capacity of no more than 75,000 barrels per day and a maximum of 1,500 employees. Recently the Environmental Protection Agency adopted a small refiner definition of 155,000 barrels per day with a maximum of 1,500 employees. The world has changed since 1975 and so has the refining industry. It is, therefore, entirely appropriate to revisit the antiquated 50,000 barrel small refiner standard established in the Code more than 25 years ago. While changing the "on any single day" language to "annual average" would be favorable, raising the threshold from 50,000 barrels per day to 75,000 barrels per day would be better. Raising the limit to 155,000 barrels per day would be better still, and more reflective of small refiner standards, given the nature of today's refining industry.

It should be noted that the change of the "on any single day" language included in the 1999 tax bill was liberally scored at less than $2 million per year by the Joint Committee on Taxation. At the request of Chairman McCrery, new revenue estimates are currently being prepared on each of these three proposals. Of course, any revenue estimate of these proposals carries the inherent weakness of ignoring the positive revenue benefits that would flow from small refiners that are allowed to grow and improve their operations.

The EPA Sulfur Reduction Regulations

The EPA has recently issued two new regulations governing the sulfur levels, which will be permitted in transportation fuels. Beginning in 2004 gasoline sulfur levels will have to meet a 30 part per million standard, which is about a tenfold decrease from current levels. In its consideration of this rulemaking the EPA provided an extended timetable for full compliance by small refiners until 2008 provided that they meet less strict interim standards in the meantime. For purposes of determining which small refiners would qualify for this treatment, the EPA adopted a 155,000 barrels per day capacity and 1,500 employee limit as its small refiner definition.

Subsequently, the EPA enacted a 15 part per million sulfur standard for on-road diesel to take effect in 2006. This standard as compared to the current 500 part per million specification represents a 97% reduction. Unlike the gasoline regulation the new diesel standard has no deferred compliance provision for small refiners. In addition, the industry expects the EPA to issue another new ruling reducing the sulfur limit for off-road diesel in the near future. All small refiners produce diesel fuel and many also produce gasoline. The combined effect of these regulations will close the markets to any small refiner who does not or cannot undertake the installation of expensive desulfurization equipment.

While no one opposes the larger objective of a cleaner environment, the onus of these regulations is falling heavily on the refining industry. The technology to produce these ultra low sulfur fuels exists, but it is not inexpensive. Due to their size and limited capital resources small refiners will be disproportionately affected.

It is impossible to generalize about the specific effects that a typical small refiner will encounter. Each refiner will encounter its own unique challenges depending upon its location, its existing infrastructure, and its marketing strategy. But it is safe to say that few, if any, small refiners will escape the need to make large investments in desulfurization equipment in order to continue in business beyond the effective dates of these regulations.

In some cases these investments may actually exceed the entire market value of the existing refinery. Moreover, if history is any guide, little return can be expected from these particular investments. It is not hard to envision the concerns that are raging through the small refiner contingent about the ability to raise the capital needed for investments which will do little more than allow them to merely stay in business. Many hard decisions lie ahead.

The Blue Island refinery closed this year citing the very same regulatory burdens being addressed herein. In addition, the former Pennzoil refinery in Shreveport, Louisiana was recently sold and ceased production of transportation fuels, devoting its resources instead to lubrication products, which are not affected by the latest EPA sulfur reduction regulations. We believe it inconsistent with the best interests of the nation to allow any more such occurrences if they can be avoided.

When considering the energy needs of the nation, policymakers have not been averse to including the use of tax incentives to spur development, and guide policy. Notable examples include the excise tax exemption on ethanol used in gasoline, tax credits for enhanced oil recovery costs, tax incentives for energy conservation investments and investments in power generation from renewable resources, and even proposed tax credits for the purchase of fuel efficient hybrid or fuel cell automobiles. The present danger of losing a significant portion of the country's refining infrastructure suggests that a similar strategy may be necessary.

An ad-hoc group of small refiners has been working on proposals permitting the use of either tax credits, or expensing of investment, or a combination of the two which would apply to all investments required of small refiners by the new EPA ultra-low sulfur regulations for diesel fuel. Since small refiners will be facing diesel fuel desulfurization expenditures sooner than gasoline desulfurization, the early proposals have focused on diesel fuel. However, similar proposals would be equally applicable to investments required of small refiners to meet the EPA ultra-low sulfur regulations for gasoline. Under these proposals the qualifying refiners would have to meet the EPA small refiner definition of 155,000 barrels maximum capacity and a maximum of 1,500 employees. I urge the Committee to give careful consideration to any bill that develops from these efforts.

The small refiner is an important national resource. Small refiners are eager to contribute to the national good but can only do so much with limited resources. Tax relief in whatever form it finally assumes could be the appropriate prescription for helping small refiners cope with the eminent challenges to their survival being posed by the new EPA gasoline and diesel sulfur reduction regulations.

Thank you very much for your invitation to present these issues before the Subcommittee.

Chairman MCCRERY. Thank you, Mr. Robinson.

Mr. Saillant.

STATEMENT OF ROGER SAILLANT, PRESIDENT AND CHIEF EXECUTIVE OFFICER, PLUG POWER INC., LATHAM, NEW YORK, ON BEHALF OF THE FUEL CELL ADVOCATES

Mr. SAILLANT. Thank you, Mr. Chairman and Members of the Committee. My name is Roger Saillant, chief executive officer of Plug Power, Incorporated, a developer of fuel cell systems in Latham, New York, right outside of Albany. We are developing proton exchange membrane fuel cell systems for the stationary market, particularly for utilities, small businesses and ultimately, homes. We are testifying today on behalf of the fuel cell companies, suppliers, and other interested parties who have come together to support tax incentives for stationary fuel cell power systems. In particular, we are supporting House Resolution 1275 and its companion Senate Bill 828.

A fuel cell system is the cleanest fossil fuel generating technology available today and will be an integral part of the hydrogen economy of the future. Fuel cells are power generation systems that electrochemically combine hydrogen and oxygen—oxygen from the air and hydrogen readily available from fossil fuels. The benefits of fuel cell technology include higher efficiency and near-zero emissions of pollutants like oxides of sulphur and nitrogen and particulate matter. If widely deployed, fuel cells can address peak power

demand and reduce the need for new central station power generation and power lines.

The fuel cell tax credit, if passed, would provide $1,000 per kilowatt for purchasers of fuel cell systems and would be available for purchase of all types and sizes of stationary fuel cell systems. It would be available for 5 years, January 1, 2002 through December 31, 2006, at which point fuel cell manufacturers should be able to produce a product at market entry cost. The credit does not specify fuel inputs, application or system sizes. Thus, a diverse group of customers can take short-term advantage of the credit to deploy a wide range of fuel cell equipment.

The credit will allow access to fuel cell systems by more customers now, when there is a serious need for reliable power in many parts of the country. Additionally, the credit will speed market introduction and create an incentive for prospective customers, thus increasing volume and helping to reduce manufacturing costs.

As with any new technology, low initial volumes keep companies from developing a manufacturing base of component and subsystem suppliers and therefore we cannot leverage better prices. For example, we have a control module in our fuel cell system that is similar to one we purchased when I was at Ford Motor Company. However, due to where we are on the learning curve and our volumes, we pay eight to 10 times more than does Ford for the same module.

Passage of H.R. 1275 will not only benefit fuel system developers but also customers and the public at large. Customers will be able to take advantage of the reliable and uninterruptable power that fuel cells provide, which is important to customers who are highly sensitive to power grid transmission problems.

Additionally, customers in rural areas or in load pockets will have reliable and secure power and will be able to have that power sooner and at a more affordable price with the passage of the tax incentive.

The public benefits are many. First and probably most important, fuel cells and the idea of distributed power lay the foundation for a truly different way to view energy generation and transmission. In other words, power becomes localized to the point of use, rather than centralized and distributed. The analogy is mainframe versus PC, cell phone versus conventional pole and line telephones.

Second, fuel cells minimize emissions. I have already mentioned NO_X sulphur and particulates.

Third, they are relatively small, quiet, and are easily sited in areas in and around people's homes.

Fourth, fuel cell systems as a distributed generation technology can address the immediate need for secure and adequate energy supplies while reducing grid demand and increasing grid flexibility.

Fifth, they avoid costly and environmentally problematic installation of transmission and distribution systems and siting issues surrounding central station power generation.

And finally, they provide a framework to move from a fossil fuel-based economy to a longer term truly sustainable energy system.

The tax credit introduced by Congressman McNulty and Congresswoman Johnson will help to bring fuel cell power systems to market more quickly and help address this country's power needs.

The Fuel Cell Advocates encourage you to enact the legislation this calendar year. Thank you.

[The prepared statement of Mr. Saillant follows:]

Statement of Roger Saillant, President and Chief Executive Officer, Plug Power Inc., Latham, New York, on behalf of the Fuel Cell Advocates

Good Morning. My name is Roger Saillant, and I am the President and Chief Executive Officer of Plug Power, Inc., a developer of on-site energy generating systems utilizing proton exchange membrane fuel cells for stationary power applications. Our Latham, NY-based company was founded in 1997, as a joint venture of DTE Energy Company and Mechanical Technology Incorporated. Plug Power's fuel cell systems for residential and small commercial stationary applications are expected to be sold globally through a joint venture with the General Electric Company, one of the world's leading suppliers of power generation technology and energy services.

We are testifying today on behalf of a loose coalition of fuel cell companies, suppliers, and other interested parties, which we are calling "Fuel Cell Advocates." Plug Power has facilitated this group coming together to urge passage of a fuel cell tax credit and a similar program for non-taxpaying entities such as federal, state and local government entities and municipalities. The group, which includes companies from all over the country, is supporting passage of H.R. 1275, introduced by Ranking Member McNulty and Congresswoman Johnson. We also support the Senate companion bill, S. 828. Attached is information on our advocacy effort, which includes the list of participating companies (manufacturers, suppliers and related organizations).

FUEL CELL DESCRIPTION

A fuel cell is an on-site power generation system that electrochemically combines hydrogen from readily available fuels—such as natural gas and propane—with oxygen in the air to form electricity. Different catalysts are used for the chemical reactions, which provides for a very diverse portfolio of fuel cell system availability. Fuel cell systems, whether for the residential, commercial, institutional or industrial market, produce not only electricity, but also heat that can be captured for combined heat and power applications. This makes them highly efficient as well as environmentally friendly.

The fuel cell was first developed in 1839 by Sir William Grove. Fuel cells were used in the 1950s and 1960s as part of NASA's space program, but the costs were prohibitive for more widespread use as compared to conventional power generation technologies. More recently, the cost of fuel cells has been reduced to the point of commercial application viability. One company has been selling a single fuel cell product, at very low volumes, for ten years, and this year, multiple fuel cell developers are beginning to introduce product. Dozens of U.S. companies are involved in developing fuel cells themselves or components for the systems.

Fuel cell systems are the ideal technology to transition to a fully sustainable energy future. By operating on hydrogen, fuel cells can be powered not only from hydrocarbon fuels, but also from renewable energy sources such as hydropower, wind and solar energy. Our growth rate in fossil fuel use is unsustainable. According to Professor Evar Nering of Arizona State University, this continued growth is akin to compound interest and produces exponential growth if calculated at a continuing rate. Fuel cells will allow us to continue to rely on electricity and consumers will see no change in service and quality of that electricity even as its becomes more sustainable.

FUEL CELL BENEFITS

Reduced Carbon Dioxide Emissions: Fuel cells emit less than half the CO_2 (a primary "greenhouse gas"), of a traditional, coal-fired power plant when operating on a fossil fuel such as natural gas. When fueled by hydrogen from a renewable energy source such as solar, wind, or hydropower, or if the fuel source is bio-fuel like ethanol from plant wastes, CO_2 emissions are net zero.

Environmental: Fuel cells create electricity through an electrochemical process with reduced emissions and high efficiency. Fuel cell systems operating on natural gas emit near zero levels of NO_X, SO_X and particulate matter. Fuels cell systems that operate on direct hydrogen from a renewable energy source can eliminate greenhouse gas emissions completely.

Power Reliability: Fuel cells can provide electricity that meets the need for high reliability. This is particularly important for sensitive mechanical installations, such as internet and computer based businesses.

Power Quality: Some studies estimate that power quality and reliability issues cost our economy alone as much as $150 billion in lost materials and productivity, while others have reported estimates as high as $400 billion (source: Bear Stearns, April 2000 Distributed Energy, p. 8).

Modular Installations and Load Profiles: Modularity, whether for large or small fuel cell systems and applications can be designed for particular profiles allowing maximum flexibility to the utility and customer.

Fuel Choice: Fuel cells need hydrogen and oxygen to chemically react and product electricity (and thermal energy) and can therefore use any hydrogen rich fuel, or direct hydrogen. This allows fuel cell products to be "customized" for customers' available fuel. It also provides the option of renewably generated hydrogen for a fully renewable and zero emissions energy system.

Grid Impact and Support: Because fuel cells provide electricity at the site of consumption, they reduce the load on the existing transmission and distribution system. This reduces the overall cost for electric infrastructure development and improvement. Additionally, fuel cell can operate in either grid parallel or grid independent modes.

Energy Efficient: Again, because they provide electricity at the point of use, fuel cell systems can be more efficient than central station power. They avoid the up to 15% line losses inherent in moving electricity and provide an alternative to what are often cost prohibitive and unattractive traditional power lines. Additionally, because fuel cells make both electric and thermal energy where it is needed, the heat can be recaptured in combined heat and power applications to improve efficiencies significantly.

Siting: Fuel cell systems are quiet. Combined with their environmental friendliness, fuel cells are very easy to site in neighborhoods and urban centers. These characteristics allow for the potential of indoor installations.

Combined Heat and Power: Because they generate both electricity and heat at the point of consumption, fuel cell systems allow for the recapture and use of the thermal (heat) energy. For example, Plug Power is currently working with a heating manufacturer to develop a residential fuel cell system that will provide all of the heat and electricity for the average home. Use of thermal energy can increase overall efficiencies approaching 80%.

Tax Credit Provisions

The Fuel Cell tax credit if passed, would provide $1000 per kW for purchasers of fuel cell systems and would be available for purchase of all types and sizes of stationary fuel cell systems. It would be available for five year, January 1, 2002 through December 31, 2006, at which point fuel cell manufacturers should be able to produce a product at market entry cost. The credit does not specify fuel inputs, application 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.

Need for a Fuel Cell Tax Credit

Solid engineering work has advanced fuel cell technology over the past ten years. In fact, the cost per kW of energy produced in a fuel cell has come down by a factor of ten over the past five years (source: Bear Stearns, April 2000, Distributed Energy Services p. 17). Plug Power was founded in 1997 and our costs have already been reduced several fold. In part, this has been through the reduced amount of platinum as a catalyst, but most of the reduction is due to engineering, materials improvements and vigorous applied research and development efforts. We, along with all of the fuel cell system developers in this country, continue a vigorous cost reduction effort. Still, current costs are, at best, $4500 per kW and need to be reduced to the $1500 per kW range to be competitive with existing distributed generation technologies.

An important point to understand when comparing the costs of fuel cell technology to current central station power is that fuel cells *will* realize their cost advantage through economies of production. As we sell more systems, we are able to provide larger sales volumes to our component and subsystem suppliers and leverage lower costs. Additionally, we are able to benefit from scale of manufacturing in our own facility. By way of example, we have a control module in our fuel cell system that is similar to one we purchased when I was at Ford Motor Company. However, due to where we are on the learning curve and our volumes, we pay 8–10 times more than does Ford.

In conclusion, we urge you to pass H.R. 1275 and/or it's companion S. 828. Providing a fuel cell tax credit to consumers will encourage energy efficiency, provide great environmental benefits to our country and will allow customer choice in their power needs.

Thank you for the opportunity to testify.

Chairman MCCRERY. Thank you, Mr. Saillant. Mr. Murray.

STATEMENT OF ROBERT E. MURRAY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, MURRAY ENERGY CORPORATION, PEPPER PIKE, OHIO, ON BEHALF OF THE NATIONAL MINING ASSOCIATION

Mr. MURRAY. Thank you, Mr. Chairman, Members of the Committee. My name is Robert E. Murray and I am president and chief executive officer of the Murray Energy Corporation. It is a privilege to be here today on behalf of the National Mining Association. The National Mining Association represents 80 percent of the coal production in the United States and all of the uranium production. Murray Energy Corporation operates in the States of Pennsylvania, Illinois, Ohio, West Virginia, Kentucky, and Utah.

Mr. Chairman, I would like to request that my written statement be included in the record and, in the essence of time, I will discuss only two areas today of my testimony—the use of investment and production tax credits (PTC) to accelerate commercialization of clean coal technologies, both in existing and in new electric power generating facilities, and the elimination of the alternative minimum tax, which is adversely affecting the ability of the mining industry to attract capital for expansion.

Affordable, reliable electricity is necessary to maintain economic growth. By 2020, electricity consumption will increase 40 percent in our country. Yet the current electric generating fleet is not large enough to meet the demand. New electric generating plants will need to be built.

Coal is now the source for 52 percent of the electricity produced in the nation and many of the new plants should be coal. Coal is reliable, domestic, and affordable. It is the lowest cost way to generate electricity. And with new technologies, it can provide electricity with minimal impact on the environment. But new coal-based generating plants that would be capable of using this natural resource are not being built. This is largely due to the uncertainty about environmental regulations from the Environmental Protection Agency and also utilities are reluctant to assume the risk associated with large investments for advanced technologies, even when these technologies mean lower emissions.

We must do two things, Mr. Chairman and members of the Committee. First, we must expand the use of newer, more advanced NO_X and SO_2 control technologies in existing plants through retrofits. Second, we need to move advanced new technologies that have been proven at the demonstration stage to the commercial marketplace.

The National Electricity and Energy Technology Act, so-called NEET, has been developed to meet these challenges. The legislation has been introduced in the Senate, S. 60, and we expect that we will shortly have this bill introduced in the House. It is supported by coal producers, power generators, coal hauling railroads, the National Mining Association, Edison Electric Institute, Associa-

tion of American Railroads, the National REAs, and the American Public Power Association.

As the subject of this hearing is specifically changes in the Federal tax code, we will limit our comments to those relevant provisions of the NEET Act.

For existing coal-fired generating units first, NEET provides a 10-percent investment tax credit on the first $100 million of investment in a qualifying system of continuous emission control retrofitted on an existing coal-fired generating unit. If an existing unit is repowered then a $0.0034/Kwhr production tax credit for the first 10 years of operation is provided. All units must meet improved efficiency targets to qualify for any tax credit.

The second portion of the NEET Act involves a tax credit for a new generation of technologies installed on new generating plants and just a limited number of plants. NEET proposes to amend the Internal Revenue Code to provide a 10-percent tax credit on variable, efficiency-based 10-year production tax credit investments in advanced clean coal technologies on a limited number of new and repowered units.

These technologies must meet improved design efficiency standards and there are limits on the amount of the capacity for each technology and this tax credit would go away as the technology becomes competitive.

Tradable tax credits are also provided for electric power cooperatives and publicly traded utilities.

It is expected that the revenue impact of the NEET Act would be between $1.7 and $2.2 billion for the first five years and $3.2 to $4.5 billion for the second five years. These incentives will offset the significant technical and financial risks associated with putting new technologies online. In turn, these new technologies will allow greater use of affordable coal with lower emissions while keeping electricity costs as low as possible. This is a win for the environment, a win for the economy, a win for the lower income Americans who pay a far higher percentage of their incomes for electricity.

The second area of my presentation involves the corporate alternative minimum tax. As we know, Representative English has proposed that it be eliminated in earlier legislation and indeed the House enacted legislation to have historical corporate AMT taxpayers, such as mining, utilize accumulated AMT tax credits to offset prospective AMT tax liability, as proposed by Representative Hayworth. Unfortunately, this was vetoed by President Clinton.

Most mining companies are not profitable according to accepted accounting principles, yet we all pay the alternative minimum tax. This is a disincentive to investment in mining, a disincentive in coal, the lowest cost form of electricity generation in America.

Finally, we believe that mining companies should be provided with the opportunity to fully expense exploration and development costs, as does the oil and gas industry. The current limitations on expensing such exploration and development costs result in mining companies being forced to capitalize a percentage of these costs. This is a disincentive to open new mines.

Mr. Chairman, this concludes my remarks. I would be pleased to answer any questions.

[The prepared statement of Mr. Murray follows:]

Statement of Robert E. Murray, President and Chief Executive Officer, Murray Energy Corporation, Pepper Pike, Ohio, on behalf of the National Mining Association

Mr. Chairman, my name is Robert E. Murray. I am President and Chief Executive Officer of the Murray Energy Corporation. It is a privilege to appear here on behalf of the National Mining Association (NMA) to talk about changes that can be made in the Federal tax laws to encourage the more efficient use of coal to provide reliable and affordable electric energy for America with reduced environmental impact.

Coal comprises over 90 percent of our domestic energy reserve. It is the fuel for approximately 52 percent of the electricity that our citizens use to run our businesses and support our everyday lives. Coal is electricity. As stated in the President's May 17th report,[1] *National Energy Policy*: "If rising electricity demand is to be met, then coal must play a significant part." Coal, is and must continue to be, one of the cornerstones of our Nation's energy strategy.

Background

The Murray Energy Corporation is the largest independent, family held, coal producer in the United States. The coal companies operating under Murray Energy Corporation's ownership produced over 20 million tons of coal in 2000 in five states: Ohio, Pennsylvania, Kentucky, Illinois and West Virginia. We are expanding our operations in these states and in Utah, and expect to produce at least 30 million tons annually within the next three years.

The National Mining Association represents the producers of over 80 percent of America's coal and all of the uranium mined and processed in the United States. NMA also represents companies that produce metals and non-metals—large industrial energy consumers—as well as manufacturers of processing equipment and mining machinery and supplies, transporters, and engineering, consulting and financial institutions serving the mining industry.

Mr. Chairman my statement today will focus on three areas in which we believe changes in the Federal tax laws could enhance energy production and use: (1) the use of investment and production tax credits to accelerate commercialization of clean coal technologies both in existing and new electric power generating facilities; (2) the elimination of the alternative minimum tax; and, (3) changes in the tax code needed to encourage domestic uranium production and processing.

Accelerating the Use of Clean Coal Technologies for the Generation of Electricity

As so well described in the National Energy Plan that President Bush released on May 17th the American economy in the 21st century will require reliable, clean and affordable electricity to keep the engine running, the lights on, and the computers humming. The Department of Energy forecasts that, by the year 2020, U.S. electricity consumption will be over 40 percent higher than today. The current electric generating fleet is not capable of meeting these new demands. As a result, a large number of new base load electric generating plants will be required to meet expanded electricity demand reliably, and at affordable prices.[2]

Today, more than one-half of U.S. electricity is generated from abundant, low cost, domestic coal. Coal can play a greater role in meeting future demands, as it constitutes more than 90 percent of United States' fossil fuel resources, enough to last more than 250 years at current consumption rates.

However, new coal based generating plants that would be capable of using this great resource are not being built. To illustrate, over 43,000 megawatts (MW) of coal capacity came on line between 1980 and the end of 1984. In the past five years, only 3,500 MW of new coal capacity have been brought on line. This is largely due to uncertainty about new environmental requirements from the U.S. Environmental Protection Agency, coupled with the risks associated with large investments as the utility industry becomes more diverse and more competitive.

The development and commercialization of more efficient and lower emitting clean coal technologies is required to meet new electricity demands while continuing to improve the environment. In the short term the challenges are two. The first challenge is to expand the use of newer, more advanced NO_X and SO_2 control technologies in existing plants through retrofits. While such investments are extremely costly, technologies are available to do this while improving the efficiency of fuel combustion and increasing output. The second challenge is to move new advanced

[1] "*National Energy Policy*," Report of the National Energy Policy Development Group.

[2] The Energy Information Administration forecasts show that nearly 400 GW of new and replacement capacity will be required by 2020, the equivalent of 1,300 plants at 300 MW each. Some 378 MW of the needed capacity is still in the "unplanned" stage.

clean coal technologies that have been proven at the demonstration stage to, and through, placement in the commercial marketplace.

Legislation the "National Electricity and Environmental Technology Act" (NEET) has been developed to meet this dual challenge. It is important to note that this legislation, which is pending in the Senate as S. 60, and, we expect will shortly be introduced in the House, is strongly supported by coal producers, coal based electric generators, and coal hauling railroads, along with the NMA, the Edison Electric Institute, the Association of American Railroads The National Rural Electric Cooperative Association and the American Public Power Association.

The NEET legislation has three important programs:

• A research and development program that addresses long-term clean coal technology needs;

• Financial incentives—a limited investment tax credit—designed to incentivize the application of advanced technologies to existing coal units; and,

• A limited demonstration program to provide tax incentives (a combination of investment tax credits and efficiency production tax credits) for initial commercial scale application of advanced coal based generating technologies in both existing and new facilities.

Not only would implementing the NEET Act result in reduced environmental impact and greater efficiencies in converting coal to electricity, it would assure that our Nation has the affordable electricity we need for continued economic growth. NEET will result in significant reductions in emissions. NO_X emissions would be reduced by 741,000 tons, SO_2 emissions would be reduced by over 2.5 million tons, and CO_2 emissions would be reduced by nearly 12 million tons. NEET is complementary to the United States' climate change strategy outlined by President Bush on Monday. NEET is a win for the economy, a win for the environment and for the lower income Americans who pay a far higher percentage of their income for electricity than others in society.

As the subject of this hearing is specifically on changes to Federal tax code, we will limit our comments to the relevant portions of the NEET proposal. Tax changes proposed are:

(1) For existing coal-fired generating units: NEET proposes to amend the Internal Revenue Code to provide a 10 percent investment tax credit on the first $100 million investment in a qualifying system of continuous emission control retrofitted on an existing coal-based generating unit. If an existing unit is repowered with a qualifying clean coal technology, NEET proposes that units under 300MW be eligible for a $0.0034/Kwhr production tax credit for the first 10 years of operation. All units must meet improved efficiency targets to qualify for any tax credit.

(2) For advanced clean coal technologies installed on new generating plants: NEET proposes to amend the Internal Revenue Code to provide a 10 percent tax credit and a variable, efficiency based 10 year production tax credit for investments in advanced clean coal technologies for use in new or repowered units. Again, these technologies must meet increasingly improved design efficiency standards. The "bar" to qualify for tax credits gets higher in the out years of the program. NEET limits the amount of capacity for each technology that would qualify for credits with the understanding that, once a technology is proven commercially, tax credits are not needed to make that technology competitive.

Tradable tax credits are available for electric cooperatives and publicly owned utilities so they may also utilize the financial benefits of NEET.

It is expected that the revenue impact of the NEET proposal would be between $1.7—$2.2 billion for the first five years and between $3.2—$4.5 billion for the second five years. Over a 24 year period, the total revenue impact is projected to be from $8.3—$11.2 billion.

Why are aforementioned incentives necessary? Uncertainty about new environmental requirements and electricity deregulation, coupled with the fact that only expensive retrofit technologies can achieve the more stringent emissions limits being considered for existing coal based generating facilities, have caused electric generators to delay investments in new technologies. Additionally, initial commercial deployment of new technologies entails significant technical and financial risk. These risks can be offset in part, and needed investments can be encouraged, through the tax-based incentives outlined above. Coal based generation must and will continue to play an important role in meeting new energy demands and it is important that coal generators use the most efficient and environmentally sound technologies available.

The fact that incentives are needed to encourage the use of advanced clean coal technologies is clearly seen by analyzing recently announced additions to the coal

based generating fleet. Since the first of this year, companies have announced intentions to build nearly 34,000 MW of new coal fired capacity.[3]

According to the referenced RDI study, 23,000 MW will be at new sites, 9,800 MW will be in the form of expansion at existing sites and 851 MW will involve repowering at existing sites. A full 12,000 MW, or one-third of the new capacity planned, will use existing PC technologies. Only 4,000 MW will use the most advanced gasification technologies. Another 9,000 MW will use fluidized bed, and the technologies at the remaining units are unknown. This illustrates the reluctance of electric generators to take either the financial or the technical risks associated with the most advanced clean coal technologies and illustrates clearly the need for incentives to put "first and second" of a kind technologies on line. The incentives included in NEET will provide the impetus to increase the supply of electricity, improve the environment through reductions of pollutants regulated under the Clean Air Act, and reduce the amount of carbon dioxide emitted per unit of energy produced through significant increases in the efficiency of converting coal to electricity.

Tax Changes to Encourage Increases in Coal Production

Tax policy can be a major component of energy policy as taxes affect the development and production of energy, including electricity. Several provisions of the Internal Revenue Code should be modified to address counterproductive policies previously put into place. These issues are also of significant importance to the oil and gas industry.

The corporate alternative minimum tax (AMT) should be repealed or modified. Mining is a capital-intensive business, and the AMT works a hardship on such businesses. As measured by generally accepted accounting principles, most mining companies are not profitable. In recent years, most companies have been consistently unprofitable. The fact that mining companies are required to pay the AMT, even if they have no profit, has added to the difficulty of attracting capital to maintain, expand, or construct new mines. If elimination of the AMT as provided in legislation introduced by Rep. English and other members of the Committee, is not politically or fiscally achievable in the near term, at a minimum, provisions similar to legislation advanced by Rep. Hayworth and many other members of the committee in the previous Congress should be supported to allow historical corporate AMT taxpayers, such as mining, to utilize accumulated AMT tax credits to offset prospective AMT tax liability. Legislation to effect such a change was enacted by the previous Congress, but was vetoed as part of a larger tax package by former President Clinton.

Further, mining companies should be provided the opportunity to fully expense exploration and development costs as does the oil and gas industry. The current limitations on expensing result in mining companies being forced to capitalize a percentage of their exploration and developments costs. This tax treatment serves as a disincentive to the development of new mines to meet our Nation's needs.

Modifications in the Tax Code to Assist Domestic Uranium Producers

The United States uranium recovery industry has long been recognized as vital to United States energy independence and essential to National security. The domestic uranium industry has been found to be "not viable" by the Secretary of Energy under provisions of the Atomic Energy Act of 1954, as amended. Transfers and sale of government uranium inventories, including those related to the United States/Russian HEU Agreement and the privatization of the United States Enrichment Corporation, have had material adverse impacts on the United States uranium industry to the extent that the current spot market price of uranium is at an all time low. The unfettered introduction of government inventories has caused domestic uranium producers to either cease or curtail production.

At such time as the price of natural uranium recovers to approach a reasonable cost of production, the United States uranium industry can be competitive with foreign producers due to advances in technology. Providing assistance to the domestic uranium industry is essential to mitigate the impacts on a private industry from government disarmament policies and government transfers of excess uranium reserves. This will assure an adequate long-term supply of domestic uranium for the Nation's nuclear power program and will preclude any threat from foreign supply disruptions or price controls.

The National Mining Association supports modification of the tax code to allow domestic users of uranium products a credit for the purchase of domestic uranium products. Suggested changes are appended to my statement.

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[3] Source for this and all data in this paragraph: *"New Coal-Fired Generation, A summary of Developments and Impacts to the US Coal Industry,"* Mark Morey, Principal Coal Group, RDI Consulting, presentation to the Western Coal Council Spring Pacific Forum, June 6, 2001.

Mr. Chairman, this concludes our statement. We will be pleased to answer any questions either now or for the record.

Chairman MCCRERY. Thank you, Mr. Murray.

I advise the Members of the Subcommittee that I am going to go forward with Mr. Geller's testimony. At the conclusion of his testimony we will recess to go vote. However, any Member wishing to leave and go vote and come back is welcome to do that, but we will recess following Mr. Geller's testimony. Mr. Geller?

STATEMENT OF HOWARD GELLER, FORMER EXECUTIVE DIRECTOR, AMERICAN COUNCIL FOR AN ENERGY–EFFICIENT ECONOMY, ON BEHALF OF THE SUSTAINABLE ENERGY COALITION

Mr. GELLER. Thank you, Mr. Chairman. I am testifying today on behalf of the Sustainable Energy Coalition, a coalition of over 30 national business, environmental, consumer and energy policy organizations. I appreciate the opportunity to appear before the Subcommittee.

The Sustainable Energy Coalition supports a broad array of tax credits for innovative energy efficiency and renewable energy technologies. Adopting these tax credits will help manufacturers justify mass production and marketing and help buyers offset the relatively high first cost of the new technologies, thereby expanding sales and market share. Once the new technologies become widely available and produced on a significant scale, costs should decline and the tax credits can be phased out.

The Sustainable Energy Coalition supports tax incentives for a limited time period, typically for 5 years, for the following energy efficiency and renewable energy technologies.

High efficiency appliances. We support a tax credit of $50 to $100 for manufacturers of highly efficient clothes washers and refrigerators with a cap on the total credit per manufacturer. This proposal has been introduced by Representatives Nussle and Tanner, H.R. 1316, and also S. 686 in the Senate.

Highly efficient building equipment. We support a 20-percent investment tax credit with caps for innovative building technologies, including very efficient furnaces, stationary fuel cell power systems, gas-fired heat pumps, and electric heat pump water heaters. This proposal is included in S. 596 in the Senate. The coalition also supports H.R. 1275 mentioned by Mr. Saillant.

Combined heat and power. We support either a 10-percent investment tax credit or 7-year depreciation for combined heat and power systems with an overall efficiency of at least 60 to 70 percent. This proposal is included in S. 389 and S. 596 in the Senate, as well as H.R. 1045 and H.R. 1945 in the House.

High efficiency commercial buildings. We support a tax deduction of $2.25 per square foot for highly efficient commercial buildings and multi-family residences. This proposal is included in H.R. 778 introduced by Representative Cunningham and also S. 207 introduced by Senator Bob Smith in the Senate.

Hybrid electric, battery electric and fuel cell vehicles. We support tax credits of up to $5,000 for hybrid electric vehicles, up to $6,000

for battery electric vehicles, and up to $8,000 for fuel cell vehicles to stimulate introduction and purchase of these innovative fuel efficient technologies. This proposal is included in the CLEAR Act, H.R. 1864, in the House and S. 760 in the Senate.

Energy efficient new homes. We support a tax credit of up to $2,000 for highly efficient new homes. Versions of this proposal are included in S. 207, S. 389 and S. 596.

Next, renewable energy electricity production. We support extending the existing credits for electricity generated from wind power and closed loop biomass for 5 years. Also, this credit should be expanded to include electricity produced by agricultural and forestry residues, geothermal energy and incremental hydropower. These provisions in part or full are included in a Filner bill, H.R. 269, Foley bill, H.R. 876, Herger-Matsui bill, H.R. 1657, and the Dunn bill, H.R. 1677 in the House, as well as a number of bills in the Senate.

Residential solar energy systems. We support a 15-percent investment tax credit capped at $2,000 for residential solar electric and water heating systems. This proposal has been introduced by Representative Hayworth, H.R. 2076, also Senator Allard in S. 465.

And finally, small scale wind turbines. We support a 30-percent investment tax credit for wind turbines 75 kilowatts and below. This proposal is included in the Bingaman-Daschle bill, S. 596, in the Senate.

As you can see, virtually all these proposed tax credits have bipartisan support. A number of them, specifically for hybrid and fuel cell vehicles, combined heat and power systems, and renewable energy technologies, are included in President Bush's energy plan.

The administration estimates its clean energy technology tax provisions will cost the Treasury about $7 billion over 10 years. We estimate that our full set of recommendations would cost the Treasury around $10 to 14 billion over 10 years. This is a relatively modest cost considering the broad scope and importance of these technologies for addressing our long-term energy needs.

In summary, the Sustainable Energy Coalition urges the Congress to make adoption of tax credits for innovative energy efficiency and renewable energy technologies a high priority. By enacting tax credits on a broad set of energy efficiency and renewable energy technologies, the Congress can pave the way to a cleaner, more secure and more affordable energy future for all Americans. Thank you very much.

[The prepared statement of Mr. Geller follows:]

Statement of Howard Geller, Former Executive Director, American Council for an Energy-Efficient Economy, on behalf of the Sustainable Energy Coalition

ACEEE is a non-profit organization dedicated to increasing energy efficiency as a means for both promoting economic prosperity and protecting the environment. I am testifying today on behalf of the Sustainable Energy Coalition, a coalition of over 30 national business, environmental, consumer, and energy policy organizations. I appreciate the opportunity to appear before the Subcommittee.

The Sustainable Energy Coalition supports a broad array of tax credits for innovative energy efficiency and renewable energy technologies. Adopting tax credits for these technologies will stimulate technological innovation and reduce future consumption of fossil fuels, thereby providing a number of benefits including:

- saving consumers and businesses money;

• reducing the costs and risks that U.S. manufacturers confront when considering introducing innovative new energy technologies;
• reducing the risk of power shortages and improve the reliability of our overtaxed electric systems;
• reducing future oil and natural gas imports;
• reducing air pollution of all types since burning fossil fuels is the main source of most air pollution;
• lowering U.S. greenhouse gas emissions and slowing the rate of global warming.

Many new energy efficiency and renewable energy technologies including photovoltaic power systems, bioenergy systems, advanced wind turbine technologies, fuel cell power systems, hybrid and fuel cell vehicles, super-efficient refrigerators and clothes washers, and super-efficient new buildings have been commercialized in recent years or are nearing commercialization. But these technologies may never get manufactured on a large scale or widely used due to their initial high cost, market uncertainty, lack of consumer awareness, and other barriers.

Tax incentives can help manufacturers justify mass production and marketing for innovative energy efficiency and renewable energy technologies. Tax credits also help buyers (or manufacturers) offset the relatively high first cost premium for the new technologies, thereby helping to build sales and market share. Once the new technologies become widely available and produced on a significant scale, costs should decline and the tax credits can be phased out.

The Sustainable Energy Coalition supports providing tax incentives for a limited time period (typically for five years) for the energy efficiency and renewable energy technologies listed below. With regard to the energy efficiency measures, a key element in designing the credits is for only highly efficient products to be eligible. If the eligibility level is set too low, there will be many so-called "free riders" (i.e., individuals who would purchase the measure without the tax credit), and the cost to the Treasury will be high and incremental energy savings low. The renewable energy credits, with a few exceptions, are based on the amount of electricity generated. This provides manufacturers with an incentive to improve the performance and reduce the cost of their renewable energy technologies.

Here is a summary of our "clean energy" tax incentives recommendations (items are listed in alphabetical order, not indicative of any priority for the Coalition as a whole):

Energy Efficiency Provisions

• **Appliances**. We support a tax credit of $50–100 for manufacturers of highly efficient clothes washers and refrigerators (with a cap on the total credit per manufacturer). This will lead to a new generation of superefficient appliances, thereby saving energy and water. This proposal has been introduced by Sens. Allard, Lincoln, and Grassley in the Senate (S. 686) and Reps. Nussle and Tanner (H.R. 1316) in the House. It is strongly supported by the appliance industry.

• **Building Equipment**. We support a 20% investment tax credit with caps for innovative building technologies including very efficient furnaces, stationary fuel cell power systems, gas-fired heat pumps, and electric heat pump water heaters. This proposal is included in the Bingaman-Daschle bill. Also, Rep. Nancy Johnson has introduced a version of the stationary fuel cell tax credit (H.R. 1275) which the Coalition supports.

• **Combined Heat and Power**. We support either a 10% investment tax credit or seven-year depreciation period for combined heat and power (CHP) systems with an overall efficiency of at least 60–70% depending on system size. This proposal has strong industry support and is included in the Murkowski-Lott energy bill (S. 389), the Bingaman-Daschle energy bill (H.R. 596), as well as a bills targeted to CHP promotion introduced by Rep. Wilson (H.R. 1045) and Rep. Quinn (H.R. 1945) in the House.

• **Commercial Buildings**. We support a tax deduction of $2.25 per square foot for investments in commercial buildings and multifamily residences that achieve a 50% or greater reduction in heating and cooling costs compared to buildings meeting current model energy codes. This proposal is included in legislation sponsored by Sen. Bob Smith (S. 207) and Reps. Cunningham and others (H.R. 778).

• **Hybrid Electric, Battery Electric, and Fuel Cell Vehicles**. Tax credits of up to $5,000 for hybrid electric vehicles, up to $6,000 for battery electric vehicles, and $8,000 for fuel cell vehicles will help jump start introduction and purchase of these innovative, fuel-efficient technologies. The incentives should be based primarily on energy performance and provide both fuel savings and lower emissions. This proposal is included in the CLEAR Act, S. 760, introduced by Sens. Hatch, Rockefeller, and Jeffords, and the companion bill (H.R. 1864) introduced by Rep. Camp.

• **New Homes**. A tax credit of up to $2,000 for highly efficient new homes will stimulate efficiency and help lower housing costs for American families. Versions of this proposal have been introduced by Sen. Bob Smith (S. 207) and Rep. Bill Thomas and others in the last session of Congress. Variants are included in both the Murkowski-Lott (S. 389) and Bingaman-Daschle (S. 596) energy bills.

Renewable Energy Provisions

• **Renewable Energy Electricity Production (Section 45)**. We support extending the existing credits for electricity generated from windpower and closed loop biomass for five years. Also, this production credit should be expanded to include electricity produced by open loop biomass (i.e., agricultural and forestry residues but excluding municipal solid waste), geothermal energy, and incremental hydropower. The same credit should be provided to closed loop biomass co-fired with coal, and a smaller credit (one cent per kWh) should be provided for electricity from open loop biomass co-fired with coal. These provisions (in part or full) are included in the Murkowski bill, Bingaman-Daschle bill, Grassley bill (S. 530), Reid bill (S. 249), Dorgan bill (S. 94), Collins bill (S. 188), Filner bill (HR. 269), Foley bill (HR 876), Herger-Matsui bill (HR 1657), and Dunn bill (HR 1677).

• **Residential Solar Energy Systems**. We support a 15% investment tax credit capped at $2,000 for residential solar electric and water heating systems. In this case, an investment credit is preferable to a production credit due to the relatively high cost of smaller scale solar technologies at this time. This proposal has been introduced by Sen. Allard (S. 465) and Rep. Hayworth (HR 2076). It also is included in the Murkowski-Lott bill.

• **Small-scale Wind Turbines**. We support a 30% investment tax credit for small (75 kW and below) windpower systems. These are used in commercial and farm applications and are relatively costly compared to large wind turbines (500 kW and up). This proposal is included in the Bingaman-Daschle bill.

As noted above, virtually all of these tax credits have been introduced in the Congress with bipartisan support. Some have numerous co-sponsors already. And a number of the credits, specifically for hybrid and fuel cell vehicles, combined heat and power systems, and renewable energy technologies, are included in President Bush's energy plan. The Administration estimates that these provisions will cost the Treasury about $7 billion over 10 years. We estimate that our full set of recommendations would cost the Treasury around $10–14 billion over 10 years. This is relatively modest considering the scope and importance of our energy problems.

In summary, The Sustainable Energy Coalition urges the Ways and Means Committee and the Congress to make adoption of tax credits for innovative energy efficiency and renewable energy technologies a top priority. By enacting tax credits on a broad set of energy efficiency and renewable energy technologies, the Congress can pave the way to a cleaner, more secure, and more affordable energy future.

That concludes my testimony. Thank you again for the opportunity to testify today.

Chairman MCCRERY. Thank you, Mr. Geller.

There is a vote on the floor, gentlemen and lady. If you would just hold tight for a few minutes while we go vote, we will be right back and then allow members of the Subcommittee to ask questions. Thank you.

The Committee stands in recess.

[Recess.]

Chairman MCCRERY. The Committee will come to order. The witnesses will take their seats. We apologize for the interruption but occasionally we have to vote on the floor.

Ms. Cooper, I will start with you. If the new hybrid and alternative fuel vehicles save money in the long run through greater fuel economy, despite their higher up front costs, why do not consumers consider those factors when they are making new vehicle purchases? Why do we need an added incentive?

Ms. COOPER. Well, I think the key, Mr. Chairman, is that as you know, when you develop a new technology vehicle it is in many

cases much more expensive than the conventional vehicles with which these new technology vehicles would compete. So as the vehicles gain consumer acceptance and production volumes increase, the cost differential between these two advanced technology vehicles and conventional vehicles will be reduced and, in fact, even eliminated over time.

So we think it is really important to balance that gap between the incremental cost in a way that makes it easier for consumers to try a new technology. So that is really why we support these tax credits for the consumers because the real value is to deliver the benefits that these vehicles will obtain into the overall fleet and we have to get—that is the challenge we have, is to get consumers to purchase these vehicles.

As I said in my testimony, we currently make a lot of vehicles that are very fuel efficient, 30 to 40 and above 40 miles per gallon, but they represent a very small part of what consumers buy. So what we really have to do is deliver the technology and put it in an array of vehicles that deliver all of the attributes that people are looking for, if it is towing capacity, if it is added passenger capacity, other features, because consumers really want everything. And when they say they want fuel economy, we want to be able to deliver that without sacrificing safety and the other features that consumers look for.

So getting it up front and beginning to build the market penetration so that we get the volumes up, we think that is the best way over time to really begin—as we said, we are on the cusp of real change in the automobile industry and that truly is what we are trying—we are trying to bootstrap ourselves. We are trying to sort of give ourselves a leg up in the process and doing it through incentives that get the consumers, really help the consumers.

Chairman MCCRERY. Well, let us assume that Congress passes Congressman Camp's bill and the up-front credit to the consumer is in law. How many more fuel efficient cars do you estimate would be sold, say, in 5 years than if no credit were available?

Ms. COOPER. We cannot really give you that estimate at this point in time. We think, based on all of our companies looking at their product plans and the like, that there would probably be a dozen or more models or vehicles that would incorporate these new advanced technologies but I cannot tell you. All the companies are looking at what the time line would look like and what an accelerated schedule would look like. So I cannot give it to you but we can work to get a number back to you so that we can give you a better idea of what it would mean in the overall fleet.

Chairman MCCRERY. Yes, that would be helpful if you could get us some idea of what this credit would mean in terms of enhanced vehicle sales. And also, once you get that number, give us some idea of the reduction in gasoline use in the country with those new cars on the road.

Ms. COOPER. Well, we think that as this program is laid out, you do get credit for the technology itself being incorporated and then, as we believe a performance bonus for the fuel savings and the efficiency or economy that you would achieve. So we will work with you to provide some better estimates. Clearly they will be estimates, as I say.

Chairman MCCRERY. Thank you.

Also, I would like for you to get the Committee in writing the changes in Congressman Camp's bill that you think are necessary. You say in your written testimony that your coalition would suggest minor changes and some technical changes.

Ms. COOPER. Yes.

Chairman MCCRERY. In H.R. 1864. If you could get those to us in writing, that would be helpful.

Ms. COOPER. We would be glad to do that, glad to do that.

Chairman MCCRERY. Thank you.

Mr. Robinson, with respect to the 50,000 barrel a day limit, can you expound a little bit on the problems that causes? In current law if you go over the 50,000 barrel limit even one day during the year then you lose your status as an independent. And you are suggesting that we go to a 50,000 barrel average per day, which would give you some flexibility. And then, of course, you suggest that we go even higher than that but let us stick right now to the question of a single day occurrence versus an average day output.

What is the difference? Why is that better for you?

Mr. ROBINSON. Mr. Chairman, thank you for the question. I did not have a chance to address it much in my testimony.

This particular rule, of course, as you expounded, if the refinery produces 50,001 barrels of crude even on one day during the tax year, the code provides that the independent producer owner of that refinery loses his status for the entire tax year. As such, that requires that the refiner that is owned by such producers have to be very careful in monitoring their day-to-day operations. We have to essentially run well below 50,000, maybe 49,500 or something like that, so that we do not have an inadvertent measuring error or metering error or something like that and inadvertently break this limit. That is for every day during the year.

Our refinery, on the contrary, we believe is capable of running more than 50,000 barrels a day, although because of this limit we have never really tested that.

Also, there are many days during the year when the refinery has to be closed or operations have to be scaled back because of routine maintenance, either scheduled or unscheduled.

If we remove this on-any-single-day test and replace it with the concept of an annual average, in other words, the refinery will run 50,000 barrels per day or less on an annual average, that will permit any surplus capacity we have to be used on certain days when we can run greater than 50,000 in order to offset those days when we cannot but yet we would still achieve over a year, stay within the intended limit of 50,000, which we think is still in accordance with the spirit of what the code is attempting to achieve here.

Chairman MCCRERY. Thank you. It sounds like to me this is just common sense. If you want to limit an independent producer to refining no more than 50,000 barrels a day, you ought to average it out to give you some flexibility for your maintenance needs and, of course, to eliminate those extra costs in monitoring every single day of the year to make sure you do not go over that. It just sounds like common sense. So thank you for your response.

Mr. ROBINSON. That is correct. And, by the way, Chairman, thank you for your support on this issue in the past and your concern for all the issues of the refining industry in this nation.

Chairman MCCRERY. Mr. Saillant, I understand how economies of scale help bring down the per-unit cost of new technologies, such as fuel cells. In fact, in your testimony you noted that already the cost per kilowatt of energy produced by fuel cells has come down by a factor of 10 over the past five years.

Based on your look at this, if we were to adopt the tax credit proposal that you propose, how much further could we expect the cost per kilowatt hour to come down, say, in the next 5 years?

Mr. SAILLANT. Thank you. The economies of scale will really only kick in when we start getting into higher volumes, probably really outside the coverage of this bill. I am talking 100,000 units a year. So I would like to keep the economy of scale idea out of there for the moment as being impacted by this bill.

What this bill does, it enables us to incentivize the purchaser at the high end who can afford a more costly device while we are working on getting the size of the device, the fuel cell system, down, while we are getting the weight down, while we are getting the reliability up and we have to go through a number of design iterations for that to happen.

The biggest single cost right now of a fuel cell system is related to fundamental design, fundamental design in the sense that the science is known, and the application engineering is unknown. So what we are trying to do is to bridge that gap and get units in the field so that utilities, commercial users can begin to have experience with it and give us feedback on how to redesign in order to get into the volume regime that we think will open up in the $1,000 to $2,000 per kilowatt target area, market area.

Is that helpful?

Chairman MCCRERY. Yes, sir, very much so. In other words, you think you need the tax credit to help you basically research the practical application of the fuel cells in the market.

Mr. SAILLANT. Do the practical application, the bridge. You are exactly right. It is beyond research but it is into the early adopter phase where we need the incentive.

Chairman MCCRERY. Okay. If Congress were to approve the fuel cell tax credit, how quickly do you think we could see or we would see a substantial increase in the amount of national energy demand met by fuel cell technology?

Mr. SAILLANT. Our company's estimate right now, in collaboration with other companies in this space, we think that we could begin to have a significant impact in year 2005, 2006. And by that I mean 2, 3, 4 percent, which may not seem like a lot but in terms of peak shaving and back-up, it is very, very significant.

[The following was subsequently received:]

PLUG POWER INC.
Latham, New York 12110
June 15, 2001

The Honorable JIM MCCRERY,
Chairman, Select Revenue Measures Subcommittee
Committee on Ways and Means
U.S. House of Representatives
Washington, DC 20515

Dear Chairman McCrery:

Thank you for the opportunity to testify at the June 13th hearing on the effect of Federal tax laws on production, supply and conservation of energy. You had asked me during the witnesses questioning about the ability of fuel cells to reduce demand for electricity. For the record, I wanted to clarify the verbal response I provided to you at that time.

Alan Greenspan is correct: the short-term market for stationary fuel cells (the term of H.R. 1275) is relatively small. The fuel cell industry has estimated that fuel cell systems can provide 500 megawatts of electricity during that five-year time frame. According to data supplied by the Department of Energy, the average annualized electric demand in the United States is 440,000 megawatts. Further, data supplied by the DOE's Energy Information Agency indicates that the increase in average energy demand is growing at a rate of 7,200 megawatts per year.

Accordingly, while the impact of the fuel cell tax benefit during the five year term, will be relatively small percentage (0.114%) of total demand, it can account for approximately 1.4% of the new megawatts needed over the next five years. By 2020, the U.S. Department of Energy estimates that distributed generation, including fuel cells, will account for 20% of the energy mix of the country. In addition, fuel cells and other distributed generation technology have the capability to address load pockets and peak demand a very targeted manner, thereby making a significant contribution in certain geographic locations.

The importance of the fuel cell tax credit is not necessarily found in megawatt demand reduction during the term of the actual tax incentive, but rather supports the production and deployment of a cost-effective product that will increasingly offload megawatts of electricity capacity over the next two decades and beyond. Without passage of H.R. 1275, many of the companies in the fuel cell industry today will be unable to sustain themselves long enough to provide the desired public good of reducing our central station power demand.

Thank you again for the opportunity to testify and the opportunity to clarify my answer.

Sincerely,

Roger Sallant

Chairman MCCRERY. That is more significant than the estimates that we have heard in this Committee from the Congressional Budget Office (CBO), for example, for all of alternative sources, not just fuel cell. And I will tell you, too, I heard Chairman Greenspan the other day, in responding to a question from a member, say not to expect too much from fuel cell technology in the near future. So you might want to get some of your research over to the Fed.

Mr. SAILLANT. I might want to add to that. When I talk about fuel cells I am including 250 kilowatt units, for example, from International Fuel Cell, Fuel Cell Corp., Ballard, and so forth. I am not necessarily talking about the small fuel cells in the 5 kilowatt area.

Chairman MCCRERY. Thank you.

Mr. Geller, in your written testimony you describe several types of new technologies and say we ought to be supporting those through the Tax Code. Do you think that without the tax incentives we will be unable to achieve commercial success for some of these technologies?

Mr. GELLER. I think it varies from technology to technology. Some of the technologies are already available and are being sold on a limited basis. For example, wind power, there are wind farms going up virtually on a weekly basis in different parts of the country and it used to be only in California. Now it is the Great Plains, the Northwest. There are wind farms going up in New York State, also.

Other technologies are a bit down the road and are not commercially available yet, like fuel cell vehicles, for example. And I think the idea across the board here is to help, as previous witnesses have said, help manufacturers and help consumers to bear the higher cost for these new technologies for a limited time period to help them get well established, to help get the bugs worked out and get the economies of scale happening so that we have these technologies in hand.

This is not going to help us much in the short run; let us be honest. This is not going to do anything in the next year or two, these advanced technologies. The objective is to get them well established in the marketplace by 2005 so that we can be well prepared to address our energy needs over the long term. This is about thinking in the medium and long term. I think there are lots of other things we should be doing for the short term, given the energy problems that our nation is facing, but I think this is part of the mix, to support these innovative technologies so that they are produced on a larger scale, to help the manufacturers make that decision to go into production. There is uncertainty and risk and the tax incentives will help overcome these obstacles.

I think without the tax incentives some of it will happen but a lot less. I mean we have a couple of hybrid vehicles being produced today, for example, but I think we will have a lot more if the tax credits in the CLEAR Act are adopted.

Can I just add a comment on your initial question to Miss Cooper?

Chairman MCCRERY. Sure.

Mr. GELLER. I was involved personally in the development of the CLEAR Act and the discussions with the auto companies that developed it and we estimated that there might be something like 1 million to 1.5 million hybrid vehicles, just talking about the hybrid vehicles, vehicles that would get the credit over the time period. I think it is a 6-year time period through 2007. About 1.5 million hybrid vehicles would qualify for the credit and the Treasury Department uses a similar number for their estimates of the cost to the Treasury.

That is not a lot of vehicles, considering the market is about 15 million passenger vehicles sold per year, 1 million over 6 years, but the whole idea again is not to get a lot of impact from the credits directly but to get the technologies well established, get the products well established. I think if this is successful, the potential market by 2010 and the decade after 2010 could be millions of vehicles per year providing major energy savings down the road. I would encourage you to look at it in that perspective, that it is not about how much do we save from the products getting incentives.

I do not think there is enough money available to incentivize a large fraction of the market for any of these technologies. It is more

important to get them introduced, support the earlier adopters, get them beyond a niche product to where they are a couple of percent of the marketplace, and then phase out the credits and allow the market to work after that.

Chairman MCCRERY. Thank you. Mr. McNulty.

Mr. MCNULTY. Thank you, Mr. Chairman. As usual, you have done a good job of covering all the salient points. Let me just take a moment before I yield to our other colleagues to try to elicit a few more of the Saillant points with regard to fuel cells.

Roger, you and your colleagues have succeeded in getting me interested and even excited about the future application of fuel cells to address our energy needs but it is my view that probably most of my constituents and probably most Americans do not really have a clue about what fuel cells are. And you have described them very ably in your testimony today but I was wondering if you could expand a little bit more on the future practical application.

I know these would be guesses but how long do you think it would be before there would be a widespread use of fuel cells in residential homes? And would you have a guess as to how much a unit would cost and how long it would last before it had to be replaced, practical things like that?

Mr. SAILLANT. The general industry belief is that the automobile will be the largest single user of fuel cells in the 2020, 2025 type of frame of reference. In order to do that, it has to be $35 a kilowatt. The price volume sensitivity is real.

Before you can get to the automobile, we believe you will come to what we call the John and Jane Doe market. That market, we think, is somewhere in the neighborhood of $350 to $500 a kilowatt. We think that that market will begin to be real in probably the 2008 to 2010 or so timeframe.

Before that market there is a market where it will be $2,000 a kilowatt, which will be back-up power, telcoms, utility substations, small commercial, whether it is a 7–Eleven or a Mobil gas station, and so forth. That area will probably be entered, and I think incentives would help that, somewhere between 2004, 2005, 2006 and 2007.

We have just recently acquired a sale of 75 units with a single utility and it is not necessarily public but the point really is they want to work with the technology to understand how to use them in back-up power and how to integrate them into their already-existing grid network, creating microgrids, and so forth.

So specifically back to your question, it is price-sensitive. It is probably two decades before we begin to see general widespread usage.

I would say that thing that you are doing in this market area by incentivating is different than regulating. When I was in the auto industry, we regulated emission controls and brought about expenditures in excess of tens of billions of dollars for automobiles over a 10- or 15-year period, cars and trucks, to go from unemissionized to emissionized.

One thing that I can see in parallel to this area is the seriousness with which the world is facing the CO_2 problem. That may lead to regulation. All this work is really about preparing ourselves in converting from a fossil fuel CO_2-based economy to one where

eventually you can actually have total renewables. So I look at this money as very well spent, and a better alternative to going the regulatory route in a crisis.

Mr. MCNULTY. Thank you very much.

And Mr. Chairman, one of the reasons I asked that question was because I do not think that you should be too concerned about Mr. Greenspan's comments because, first of all, he was talking about in the short term and obviously here we are talking about the long term.

And the other thing is that I have tried to figure out for many years why, for instance, the stock market does what it does. A lot of people think it is based upon Greenspan's comments and it has been my experience, because I have been tracking this, that the stock market also goes up and down based upon whether or not Alan Greenspan has had a bad hair day.

So I really would not worry too much about his comments with regard to fuel cells. Thank you.

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

Mr. BRADY. Mr. Chairman, I came in a little late so on this panel I am clueless, not that the two are always related but in this case it is, and I will wait for the next panel. Thank you.

Chairman MCCRERY. Okay, thank you very much.

I want to thank all the Members of the panel for your excellent testimony and your being patient with us, staying to receive our questions, and now we will excuse you and invite our second panel to come forward.

In the second panel we have Tom Ed McHugh, the executive director of the Louisiana Municipal Association, Baton Rouge, Louisiana on behalf of the American Public Gas Association; Charles N. MacFarlane, assistant general tax counsel, Chevron Corporation on behalf of the American Petroleum Institute; Vince T. Van Son, manager, business development, Alcoa Energy Division, Alcoa Inc.; and Mr. David S. Hall, manager of taxation, Berry Petroleum Company from Taft, California on behalf of the Independent Petroleum Association of America.

Gentlemen, the Subcommittee is pleased to have all of you with us today. I am particularly pleased to have an old friend of mine, Tom Ed McHugh from Louisiana, whom I have gotten to know over the years and have a great deal of respect for. He is a former mayor of the second largest city in our State, Baton Rouge, did a great job there and is now continuing to assist the municipalities all over the State through the Louisiana Municipal Association. And Mr. McHugh, we will begin with you. You may proceed.

STATEMENT OF TOM ED McHUGH, EXECUTIVE DIRECTOR, LOUISIANA MUNICIPAL ASSOCIATION, BATON ROUGE, LOUISIANA, ON BEHALF OF THE AMERICAN PUBLIC GAS ASSOCIATION

Mr. MCHUGH. Thank you, Mr. Chairman, Mr. McNulty and members of the Subcommittee. I am delighted to be here.

I am in support of H.R. 1986 by Congressman Mac Collins and this legislation's purpose is to clarify the treatment of tax-exempt bonds used to fund long-term prepaid contracts for natural gas. The reason for this clarification is to deal with the problem created

by the IRS that has effectively prevented the use of tax-exempt bonds, a privilege granted to the municipal and state governmental entities by Congress.

As background, the American Public Gas Association and municipal gas systems, APGA, is a national association representing 570 members in 36 states across this great nation, of the nearly 1,000 systems that serve 4.8 million customers or 5 percent of the national gas market.

The Louisiana Municipal Gas Association is comprised of 62 members of the 109 systems throughout the State of Louisiana and it is managed by the Louisiana Municipal Association, an association of 303 municipal governments across the entire State of Louisiana and one parish, or county that you might be more familiar with.

Municipal-owned gas systems are not-for-profit entities, public entities owned and accountable to the citizens that they serve, generally serving a mixture of residential, commercial and industrial customers. Reliability of service is paramount. As a practical matter, service can never be interrupted, heating our homes, our hospitals, and our schools.

Let us review for a minute the important issues that bring us to where we are today. The Federal Energy Regulatory Commission in 1993 restructured the natural gas industry. Municipal local distribution companies, LDCs, could no longer buy direct from interstate pipelines. They now are required to acquire a reliable gas supply and arrange transportation in order to serve the members across their districts.

In response to this new changing marketplace, joint action agencies or authorities were created to help the LDCs to assure a supply of competitive price natural gas. Joint action agencies or authorities looked at options. They, in effect, tried to form business plans. They looked at options such as pay-as-you-go, drilling wells, operating buying production, long-term prepay, both taxable and nontaxable bond issues, and other business plans in order to meet the requirements of a reliable service of long-term prepaid and as we went through that business process, it became absolutely clear to us that the prepay was a substantial business response to the needs that we had.

And based on the risk factors—credit issues and good public policy—we had no commercially reasonable alternative. In August 1999 the IRS, in an unrelated matter, raised some questions and asked for public comments and threatened the potential of a retroactive clause in the issuance of the prepaid tax-exempt bonds.

In January of 2000 they had a public hearing. No other action has resulted from that public hearing and the action or the lack of action has effectively prevented the issuance of tax-exempt bonds to fund long-term prepaid contracts for natural gas. By no action, IRS, since January 2000, have basically overturned a privilege granted by Congress.

If we review the current law, prepayment does not result in prohibited arbitrage if prepayment is made for a substantial business purpose other than investment returns. And the issuer has no commercially reasonable alternative.

This is precisely the case with prepaid natural gas contracts for municipal gas systems. Our substantial business purpose is the duty to protect the general health and welfare of the citizens that we serve. We must deliver gas that heats our homes, our schools, our hospitals, our businesses and our factories. Prepay allows long-term contracts that have severe penalties for failure to perform. The overriding business purpose is to secure delivered supplies of gas on a competitive price basis. Prepaid transactions are designed to meet these goals and they become a clear business purpose.

As previously mentioned, other transactions, such as pay-as-you-go, drilling, and others, are not reasonably commercial alternatives. Although municipal gas systems clearly have a substantial business purpose and no commercially reasonable alterative, IRS' failure to clear up this matter in line with the current law has eliminated this most efficient tool available to public gas systems to secure long-term reliable supplies of natural gas. Congress must step in and enact legislation clarifying this law.

Mr. Chairman, this concludes my prepared testimony. Thank you for this opportunity.

[The prepared statement of Mr. McHugh follows:]

Statement of Tom Ed McHugh, Executive Director, Louisiana Municipal Association, Baton Rouge, Louisiana, on behalf of the American Public Gas Association

Mr. Chairman, Mr. McNulty, and Members of the Subcommittee:

I appreciate the opportunity to discuss with you ways to facilitate the reliable distribution of natural gas. My name is Tom Ed McHugh. I am the Executive Director of the Louisiana Municipal Association and I am here on behalf of the American Public Gas Association. We are testifying in support of H.R. 1986, legislation that has been introduced by Congressman Mac Collins to clarify the treatment of tax-exempt bonds used to fund long term prepaid contracts for natural gas.

Background on APGA and Municipal Gas Systems

APGA is the national association of municipally owned natural gas distribution systems, with some 570 members in 36 states. Overall, there are nearly 1,000 municipally owned natural gas systems in the United States, serving approximately 4.8 million customers or about 5% of the national market for gas.

In Louisiana there are approximately 109 publicly owned, municipal or utility district gas distribution systems, of which 60 are members of the Louisiana Municipal Gas Authority. My organization, the Louisiana Municipal Association, manages the day-to-day operations of the LMGA. The LMGA was created in 1987 by an act of the Louisiana legislature. The LMGA and its members are political subdivisions of the State of Louisiana. The primary purpose of the LMGA is to purchase wholesale natural gas supplies for its members at the best price possible. These 60 members are connected to 11 pipelines. The LMGA was in the process of prepaying for a 10-year supply of natural gas in August 199 when the IRS chilled the market.

Municipally owned gas systems are not-for-profit retail gas distribution entities that are owned by, and accountable to, the citizens they serve. They include municipal gas distribution systems, gas and other public utility districts, county districts, and other public agencies that own and operate natural gas distribution facilities. I will refer to systems as "Municipal LDCs." Although they are located throughout the nation, municipal gas systems are most prevalent in the Southeast, and within the Southeast mostly in small towns.

Municipal LDCs generally serve a mix of residential, commercial and industrial customers. The service provided by most Municipal LDCs to their customers is predominantly firm service, which means that natural gas deliveries as a practical matter can never be interrupted. The reliability of service is of paramount importance, since natural gas is used mostly to provide heat to homes, hospitals and schools.

As departments or enterprises of governmental units, Municipal LDCs operate under different principles than do for-profit, investor-owned corporations. As a general matter, governmental units operate in a conservative, risk-averse manner and

do not enter into transactions that may have the potential of generating substantial profits but which also expose public funds and capital investments to substantial risk of loss. As applied to Municipal LDCs, this principle would foreclose in most instances consideration of certain transactions that would be considered by private companies in obtaining gas supplies, such as the various means of purchasing natural gas in the ground, due to the production risks associated with such transactions. As a general rule, Municipal LDCs in the deregulated supply market are seeking, and will continue to seek, to obtain their natural gas supplies through contractual arrangements containing appropriate security provisions with reputable, substantial suppliers of natural gas, whether producers or aggregators/marketers.

Regulatory and Market Changes

In 1993, the Federal Energy Regulatory Commission ("FERC") restructured the natural gas industry so that municipal LDCs could no longer purchase natural gas supplies from interstate natural gas pipelines. This fundamental change in the marketplace meant that for the first time municipal LDCs both had to acquire reliable gas supplies and transport those supplies on their own in a deregulated marketplace. In response, many formed joint action agencies—as contemplated in the FERC restructuring—to acquire and manage the delivery of gas.

Joint action agencies provide a range of services to municipal LDCs to assist them with their responsibilities to provide an assured supply of competitively priced natural gas to their customers. The preferred means of fulfilling these responsibilities in today's gas markets is through long-term prepaid contracts financed with the proceeds from tax-exempt bonds. The joint action agency deals directly with the gas supplier negotiating the terms of the prepaid, long-term contract for the delivery of natural gas. These contracts are typically for ten-year terms. The contract with the supplier is for a fixed price based on the market conditions at the time of the contract. In most cases, the parties then enter into a swap agreement with a third party financial institution where the fixed price is converted to a monthly indexed price as the gas is delivered.

The municipal LDCs enter into swap agreements because as public bodies, accountable to their citizens, they prefer to avoid the risk associated with purchasing long term gas at fixed prices. For example, they want to avoid a situation where they have a supply of gas that was purchase at $5.00 per MMBtu when the current market price is at $3.00 per MMBtu. In such case, the municipal LDC risks incurring substantial losses, as well as the loss of industrial customers, where they have purchased gas at one price and the market price is considerably less.

IRS Action

In August 1999, in the preamble of unrelated proposed regulations, the Internal Revenue Service (IRS) published a request for comments that has effectively prevented municipal LDCs from using their tax-exempt borrowing authority to fund the purchase of long-term, prepaid supplies of natural gas for their citizens. In the preamble statement, the IRS questioned whether the purchase of a commodity, such as natural gas, under a prepaid contract financed by tax-exempt bonds has a principal purpose of earning an investment return. If this were the case, the bonds could run afoul of the arbitrage rules of the Internal Revenue Code.

This action, together with the treat of retroactive action, has effectively prevented the issuance of tax-exempt bonds to fund long-term prepaid contracts for natural gas. Municipal LDCs, and the joint action agencies which represent them, have resorted to the use of short-term contractual arrangements or have issued taxable bonds. Other than to hold a hearing in January of 2000, and to threaten retroactive regulations, the IRS has not made any public statements nor taken any further steps toward the issuance of further guidance to clarify current law or adopt new rules.

This has seriously impeded the gas supply planning efforts of municipal gas systems throughout the United States. Meanwhile, during this period the natural gas markets have been in turmoil, as supply has not kept up with growing demand. As a result, prices have reached record levels and supply disruptions have occurred throughout the country. While prices have currently settled down because of the seasonal drop in demand, uncertainties continue in the natural gas markets.

H.R. 1986

H.R. 1986 does not overturn current law nor change any IRS regulation. It simply restates the law as it has been understood for years, both with respect to the arbitrage rules and the private loan financing rules, to allow an effective and reason-

ably-priced energy delivery system to continue unimpeded. The legislation provides that a prepayment contract for the purchase of natural gas reasonably expected to be used in the business of a governmentally owned utility is not investment property under the arbitrage rules. It would also clarify that prepayment contracts for the purchase of natural gas reasonably expected to be used in the business of a public utility do not create a loan of the bond proceeds to the gas supplier for purposes of the private loan financing test. Although no current issue exists with respect to the private loan financing test, this change is included to deal with any potential attempt by the IRS to characterize prepaid natural gas contracts for public utilities as private loan financings. The existing Treasury regulations relating to the treatment of prepayments under the private loan financing rules contain basically the same standard as the existing Treasury regulations relating to the treatment of prepayments under the arbitrage rules.

Current Law

Investment Type Property. Section 103(a) of the Internal Revenue Code of 1986 (the "Code") provides that interest on an obligation of a State or local government is not included in gross income. Section 103(b) of the Code provides an exception to this general rule under which interest on any arbitrage bond is not tax-exempt. Section 148 of the Code, in turn, defines an arbitrage bond as a bond issued as part of an issue any portion of the proceeds of which are reasonably expected to be used directly or indirectly to acquire higher yielding investments. With one important exception, these general rules have not changed since 1969, when the arbitrage bond prohibition was first added to the Internal Revenue Code of 1954 (the "1954 Code").

Under the 1954 Code, the only types of investments that were subject to the arbitrage restrictions were "securities or obligations." As a result, under the 1954 Code, the investment of bond proceeds in investments other than securities or obligations did not result in the loss of tax-exempt bond status. The terms "security" and "obligation" were relatively narrowly defined under the applicable regulations.

As part of the enactment of the Tax Reform Act of 1986 (the "1986 Act"), Congress expanded the arbitrage limitations applicable to tax-exempt bonds in a variety of ways. One specific change was to expand the types of investments that are subject to the arbitrage restrictions. This was accomplished by providing that the acquisition of "higher yielding investments" result in arbitrage bond status. Under the Code, the term "higher yielding investments" is defined as any "investment property" that produces a yield over the term of the bond issue that is materially higher than the yield on that bond issue. "Investment property" was, in turn, defined to include securities, obligations, annuity contracts, and any "investment-type property." The term "investment-type property" is not defined by the Code, although Congress did provide some guidance on the meaning of this term in the legislative history to the 1986 Act. The General Explanation of the Tax Reform Act of 1986 prepared by the staff of the Joint Committee on Taxation includes a reference to prepayments in a reference on page 1202: "Congress was aware that bond proceeds might be used to prepay items as a means to avoid arbitrage restrictions, and intended for the Treasury Department to adopt rules to treat such prepayments as investment-type property where appropriate."

The regulations, 1.148–1(e), issued in June, 1993, include a definition of "investment-type property" that reads as follows:

(e) Investment-type property—(1) In general. Investment-type property includes any property, other than property described in section 148(b)(2)(A), (B), (C), or (E), that is held principally as a passive vehicle for the production of income. For this purpose, production of income includes any benefit based on the time value of money, including the benefit from making a prepayment.

(2) Non-customary prepayment. Except as otherwise provide in this paragraph (e), a prepayment for property or services gives rise to investment-type property if a principal purpose for prepaying is to receive an investment return from the time the prepayment is made until the time the payment otherwise would be made. A prepayment does not give rise to investment-type property if—

(i) The prepayment is made for a substantial business purpose other than investment return and the issuer has no commercially reasonable alternative to the prepayment; or

(ii) Prepayments on substantially the same terms are made by a substantial percentage of persons who are similarly situated to the issuer but who are not beneficiaries of tax-exempt financing.

Private Loan Financing. Section 141 of the Code includes rules for purposes of determining if a bond is a private activity bond. A bond will be considered to be a private activity bond if the "private loan financing" test set out in section 141(c) of

the Code is met. The test is met if more than a certain amount of the proceeds of the issue are used, directly or indirectly, to finance a loan to a person other than a governmental unit. The General Explanation of the Tax Reform Act of 1986 prepared by the staff of the Joint Committee on Taxation provides on page 1166 that "a loan may arise—from transactions in which indirect benefits that are the economic equivalent of a loan are conveyed." That discussion goes on to describe circumstances in which a lease, management contract, or output contract may in substance constitute a loan of bond proceeds. There is no discussion whatsoever of prepayments by the governmental entity and the situations described have no relationship to contracts under which a governmental entity purchases a needed commodity or service.

Nevertheless, the regulations interpreting the private loan financing test, 1.141–5(c)(2)(ii), provide that certain prepayments will be treated as loans if "a principal purpose for prepaying is to provide a benefit of tax-exempt financing to the seller. A prepayment is not treated as a loan for purposes of the private loan financing test if—

(A) The prepayment is made for a substantial business purpose other than providing a benefit of tax-exempt financing to the seller and the issuer has no commercially reasonable alternative to the prepayment; or

(B) Prepayments on substantially the same terms are made by a substantial percentage of persons who are similarly situated to the issuer but who are not beneficiaries of tax-exempt financing.

This language is substantially the same as the language used for purposes of the "investment-type property" test described above.

Position of American Public Gas Association

It has been our position, and that of every bond counsel who has reviewed these transactions, that the existing arbitrage rules, as illuminated by their legislative history, do not prevent the prepaid purchase of natural gas by a municipal gas supply agency. Those rules were intended to target prepayment abuses, not prepaid natural gas supply contracts entered into by municipalities or their gas supply joint action agencies.

The use of tax-exempt financing to prepay long-term gas supply contracts is not prohibited arbitrage because: (1) receiving an investment return is not a principal purpose of the prepayments; and, (2) the prepayment is made for a substantial business purpose and the issuers have no commercially reasonable alternative. Furthermore, the use of tax-exempt financing to prepay long-term gas supply contracts is not private-loan financing because: (1) the prepayment is not made to provide a benefit of tax-exempt financing to the seller; and (2) the prepayment is made for a substantial business purpose and the issuers have no commercially reasonable alternative.

As noted above, H.R. 1986 would not change current law or any IRS regulations, it would simply deal with the confusion created by the August 1999 IRS request for comment by clarifying the law to allow public gas systems to continue providing reasonably-priced energy to their customers.

Substantial Business Purpose and Commercially Reasonable Alternatives

Municipal LDCs have a duty to protect the general health and welfare of their customers, i.e., the citizens of their community, and therefore they cannot fail to deliver gas that heats homes, hospitals, schools, businesses, and factories. The security, reliability, and adequacy of natural gas supplies are the paramount concern for these gas distributors. In a partially deregulated industry, supply security can be obtained only by contract. Prepaid gas contracts allow Municipal LDCs to obtain long-term supplies under a contract structure that often includes severe penalties if the supplier fails to perform. Such agreements have become the vehicle for the Municipal LDCs to acquire the most reliable gas supply possible.

In today's turbulent natural gas markets, long-term prepaid supply arrangements are the most reliable means of obtaining an assured supply of natural gas. To fund prepayment contracts, the municipality or the joint action agency issues tax-exempt bonds. The seller discounts the prepaid price for several reasons, including because the contract is prepaid, which eliminates the normal credit risk associated with selling gas to non-rated governmental entities. (The LDC's credit risk became even more of a limiting factor in the kind of high priced, volatile gas markets witnessed last winter.) Municipal LDCs are able to obtain these very firm gas supplies at more competitive prices. Until August of 1999, joint action agencies entered into prepayment supply contracts with gas suppliers to obtain a long-term (e.g., 10-year) supply of gas.

The law does not impose the arbitrage restrictions on all prepayment transactions funded with tax-exempt bonds. Rather, those restrictions only apply if a principal purpose of the transaction was arbitrage and there is no other substantial business purpose or evidence that the prepayment is a customary transaction. The approach taken by the IRS, Treasury, and Congress has been not to prohibit transactions where tax-exempt bond proceeds are used and a time value of money benefit results so long as there is a good business purpose or the transaction is customary. Passage of H.R. 1986 will preclude the IRS from changing this policy with respect to gas purchased by municipal LDCs.

The gas prepayment transactions at issue do not result in investment-type property. Without question, the principal purpose of municipal gas systems that have entered into gas prepayment transactions has not been arbitrage. The joint action agencies that have entered into prepaid gas transactions have two overriding purposes: (1) they must obtain a secure delivered supply of gas to meet their obligations to their members and other customers and (2) they must obtain delivered gas at competitive prices to ensure that their members can remain competitive. The gas prepayment transactions are designed to meet these two goals, which also reflect the *raison d'etre* of these joint action agencies.

Municipal LDCs have concluded that these transactions are the best way to cope with deregulation of natural gas sales. They have not been able to assemble the benefits derived from a long-term, prepaid gas supply contract in any other sort of transaction. Sellers extract a substantial premium for the features of a prepaid contract when the gas is sold on a pay-as-you-go basis. Thus, many Municipal LDCs and joint action agencies have concluded that there is no commercially reasonable alternative to a prepaid gas contract.

Commodity Swaps

Some confusion has developed around this matter because of the use of commodity swaps in these transactions. A commodity swap is a price hedge that has become a widely used tool in the industry by both buyers and sellers of natural gas. Natural gas supply prices are extremely volatile. The risk of future changes in natural gas prices is great. It is not uncommon to see price swings of $1.00 to $2.00 per MMBtu from one month to the next. Protecting against price risk is commonplace in the natural gas industry. Producers, distributors and end-users regularly purchase natural gas price protection through swap agreements or natural gas futures contracts.

The fact that municipalities or municipal joint action agencies purchase separate protection to address their price risk does not add to, or take from, the analysis under the arbitrage regulations. The test is whether the natural gas supply prepayment is to earn an investment return. It is not. It is to obtain long-term, firm, secure natural gas supply to meet the obligations of the municipalities or agencies. The benefits of the natural gas supply prepayment are locked in by the up-front payment and are exactly the same whether or not the municipalities or agencies purchase the separate price protection.

Conclusion

Municipal LDCs have responded to the federally mandated restructuring of the natural gas industry in just the manner envisioned by the federal government. They have joined together into gas purchasing groups, and they have then developed a supply transaction that helps them compete. That transaction is consistent with the rules and the purposes that underlie those rules. There is no valid basis for prohibiting prepaid natural gas contracts funded by tax-exempt bond proceeds.

Although municipal gas systems clearly have a "substantial business purpose" for entering into prepayment transactions and "no commercially reasonable alternative," the IRS' failure to issue any guidance following its August 1999 request for comment has eliminated the most efficient tool available to public gas systems to secure long-term supplies of natural gas. Congress must step in and enact legislation clarifying the law.

Mr. Chairman, this concludes my prepared testimony. I will be pleased to answer any questions you or other members of the Subcommittee may have.

Chairman MCCRERY. Thank you, Mayor McHugh. I might add, too, Mayor McHugh is ably assisted by another old friend of mine, former State representative Robert Adly from Louisiana, who was also a floor leader for our Governor in his days in the legislature,

so they come well prepared. Thank you both for coming. Mr. MacFarlane.

STATEMENT OF CHARLES N. MACFARLANE, ASSISTANT GENERAL TAX COUNSEL, CHEVRON CORPORATION, SAN RAMONE, CALIFORNIA, ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, DOMESTIC PETROLEUM COUNCIL, AND U.S. OIL & GAS ASSOCIATION

Mr. MACFARLANE. Thank you, Mr. Chairman. My name is Charles MacFarlane and I am assistant general tax counsel at Chevron Corporation. I am appearing today as a witness for the American Petroleum Institute, the Domestic Petroleum Council, and the U.S. Oil and Gas Association.

The United States today finds itself at a crossroads. Natural gas price increases last winter and higher gasoline prices this spring are in large part the inevitable result of our Nation's past failure to address its long-term energy needs. According to the Department of Energy, energy demand in this country will only continue to grow, with demand for oil and natural gas expected to rise 33 percent by the year 2020.

The oil and natural gas industry stands ready to do all that we can to meet the dual challenges of satisfying increased future U.S. energy demand while at the same time maintaining a clean environment. In the short run, our industry is working flat out to produce the gasoline consumers need. With eight consecutive weeks of record production, refinery utilization is up to 97 percent. However, securing our Nation's long-term energy future will take time and will require an incredible amount of capital investment.

U.S. tax policy significantly impacts our industry's ability to compete and will play a pivotal role in determining whether the needed capital investment will be made. It must be remembered that oil and gas projects require large amounts of capital and are high risk, long lead time ventures. The tax treatment of the financing and structuring of these ventures is one of the essential elements of decisions whether to proceed.

In 1999 the united oil and gas industry proposed a series of tax changes designed to spur domestic oil and gas production—expensing of geological and geophysical costs, expensing of delay rental payments, relief from the alternative minimum tax, a marginal domestic oil and natural gas well tax credit, and eliminating restrictions on percentage depletion for independent producers. In addition, expanding the enhanced oil recovery and a heavy oil production credit would help to increase domestic production.

Finally, recent events have demonstrated that it is equally important that we maintain an adequate refining and pipeline transportation infrastructure. Modifying the depreciation lives for refinery assets, oil and gas pipelines, and storage tanks by making them more consistent with other manufacturing assets will help promote the tremendous investment that is needed in these areas.

While the United States has a strong strategic and economic interest in maintaining a vibrant domestic oil and gas industry, we also need a wide diversity of international supplies. The U.S. taxation of foreign source income imposes a substantial burden on all U.S. multinational companies by exposing them to double taxation

and significant compliance costs. Significant additional tax restrictions are imposed on the oil and gas industry that place us in a less favorable position than U.S. industry in general.

In order to survive, the industry must operate where it has access to economically recoverable reserves. Since access to domestic opportunities has been substantially foreclosed, the tax treatment of international operations is critical to the industry's ability to supply consumers' energy needs.

Tax measures that would enable U.S. oil and gas companies to better compete in the global oil and gas market include the repeal of the separate oil and gas foreign tax credit limitation and other items enumerated in my written statement.

In summary, we support tax provisions that will encourage the needed capital investment in our Nation's refining and distribution infrastructure. Further, our industry strongly supports efforts to encourage increased petroleum and natural gas production activity in the United States through more equitable tax rules that will facilitate the use of new technologies for exploration, development, and production.

It is clear that despite our best efforts, U.S. demand for oil and natural gas cannot be met solely through increased domestic production. While U.S. reliance on imported oil can and should be reduced, maintaining the global competitive position of the U.S. oil and gas industry will be crucial to ensuring that U.S. consumers continue to enjoy a readily available supply of affordable fuels.

Thank you for the opportunity to present our views.

[The prepared statement of Mr. MacFarlane follows:]

Statement of Charles N. MacFarlane, Assistant General Tax Counsel, Chevron Corporation, San Ramone, California, on behalf of the American Petroleum Institute, Domestic Petroleum Council, and U.S. Oil & Gas Association

I. INTRODUCTION

These comments are submitted by the American Petroleum Institute (API) and the Domestic Petroleum Council for inclusion in the record of the June 13, 2001 House Ways and Means Subcommittee on Select Revenue Measures Hearing on the effect of federal tax law on the production, supply and conservation of energy. API represents more than 400 member companies involved in all aspects of the oil and gas industry, including exploration, production, transportation, refining, and marketing. The Domestic Petroleum Council is a national trade association representing 22 of the largest U.S. independent natural gas and crude oil exploration and production companies. The U.S. Oil & Gas Association represents more than 2000 members of all sizes involved in the exploration and production of oil and natural gas.

Last year, and again this spring, U.S. energy consumers experienced sudden increases in oil and gas prices, and regional price volatility in response to events such as unusual weather, difficulties in producing regional gasoline blends, and refinery and transportation interruptions. With the President's national energy strategy proposals joining those from Democrat and Republican members of Congress, Americans will benefit from the long-neglected national debate now underway concerning our nation's energy future. Recent events affecting energy supplies and prices also serve as a reminder that oil and natural gas remain essential to fueling the growth of both the U.S. and the world economies, and measures to ensure sufficient quantities of these products must be part of any U.S. energy plan. Together, oil and natural gas supply more than 60 percent of U.S. and world energy needs, and their role in fueling future economic growth is expected only to increase.

The Department of Energy's (DOE) most recent *International Energy Outlook* estimates that by 2020, world energy demand will be almost 60 percent higher than in 1999. Three-quarters of that total energy demand growth is expected to be for oil and gas, so that the share of oil and gas in the global energy mix will rise to 68 percent by 2020. An ever-increasing share of this growth, especially in the

United States, is expected to be for natural gas due to its comparative energy efficiency, clean burning characteristics, and abundance of potential supplies in North America.

From strictly a world resource standpoint, there is no reason to doubt that the resource base is adequate to satisfy expected growth in energy demand for well beyond the next several decades. Advanced technology has greatly increased industry's ability to pursue the development of new oil and natural gas reserves without adverse environmental impact. Nevertheless, there are a number of sobering challenges that must be met in order to satisfy our country's future energy needs.

These challenges stem not from resource scarcity, but from self-imposed policy restrictions on accessing key remaining domestic supply prospects, policies that have deterred adequate U.S. downstream infrastructure investment, resurgence of OPEC market power in global oil markets, and regulations that have diminished the flexibility of the existing infrastructure to respond effectively to unexpected events. In addition, the technology and increasingly sophisticated production methods necessary to secure adequate supplies of oil and natural gas are expensive and will require huge capital investments by U.S. oil and gas companies. For example, the National Petroleum Council projects that producers will have to invest some $650 billion through 2015 in order to meet the anticipated growth in U.S. natural gas demand alone.

Downstream, the refining industry has long been able to meet its objective of supplying American consumers with readily available, reasonably priced petroleum products. However, massive investments will be required in the next ten years both to expand refinery capacity to meet growing demand and offset the production loss resulting from more stringent product quality specifications and possible refinery closures. Combined with the historically low rates of return in refining, the size of these investments will make the task of expanding refinery capacity increasingly difficult in the future. The number of refineries in the U.S. peaked in 1981, when there were 315 operating refineries in the United States. Many of these closed in the 1980s and 1990s, and there are now only 152 refineries operating in this country. Fortunately, despite the fact that no new U.S. refinery has been built since 1976, growth in capacity at existing refineries has offset the effect of refinery closures with the result that total refinery capacity grew from 15.5 to 16.5 million barrels per day in the 1990s. Nevertheless, this increase has not been adequate to keep up with the growth in petroleum product demand, and refinery utilization rates are now approaching 100 percent.

While the United States has a strong strategic and economic interest in maintaining a vibrant domestic oil and gas industry, we also need a wide diversity of international supplies. Over the last 30 years, imports as a percentage of U.S. petroleum deliveries have risen from 23.3 percent to almost 60 percent during the first part of this year. As our reliance on global oil markets has grown, we have learned that this dependence carries both opportunities and risks. On the one hand, it affords us access to energy supplies less costly than could be produced domestically. On the other hand, it exposes us to two inherent risks associated with that marketplace, namely the potential for short-term supply interruptions, and the potential for long run vulnerability to adverse actions by OPEC.

Recognizing that 90 percent of the world's proven oil reserves are in the hands of foreign government-controlled oil companies (more than two-thirds of those are in the Middle East), U.S. energy security is best served by U.S. companies being competitive participants in the international energy arena. However, the ability of the U.S. oil and gas industry to compete globally is currently hampered by the unintended consequences of two sets of U.S. policies, namely the adverse tax treatment of foreign source income earned by U.S. companies operating overseas, and the persistent tendency of the United States to utilize unilateral economic sanctions against oil producing countries as an instrument of foreign policy. The U.S. international tax regime imposes a substantial economic burden on U.S. multinational companies, and to an even greater degree on U.S. oil and gas companies, by exposing them to potential double taxation, that is, the payment of tax on foreign source income to both the host country and the United States. In addition, the complexity of the U.S. tax rules imposes significant compliance costs. As a result, U.S. oil and gas companies are forced to forego foreign exploration and development projects based on lower projected after-tax rates of return, or they are preempted in bids for overseas investments by global competition not subject to such complex rules.

Recent events should serve as a wakeup call for the United States to adopt a national energy policy, which includes revised tax rules, that begins to tear down the barriers to development of oil and natural gas supplies at home, supports necessary international risk taking and encourages the tremendous capital investment that will be needed to meet U.S. and global energy demand growth.

II. DOMESTIC TAX PROVISIONS

While most other countries encourage energy development, flawed public policies—especially excessive restrictions on access to federal lands and unreasonably burdensome regulations—continue to place substantial restrictions on our ability to explore for, produce, refine and transport oil and gas in this country. Moreover, continued high corporate tax rates and an obsolete cost recovery regime limit the capital available to U.S. oil and gas companies at the very time huge investments in both exploration and production and refining capacity must be made to meet future energy needs. As with all industries, the after-tax economics of oil and gas development projects determines whether or not those investments will be made. The most important thing Congress and the Administration can do is enact a national energy plan that will change these policies to promote the economic and environmentally sound recovery of domestic reserves, increased U.S. refining capacity, and an expanded nationwide oil and gas pipeline network.

In 1999, a united oil and gas industry proposed a series of tax changes designed to spur domestic oil and gas production. The need for these changes has only intensified over the last couple of years as OPEC has reestablished its ability to profoundly impact the available supply of oil—and most importantly, the price paid by consumers.

While not the sole answer to ensuring adequate oil and gas supplies for U.S. energy consumers, tax measures such as the expensing of geological and geophysical (G&G) costs and delay rental payments, a marginal domestic oil and natural gas well production credit, eliminating limitations on use of percentage depletion of oil and gas by independent producers, and Alternative Minimum Tax (AMT) relief will promote greater U.S. exploration and production. Most of these items were previously adopted by both the House of Representatives and the Senate as part of the conference report to the Taxpayer Refund and Relief Act of 1999 (H.R. 2488), which was ultimately vetoed by former President Clinton. Other provisions, including an expansion of the enhanced oil recovery (EOR) credit to include certain nontertiary recovery methods and a heavy oil production credit, would further encourage increased domestic petroleum activity.

Finally, while it is vitally important to promote increased oil and gas production, it is equally important that we maintain an adequate refining and pipeline transportation infrastructure to ensure that sufficient quantities of our industry's finished products will be available when and where they are needed. Modifying the depreciation lives for refinery assets, oil and gas pipelines and storage tanks by making them more consistent with other manufacturing assets will help promote the tremendous investment needed in these areas.

Many of these proposals continue to enjoy bipartisan support and have been included in numerous bills that have been introduced in both the House and Senate. Moreover, most of these provisions are included in one or both of the two national energy plans pending in the Senate—S 389, introduced by Sen. Murkowski on February 26, 2001, and S. 596, introduced by Sen. Bingaman on March 22, 2001.

Geological and Geophysical Expenses

Oil and gas exploration companies incur huge up front capital expenditures, including geological and geophysical (G&G) expenses, in their search for new oil reserves. G&G expenses include costs incurred for geologists, surveys, and certain drilling activities, which help oil and gas companies locate and identify properties with the potential to produce commercial quantities of oil and/or gas. Currently, these costs must be capitalized, suspended and then amortized over a period of years in the form of cost depletion *after* production begins. Forcing oil and gas companies to capitalize G&G costs exacerbates the economic burden imposed by these significant cash outlays that must be made prior to or at the beginning of an exploration project.

Delay Rentals

Delay rentals are paid by oil and gas exploration companies to defer the commencement of drilling on leased property without forfeiting the lease. Treasury regulations and case law clearly supported the option to expense or capitalize delay rental payments. However, with the 1986 enactment of the Section 263A uniform capitalization rules, the IRS began to challenge the deductibility of delay rentals during audits. In 1997, the IRS unequivocally adopted the position that for tax years beginning after December 31, 1993, delay rentals had to be capitalized unless the taxpayer could establish that the lease was acquired for some reason other than development. This position ignores forty years of history and long-established regulations. Congress should pass legislation that clarifies and reaffirms the long-standing rule that delay rentals be expensed rather than capitalized. By permitting a cur-

rent deduction for both delay rentals and G&G costs, more capital will be available for new outlays that otherwise wouldn't be available for extended periods of time.

In addition to having been included in the vetoed 1999 tax bill, proposals to expense both G&G costs and delay rental payments are included in both S. 389 and S. 596. Even former President Clinton expressed support for these tax provisions in his March 2000 proposal to "strengthen America's energy security."

Marginal Well Production Credit

A marginal well production credit of $3 per barrel for the first three barrels of daily production from an existing marginal oil well, and a 50 cent per thousand cubic feet (Mcf) tax credit for the first 18 Mcf of daily natural gas production from a marginal gas well, would help producers ensure the economic viability and survival of marginal wells. Like the proposed AMT relief, the credits would phase out as oil and natural gas prices rise to an economically viable level. Finally, the credit should be allowed against both regular and alternative minimum tax and to be carried back ten years. A marginal oil and gas well production credit proposal is included in both S. 389 and S. 596.

Percentage Depletion

Another way Congress could assist independent producers is to permit, by annual election, elimination of the 65 percent taxable income limitation on percentage depletion, as well as elimination of the 100 percent net income limitation. Moreover, independent producers and royalty owners should be permitted to carry back percentage depletion deductions for ten years. These proposals are included in S. 389.

Alternative Minimum Tax

The AMT was intended as an advance payment of federal income tax, and therefore, AMT payments are creditable in future years, though only against regular tax liability and not the taxpayer's tentative minimum tax. However, companies within the capital intensive petroleum industry often find themselves in a position where they are consistently unable to use their AMT credits because their regular tax liability in subsequent years does not exceed their tentative minimum tax for those years. For those companies, the AMT constitutes a permanent tax increase and decreases the economic viability of certain domestic operations.

Recently, the problems associated with the AMT have again been all too real for many domestic oil and gas producers. Oil and gas drilling activity has accelerated rapidly since 1999 in response to the phenomenal growth in demand for oil and natural gas. However, a portion of this activity had to be curtailed, not because of a lack of product demand, but, rather, because the AMT preference item for intangible drilling and development costs (IDCs) exposed those producers to the AMT and rendered some of that additional drilling activity uneconomic. In other cases, producers were not in an AMT position because their regular tax liability exceeded their tentative minimum tax. However, the ability of those producers to utilize accumulated AMT credits was diminished due to a higher tentative minimum tax amount resulting from the IDC preference item. In both instances, the AMT served to restrict new oil and gas drilling activity at the very time the nation was seeking to spur oil and natural gas production.

Some of the AMT's most discriminatory provisions are targeted at the U.S. oil and natural gas industry. In order to reverse this inequity and promote capital investment in the oil and gas sector, Congress should, at a minimum, eliminate the preference for IDCs, fully eliminate the depreciation adjustment for oil and gas assets, eliminate the impact of IDCs from the Adjusted Current Earnings (ACE) adjustment, and permit the EOR and Section 29 credits to reduce tentative minimum tax. This proposed AMT relief would phase in and out as oil and natural gas prices fall and rise between specified levels, thereby providing the greatest assistance to producers in times of low prices.

Another non-industry specific way to mitigate the adverse impact of the AMT would be to allow AMT credits to be applied against future tentative minimum tax. This specific provision was included in the vetoed 1999 tax bill.

EOR Credit

The Enhanced Oil Recovery (EOR) credit provides a credit equal to 15 percent of costs attributable to qualified enhanced oil recovery projects. Since the enactment of the EOR credit in 1990, new technologies have greatly enhanced the ability of oil producers to economically recover additional domestic reserves from existing wells with minimal environmental impact. By extending the EOR credit to certain nontertiary production methods such as horizontal drilling, gravity drainage, cyclic gas injection, and water flooding, the economic viability of these oil recovery methods would be greatly enhanced. In turn, the up to 70 percent of an oil well's reserves

that otherwise would be left in the ground could be added to the nation's available energy supply.

Heavy Oil Production Credit

So-called "heavy oil" is one source of domestic petroleum that is significantly less economic, but represents a key component of the U.S. energy base. Currently, heavy oil accounts for over 11 percent of U.S. production. However, its potential is far more significant because the measured U.S. heavy oil resource base is over 100 billion barrels. Heavy crude oil is generally characterized by its high specific gravity or weight, as well as its high viscosity or resistance to flow. Because of these characteristics, heavy oil is substantially more difficult and expensive to extract and refine than other types of oil. Additionally, this oil is less valuable because a smaller percentage of high-value petroleum products can be refined from a barrel of heavy oil than from a barrel of higher quality crude oil. A heavy oil production tax credit would help the nation maximize its domestic energy supply by making that resource economic to produce.

Depreciation of Refineries, Pipelines and Storage Tanks

The Administration's development of a National Energy Policy and recent gasoline price increases have drawn attention to the fact that U.S. demand for refined petroleum products exceeds the domestic refining capacity to produce them. Among the solutions to this problem is to have government policies in place that create an environment conducive to refinery capacity expansion investments. One option for doing so is eliminating the currently outdated tax treatment of refinery investments.

Most manufacturing assets are depreciated over five or seven years. Despite substantial changes in the refining business and considerable investment made during the last decade, refinery assets are still subject to a 10-year depreciation schedule. The longer recovery period for refinery capital assets results in a depreciation deduction present value that is 17 percent to 25 percent less than that for other manufacturing assets and thus reduces the incentive to invest in refinery capacity expansion projects. Shortening the depreciation life for refinery assets to five years will reduce the cost of capital and remove the current bias in the tax code against needed refinery capacity expansion.

In addition to refineries, substantial investments will be needed in the nation's oil and natural gas pipeline system, as well as in new petroleum storage facilities. The present law 15-year depreciation life for pipelines denies an adequate cost recovery for tax purposes. In the case of gas gathering lines, which carry natural gas from the well to the processing plant or trunk line, the proposal to permit 7-year depreciation, as provided for in S. 389, would merely clarify their status as lease and well equipment. Contrary to an appellate court decision, the IRS currently challenges that classification in certain circumstances.

Under antiquated IRS classifications (dating from the early 1960s), petroleum storage facilities are depreciated over 5 years or 15 years, depending on whether the IRS considers them to be movable property. This demarcation is difficult to administer, depends on factors unrelated to useful life, and easily penalizes the economics of a project, often retroactively on tax audit. The assurance of 5-year depreciation for such facilities will increase the tax deduction's present value and improve project economics. All of these depreciation changes, which are similar to proposals included in S. 389, will help spur the investment needed to assure the maintenance of an adequate and environmentally safe pipeline transportation system and petroleum storage facilities.

III. RELIEF FROM DISCRIMINATORY INTERNATIONAL TAX RULES

In order to survive, the oil and gas industry must operate where it has access to economically recoverable oil and gas reserves. Since the opportunity for domestic reserve replacement has been substantially restricted by federal and state government policies, the tax treatment of international operations is critical to maintaining global supply diversity and ensuring the industry's continued ability to supply the nation's hydrocarbon energy needs. Therefore, while federal tax policy should promote domestic oil and gas production and an adequate refining and transportation infrastructure, it should also seek to enhance the competitiveness of U.S. companies operating abroad. The following tax changes would help enable U.S. companies operating overseas to better compete in the global oil and gas marketplace.

The Foreign Tax Credit Rules Need Reform

Since the beginning of federal income taxation, the U.S. has taxed the worldwide income of U.S. citizens and residents, including U.S. corporations. The FTC was intended to allow a dollar for dollar offset against U.S. income taxes for taxes paid to foreign taxing jurisdictions in order to avoid double taxation of that income

earned abroad. However, the many limitations on the FTC in our current rules often results in U.S. taxpayers paying tax on the same items of income in more than one jurisdiction.

The FTC is intended to offset only U.S. tax on foreign source income. An overall limitation on currently usable FTCs is computed by multiplying the tentative U.S. tax on worldwide income by the ratio of foreign source income to worldwide taxable income. However, since enactment of the Tax Reform Act of 1986, the overall limitation must be computed separately for not less than nine "separate limitation categories" or "baskets." Some of the separate limitations apply for income: (1) whose foreign source can be easily changed; (2) which typically bears little or no foreign tax; or (3) which often bears a rate of foreign tax that is abnormally high or in excess of rates of other types of income. In these cases, a separate limitation is designed to prevent the use of foreign taxes imposed on one category to reduce U.S. tax on other categories of income. There are other examples of normal active-business types of income that also must be calculated separately. Examples of these normal business-types of foreign source income include dividends received from 10/50 companies (i.e., foreign companies owned between 10 percent and 50 percent by U.S. owners), gains on the sale of foreign partnership interests, and payments of interest, rents and royalties from non-controlled foreign corporations and partnerships.

Section 907: Foreign Oil and Gas Extraction Income and Foreign Oil Related Income

Under the separate basket rules, foreign oil and gas income falls into the general limitation basket. But before determining this limitation for general operating income, U.S. oil and gas companies must first clear an additional tax credit hurdle.

Internal Revenue Code Section 907 limits the utilization of foreign income taxes on foreign oil and gas extraction income (FOGEI) to that income multiplied by the current U.S. corporate income tax rate. The excess credits may be carried back two years and carried forward five years, with the creditability limitation of Section 907 being applicable for each such year.

Congress intended for the FOGEI and foreign oil related income (FORI) rules to purport to identify the tax component of payments made by U.S. oil companies to foreign governments. The goal was to limit the FTC to that amount of the foreign government's "take" which was perceived to be a tax payment versus a royalty paid for the production privilege. But even the so-identified creditable tax component of those payments should not be used to shield the U.S. tax on certain low-taxed other foreign income.

These concerns have been adequately addressed in subsequent administrative rulemaking and legislation. In 1983, after several years of discussion and drafting, Treasury completed the "dual capacity taxpayer rules" of the FTC regulations, which determine how much of an income tax payment to a foreign government will not be creditable because it is a payment for a specific economic benefit. Such a benefit could, of course, also be derived from the grant of oil and gas exploration and development rights. These regulations have worked well for both IRS and taxpayers in various businesses (e.g., foreign government contractors), including the oil and gas industry.

Since concerns underlying Section 907 have been adequately addressed in subsequent legislation and rulemaking, that tax code provision has been rendered obsolete. Furthermore, Section 907 has raised little, if any, additional tax revenue because excess FOGEI taxes would not have been needed to offset U.S. tax on other foreign source income. Nevertheless, oil and gas companies continue to be subject to burdensome compliance work. Each year, they must separate FOGEI from FORI and the foreign taxes associated with each category. These are time consuming and labor intensive analyses, which have to be replicated on audit. As was done in the vetoed H.R. 2488, Section 907 should be repealed as obsolete. This would promote simplicity and efficiency of tax compliance and audit with minimal loss of revenue to the government.

Allocation of Interest Expense

Current law requires the interest expense of all U.S. members of an affiliated group to be apportioned to all domestic and foreign income, based on assets. This denies U.S. multinationals the full U.S. tax benefit from the interest incurred to finance their U.S. operations.

In addition, unless allocation based on fair market value of assets is elected, allocation of interest expense according to the adjusted tax bases of assets generally assigns too much interest to foreign assets. For U.S. tax purposes, foreign assets generally have higher adjusted bases than similar domestic assets because domestic assets are eligible for accelerated depreciation while foreign-sited assets are assigned

a longer life and limited to straight-line depreciation. For purposes of the allocation, the earnings and profits (E&P) of a CFC is added to the stock basis, and the cost basis in stock does not depreciate. Since the E&P reflect the slower depreciation, the interest allocated against foreign source income is disproportionately high.

Rules similar to the Senate version of interest allocation in the Tax Reform Act of 1986, as well as those included in the vetoed 1999 tax bill, would help to alleviate these current anti-competitive results. The allocation group would then include all companies that otherwise would be eligible for U.S. tax consolidation, but for their being foreign corporations. Additionally, "stand alone" subsidiaries could then elect to allocate interest on certain qualifying debt on a mini-group basis, i.e., looking only to the assets of that subsidiary, including stock.

At the very least, taxpayers should be allowed to elect to use the E&P bases of assets, rather than the adjusted tax bases, for purposes of allocating interest expense. Use of E&P basis would produce a fairer result because the E&P rules are similar to the rules now in effect for determining the tax bases of foreign assets.

Foreign Tax Credit Carryover Rules

Excess FTCs can be carried back to the two preceding taxable years, or to the five succeeding taxable years, subject in each of those years to the same overall limitation. Excess credit positions are frequent because of the ever-increasing limitations on the use of FTCs, coupled with the differences in income recognition between foreign and U.S. tax rules. Credits are often lost, most likely resulting in double taxation. A practical proposal to help reduce the existing risk of double taxation would permit five-year carryback and 15-year carryforward periods for excess FTCs. At the very least, a two-year carryback and 20-year carryforward period would provide greater consistency within the tax code by aligning the FTC carryover periods to those provided for net operating losses.

Dividends Received from 10/50 Companies

The 1997 Tax Act repealed the separate basket rules for dividends received from each 10/50 company, effective after the year 2002. A separate FTC basket will be required for post-2002 dividends received from pre-2003 earnings. When fully implemented, the repeal will remove significant complexity and compliance costs for taxpayers and foster their global competitiveness.

The repeal of the separate limitation basket requirement should be accelerated. The requirement of maintaining a separate limitation basket for dividends received from earnings and profits accumulated before the repeal should be eliminated. These provisions were included in the last few Clinton Administration budget proposals, as well as in the vetoed 1999 tax bill, H.R. 2488.

Look-through Treatment for Sales of Partnerships

The distributive share of an at least 10 percent U.S. partner of a foreign partnership follows the partnership's income FTC basket classification. On the other hand, the gain from such an interest is treated as separate basket passive income, thereby limiting the opportunity of FTC utilization. This is not only inequitable but also counterintuitive for the legal form of the value realization to control the FTC basket characterization. Accordingly, for a 10 percent or greater partnership interest, look-through treatment should apply to the gain in the same way that it applies to the distributive share of partnership income.

Look-through Treatment for Interest, Rents, and Royalties with Respect to Non-Controlled Foreign Corporations and Partnerships

U.S. oil and gas companies are often unable, due to government restrictions or operational considerations, to acquire controlling interests in foreign partnerships or corporate joint ventures. Look-through treatment for interest, rents and royalties received from foreign joint ventures should be available, as it is in the case of distributions from a controlled foreign corporation (CFC).

Recapture of Overall Domestic Losses

When foreign source losses reduce U.S. source income (overall foreign loss or OFL) in a tax year, the perceived tax benefit has to be "recaptured" by resourcing foreign source income in a subsequent tax year as domestic source income. However, if foreign source income is reduced by U.S. source losses, there is no parallel system of "recapture." Taxpayers are not allowed to recover or recapture foreign source income that was lost due to a domestic loss, resulting in the double taxation of such income. Only a corresponding re-characterization of future domestic income as foreign source income will reduce the risk that FTC carryovers do not expire unused.

IV. SUMMARY

Our industry strongly supports tax law changes designed to encourage increased domestic petroleum activity, which, in turn, will help to expand overall product supply in the United States. Expansion of available supply is critical to meeting DOE projections of a 33 percent increase in U.S. petroleum demand and a more than 50 percent increase in U.S. natural gas demand by 2020. Existing tax laws do not begin to address how this nation will encourage the massive capital investment needed to meet this energy demand growth. Positive tax changes will help promote the use of new technologies for exploration, development and production, help maintain the economic viability of mature production sites, and develop urgently needed new refining capacity. Notwithstanding the positive effects of these new tax provisions, their potential to help increase and sustain domestic petroleum production will be limited unless Congress also acts to reduce restrictions on access to federal lands and to rationalize the increasingly burdensome regulatory apparatus imposed on all segments of the industry. Moreover, it must be recognized that expected growth in U.S. demand for oil and natural gas cannot be met merely through increased U.S. production. While U.S. reliance on imported oil can be reduced, restoring the global competitive position of the U.S. oil and gas industry through changes in U.S. international tax policy will be crucial to ensuring that U.S. consumers continue to enjoy adequate and affordable supplies of our industry's major products.

Chairman McCrery. Thank you, Mr. MacFarlane. Mr. Van Son.

STATEMENT OF VINCE T. VAN SON, MANAGER, BUSINESS DEVELOPMENT, ALCOA ENERGY DIVISION, ALCOA INC., PITTSBURGH, PENNSYLVANIA

Mr. Van Son. Mr. Chairman and Members of the Subcommittee, my name is Vince Van Son and I am manager of business development for the Energy Division of Alcoa Inc. of Pittsburgh, Pennsylvania. I appreciate the opportunity to appear before you today. My comments today are a summary of written testimony submitted to the Subcommittee for the official record and are made on behalf of Alcoa Inc. My responsibilities at Alcoa include the procurement of electricity and the development of additional energy assets.

Alcoa is the world's leading producer of primary aluminum, fabricated aluminum and alumina. Its activities include mining, refining, smelting, fabricating, and recycling. Since the cost of energy to support some of these activities represents up to 25 percent of total production costs, Alcoa takes considerable interest in all energy and electricity developments. The total size of Alcoa's energy expenditures, coupled with Alcoa's ambitious environmental goals, makes Alcoa keenly interested in both measures to improve energy efficiency and conservation, and the growing market potential of clean and renewable energy sources.

Consistent with these interests, Alcoa is a Member of the World Resources Institute's Green Power Market Development Group. The group consists of Alcoa and nine other large U.S. companies interested in promoting the development of 1,000 megawatts of renewable and clean energy sources by 2010 through directed purchasing and investment. My remarks today are based on my direct experience with renewable energy markets and my involvement in the Green Power Market Development Group's activities over the last 12 months. Through this effort Alcoa has been looking at renewable energy supplies not only from the perspective of contributing to environmental protection and sustainable development but also as a viable business proposition.

An integral part of a corporate or national energy strategy is to ensure energy is used as efficiently as possible. Extending energy efficiency and conservation can be orders of magnitude more cost effective and quicker to implement than extending supply. Efficiency and conservation of resources are integral to the Alcoa business system and Alcoa's values and therefore a natural part of Alcoa's overall energy management strategy. A national energy strategy would be incomplete without a keen focus on conservation and efficiency.

In addition, recognizing that additional generation capacity is inevitable to meet growing energy demands, Alcoa believes that there is a significant role for green power technologies within the nation's future energy mix. Green power technologies, including solar, wind, landfill gas, cogeneration and fuel cells, offer a number of environmental advantages. Consequently, Alcoa feels that renewable and clean energy technologies should be given an explicit place and support in the nation's future energy strategy.

Typical of many new technologies, renewable energy technologies currently face several obstacles that limit their growth. The primary obstacle Alcoa and the Green Power Market Development Group has encountered that currently inhibits more aggressive demand for green power and corresponding development is its relatively high delivered cost. The cost of power from renewables is often greater than the market price established by more common sources of generation for several reasons, more details of which are given in my written testimony.

Some factors relate to the relatively high capital cost of still-developing technologies. Other factors relate to the particular characteristics of some renewable technologies, such as the intermittency of wind power or the location specificity and size of landfill gas to energy projects, which present challenges to energy developers and purchasers alike.

One key factor for green power's current competitive disadvantage is that no monetary value is placed on the superior environmental attributes of green power technologies. In making decisions about new generation capacity, developers and purchasers are not presented with comparable life cycle costs and profitability that reflect environmental attributes.

In short, renewable energy sources are not competing on a level playingfield with traditional energy sources. While technological and market developments will help us overcome some of the obstacles currently facing renewables, policy solutions are also needed.

A national energy strategy should provide incentives for energy conservation and accelerated development and deployment of renewable and clean energy sources. An ideal framework would ensure that after a certain future date, monetary values were placed on environmental benefits and included in all new energy investment decisions, whether conservation measures or investment in new generation. Such an outcome could be achieved through the introduction of comprehensive emission credit programs. Such programs would lead to increased development of renewables and clean energy sources. Furthermore, by extending the credit programs beyond power generation activity to include other sources of emissions, larger gains in energy efficiency could be achieved.

We recognize that a broad system of incentives cannot be designed and implemented immediately. In the meantime there will have to be bridging policies that encourage the development of renewable and clean energy sources. We believe that specific short-term tax provisions can play a vital role in encouraging investment decisions that support a more sustainable environment. In particular, we support the immediate renewal of the section 45—production tax credit for wind and closed loop biomass. In addition, we support the extension of the PTC to include a broader range of biomass technologies, such as landfill gas and combined heat and power or cogeneration applications. We would also strongly encourage incentives such as accelerated depreciation of capital investments in equipment that reduces energy use and associated emissions from industrial processes.

In conclusion, we hope that the Federal government can instigate the development of broad emission credit programs open to sectors beyond just power generation. Until such programs are firmly established, the PTC will continue to be a vital support for near-term development and application of renewable energy and clean energy technologies. The PTC and other investment incentives are needed to bridge the gap between the cost of generation between renewable and clean energy sources and the cost of generation from the technologies and sources that the nation has historically adopted.

Thank you for the opportunity to testify. I look forward to your questions.

[The prepared statement of Mr. Van Son follows:]

Statement of Vince T. Van Son, Manager, Business Development, Alcoa Energy Division, Alcoa Inc., Pittsburgh, Pennsylvania

I. Introduction

Mr. Chairman and Members of the Subcommittee, my name is Vince Van Son, and I am Manager of Business Development for the Energy Division of Alcoa Inc. of Pittsburgh, Pennsylvania. I appreciate the opportunity to appear before you today.

My responsibilities at Alcoa include the procurement of electricity and the development of additional energy assets. Alcoa is the world's leading producer of primary aluminum, fabricated aluminum, and alumina. It is active in mining, refining, smelting, fabricating, and recycling. Since the cost of energy to support some of these activities represents up to 25% of total production costs, Alcoa takes considerable interest in all energy and electricity developments. The total size of Alcoa's energy expenditures coupled with Alcoa's ambitious environmental goals makes Alcoa keenly interested in both measures to improve energy efficiency and conservation; and the growing market potential of clean and renewable energy sources.

Consistent with these interests, Alcoa is a member the World Resources Institute's Green Power Market Development Group. The Group consists of Alcoa and nine other large U.S. companies interested in promoting the development of 1,000 MW of renewable and clean energy sources by 2010 through directed purchasing and/or investment. We plan to achieve our objective by engaging suppliers and technical experts, sharing knowledge, developing strategies, and investing in green power.

Green power technologies—including solar, wind, landfill gas, biomass, geothermal, cogeneration, hydroelectric and fuel cells—have an increasingly important role to play within the nation's overall energy mix. Furthermore, certain policies could be implemented that would accelerate the growth of these technologies, and so facilitate a smooth transition to a more sustainable energy future.

My remarks today are based on my direct experience with renewable energy markets and my involvement in the Green Power Market Development Group's activities over the last twelve months. These activities have been centered on preparations for making contractual commitments for renewable power. Alcoa has been looking at renewable energy supplies from the perspective of contributing to envi-

ronmental protection and sustainable development as well as being a viable business proposition.

II. Role of Conservation and Renewables within a National Energy Strategy

An integral part of a corporate or national energy strategy is to ensure energy is used as efficiently as possible. Extending energy efficiency and conservation can be orders of magnitude more cost-effective and quicker to implement than extending supply. Efficiency and conservation of resources are integral to the Alcoa Business System and Alcoa's values and therefore are a natural part of Alcoa's overall energy management strategy. A national energy strategy would be incomplete without a keen focus on conservation and efficiency.

In addition, recognizing that additional generation capacity is inevitable to meet growing energy demands, Alcoa believes that there is a significant role for green power technologies within the nation's future energy mix.

From our review of green power technologies, it is clear that they offer a broad range of positive attributes, not always possessed by traditional forms of power generation. These include the following:

• Green power does not emit or emits less air pollutants, such as nitrogen oxides, carbon dioxide, and sulfur dioxide than more common power generation technologies.

• Green power reduces the potential for undesirable climate change through the reduction of fossil fuel-derived carbon dioxide released into the atmosphere.

• Green power can help stabilize energy prices by diversifying the blend of fuels and related transportation or transmission infrastructure used to support national energy needs

• Green power increases energy self-sufficiency by harvesting untapped and renewable resources within our own borders.

Some green power technologies such as fuel cells and micro-turbines and clean energy technologies such as combined heat and power or cogeneration can be co-located with electric demand. This provides additional benefits such as improved reliability of supply, increased efficiency, reduced transportation/transmission losses, and optimal use of existing and future transportation/transmission infrastructure.

Enhancing self-sufficiency and efficiency, stabilizing energy costs, ensuring reliable supply and reducing environmental impacts are important goals. Consequently, Alcoa feels that renewable and clean energy technologies should be given an explicit place and support in the nation's future energy strategy.

III. Principal Obstacles to Increased Supply from Renewable Energy Technologies

Typical of many new technologies, renewable energy technologies currently face several obstacles that limit their growth. The primary obstacle Alcoa and the Green Power Market Development Group have encountered that currently inhibits more aggressive demand for green power and corresponding development is its relatively high delivered cost. The cost of power from renewables is often greater than the market price established by more common sources of generation and is largely the result of:

1. High Capital Costs. The cost per kilowatt of generating capacity installed is much higher than conventional sources. The cost premium is due in part to the lack of commercial scale relative to manufacturing and installing associated equipment and sufficient experience to improve upon the same.

2. Small Project Size. The small size of some renewable projects such as photovoltaic and landfill gas to energy projects (typically 3–6 MW) increases their capital, labor, and transactional costs on a unit basis.

3. Operating Constraints. Some renewable projects, such as larger scale wind farms, offer some advantages of scale (100 to 200 MW) but suffer from intermittent energy output which totals 30% to 40% of installed generating capacity. Furthermore, generation from wind is often concentrated during off peak hours when market prices are the lowest.

4. Location and Cost of Delivery. Resources for some green power technologies are location specific such as geothermal, wind, and biomass. Location is significant in that the additional cost of moving generated power across distribution and transmission systems can make an otherwise competitive cost of generation non-competitive.

5. Need for Additional Generation Assets to Offset Operating Constraints. The variability in output inherent in some green power projects can be better absorbed and managed by entities with multiple generating resources and/or positions such as large regional utilities than by individual consumers.

6. Inability to Independently Secure Output From Projects. Current transaction structures in both regulated and deregulated environments make it difficult for individual consumers to secure the output from a particular green power project. The continued reliance upon intermediary parties can add complexity and cost to a transaction. Net metering provisions that provide credit for off-site renewable generation as if it was physically located at a consumer's site and displacing retail purchases can mitigate this problem. Net metering may also be able to mitigate the location issues associated with renewable technologies that cannot be located at a consumer's site.

7. Higher Transaction Costs On A Unit Basis. Administrative and procurement costs associated with securing power are relatively fixed regardless of the amount of power involved. This coupled with the relatively novel nature of green power transactions can result in a 50 MW "traditional" transaction being easier and less costly to execute than a 3 MW transaction involving green power.

8. Value of Environmental Attributes Not Recognized. Currently no monetary value is placed on the superior environmental attributes of green power technologies. Consequently, in making decisions about new generation capacity, developers and purchasers are not presented with comparable life cycle costs and profitability. Renewable energy sources are not competing on a level playing field with traditional energy sources.

Technological and market developments will help us overcome some of these obstacles. Policy solutions are also needed.

IV. Policy Solutions to Promote Energy Conservation and to Accelerate Increased Supply from Renewable and Clean Energy Technologies

A national energy strategy should provide incentives for energy conservation and accelerated development and deployment of renewable and clean energy sources.

An ideal framework would ensure that after a certain future date monetary values were placed on environmental benefits and included in all new energy investment decisions—whether conservation measures or investment in new generation. Such an outcome could be achieved through the introduction of comprehensive emissions credit programs. An emissions program could extend to cover carbon dioxide and other emissions and would evolve into a market driven program much like the sulfur dioxide trading program that exists today. Such programs would lead to increased development of renewables and clean energy sources. Furthermore, by extending the credit programs beyond power generation activities to include other sources of emissions larger gains in energy efficiency could be achieved.

We recognize that such a broad system of incentives cannot be designed and implemented immediately. In the meantime, there will have to be bridging policies that encourage the development of renewable and clean energy sources. We believe that specific short-term tax provisions can play a vital role in encouraging investment decisions that support a more sustainable environment. In particular:

1. We support the immediate renewal of the Section 45 production tax credit (PTC) for wind and closed-loop biomass. The current uncertainty regarding the renewal of the PTC has stalled development of projects that cannot meet the current 2001 in service deadline.

2. In addition, we support the extension of the PTC to include a broader range of biomass technologies such as landfill gas and combined heat and power or cogeneration applications. Provisions should also be made to provide the PTC to direct applications of the renewable and clean energy technologies. For example, in some cases it is more efficient for industrial consumers to consume landfill gas directly in other processes instead of using it to fuel electricity generation.

3. We would also strongly encourage incentives such as accelerated depreciation of capital investments in equipment that improves energy efficiency and reduces emissions from industrial processes.

Alcoa does not support government mandates that require the use of electricity generated from renewable or clean energy technologies by utilities or consumers. Over time, appropriately structured markets will yield the optimal blend and amount of renewable and clean energy technologies based on consumer demand.

We hope that the Federal Government can help instigate the development of broad emissions credit markets open to sectors beyond just power generation. Until such programs are firmly established the PTC will continue to be vital to support near-term development and application of renewable and clean energy technologies. The PTC and other investment incentives are needed to bridge the gap between the cost of generation from renewable and clean energy sources and the cost of generation from the technologies and sources the nation has historically adopted.

Thank you for the opportunity to testify. I look forward to your questions.

Chairman MCCRERY. Thank you, Mr. Van Son. Mr. Hall.

STATEMENT OF DAVID S. HALL, MANAGER OF TAXATION, BERRY PETROLEUM COMPANY, TAFT, CALIFORNIA; CHAIRMAN, ECONOMIC AND POLICY AND TAXATION COMMITTEE, CALIFORNIA INDEPENDENT PETROLEUM ASSOCIATION; ON BEHALF OF THE INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, AND THE NATIONAL STRIPPER WELL ASSOCIATION

Mr. HALL. Mr. Chairman and Members of the Committee, I am David Hall, manager of taxation for Berry Petroleum Company of Taft, California and a member of the Tax Committee of the Independent Petroleum Association of America.

Today's hearing examines the effect of Federal tax laws on energy. To put this issue in a clear perspective we can turn to the 1999 National Petroleum Council's Natural Gas Study. This study concluded that the U.S. demand for natural gas would increase by over 30 percent during the next 10 years. The report also identified general areas that must be addressed to assure that this clean burning fuel will be adequately supplied to American consumers (IPAA).

The Federal Government and the tax code play a significant—if not pivotal—factor in two areas: (1) access to capital, and (2) access to resource base. Federal tax policy has historically played a substantial role in developing America's oil and natural gas. But the converse is equally true, such as the Windfall Profits Tax and the AMT that have sucked millions of dollars from the exploration and production of oil and gas. These changes have discouraged capital from flowing toward this industry. And, without capital, the ultimate result is lower production.

The independent producers are now recovering from the low prices 1998 and 1999 that starved the industry of funds to maintain existing production and to generate new production. Today we have a domestic industry ready to find and produce new energy for the nation's consumers, but this inherently risky industry must compete for funds against other more appealing investments and the lure of lower costs to produce foreign oil.

Hearings throughout Congress have echoed with the statements of Members from both producing and consuming states alike that more must be done to increase the domestic production. The question is how, and much of that answer lies within this Committee.

In the near term there are a number of actions that can be taken. In fact, there has been wide agreement on these actions between Republicans and Democrats alike. These include: (1) allowing expensing for G&G costs and expensing of delay rental payments, (2) creating a marginal tax credits, (3) suspending or eliminating the net income limitation on percentage depletion for marginal wells, and the 65-percent net overall taxable income limit on percentage depletion, (4) and providing for an extended period for net operating loss carry-back or for the carry-back of carried-over percentage depletion.

Equally important, these changes must be crafted in a manner to assure that AMT does not nullify the benefits that would be created. The mistake 1986 should not be repeated.

For the future, the country needs to look toward tax policies to encourage domestic production. The AMT remains the constriction, which should be addressed. Some of the future focus need to be directed to getting more out of existing resources. For example, the Enhanced oil Recovery Tax Credit does not consider technologies that have been developed in the last 20 years.

Equally significant, policies need to address encouraging more new development. For example, the section 29 tax credit for unconventional fuels proved to be a strong inducement to developing those resources, and was addressed in an earlier hearing.

Fundamentally, the question facing the nation is how to marshal the capital to develop its domestic resources. The '99 natural gas study estimates that an additional $10 billion will need to be invested annually in domestic production over the next 15 years to meet the expected demand. One source is the capital markets, but it has significant drawbacks. First, the capital markets have yet to show a strong interest in the E&P industry, despite the recent high prices in both commodities. Second, where the capital markets are likely to focus their attention will be on large companies. So, while some large independents may derive some of the capital from these markets, it will only be a portion and smaller independents will need to look elsewhere. Third, there is no guarantee that such capital will go to domestic production.

The next source of capital will be from the revenues generated by higher production and higher prices. First, the magnitude of this capital may be overstated, because just as prices for oil and natural gas have increased, prices for drilling rigs and other costs are also increasingly squeezing the capital that is available. Second, this capital also will be directed to the most promising projects, so there is no guarantee that it will be invested domestically. Third, this revenue will be significantly reduced by taxes.

The challenge then is to create a mechanism to direct the capital to domestic production. One such approach would be to create a "plowback" incentive that would apply to expenditure for domestic oil and natural gas. This type of proposal would encourage capital formation and development of domestic wells provided it was immediately beneficial. It would address a compelling need to improve natural gas supply as well as reduce the growing dependency on foreign oil. It must also apply to both oil and natural gas because they are inherently intertwined, and often found together. A healthy domestic natural gas industry cannot exist without a healthy comparable oil industry. The IPAA has been evaluating two approaches. The first would be a deduction against gross income of wells drilled domestically after 2001. The second would be an investment tax credit applied to domestic investment made after 2001. One of these could provide a substantial in-flow of capital for domestic production.

In conclusion, if Congress wants to see more domestic oil and natural gas production, it must recognize that Federal tax policy plays a critical role in whether capital will flow toward this industry and production of these resources. There are immediate actions

that can and should be taken. The time is right as the nation is seeking a more stable energy supply, and Congress should act. Thank you very much.

[The prepared statement of Mr. Hall follows:]

Statement of David S. Hall, Manager of Taxation, Berry Petroleum Company, Taft, California; Chairman, Economic and Policy and Taxation Committee, California Independent Petroleum Association; on behalf of the Independent Petroleum Association of America, and the National Stripper Well Association

California Independent Petroleum Association
Colorado Oil & Gas Association
East Texas Producers & Royalty Owners Association
Eastern Kansas Oil & Gas Association
Florida Independent Petroleum Association
Illinois Oil & Gas Association
Independent Oil & Gas Association of New York
Independent Oil & Gas Association of Pennsylvania
Independent Oil & Gas Association of West Virginia
Independent Oil Producers Association Tri-State
Independent Petroleum Association of Mountain States
Independent Petroleum Association of New Mexico
Indiana Oil & Gas Association
Kansas Independent Oil & Gas Association
Kentucky Oil & Gas Association
Louisiana Independent Oil & Gas Association
Michigan Oil & Gas Association
Mississippi Independent Producers & Royalty Association
Montana Oil & Gas Association
National Association of Royalty Owners
Nebraska Independent Oil & Gas Association
New Mexico Oil & Gas Association
New York State Oil Producers Association
Ohio Oil & Gas Association
Oklahoma Independent Petroleum Association
Panhandle Producers & Royalty Owners Association
Pennsylvania Oil & Gas Association
Permian Basin Petroleum Association
Petroleum Association of Wyoming
Tennessee Oil & Gas Association
Texas Alliance of Energy Producers
Texas Independent Producers & Royalty Owners Association
Wyoming Independent Producers Association

Mr. Chairman, members of the committee, I am David S. Hall, Manager of Taxation for Berry Petroleum Company (an independent heavy oil producer since 1909), of Taft, California, and Chairman of California Independent Petroleum Association's (CIPA) Economic and Policy and Taxation Committee. I am also a member of the Tax Committee of the Independent Petroleum Association of America (IPAA). This testimony is submitted on behalf of the IPAA, the National Stripper Well Association (NSWA), and 33 cooperating state and regional oil and gas associations. These organizations represent independent petroleum and gas producers, the segment of the industry that is damaged the most when domestic energy policy does not recognize the importance of our own national resources. NSWA represents the small business operators in the petroleum and natural gas industry, producers with "stripper" or marginal wells.

Today's hearing addresses the effect of Federal tax laws on the production, supply and conservation of energy. I have attempted to answer your challenge by examining a critical issue confronting domestic petroleum and natural gas production—the role of the tax code with regard to the enhancement or deterioration of domestic exploration and production of natural gas and crude oil. To put this issue in a clear perspective all we have to do is look to the 1999 National Petroleum Council (NPC) *Natural Gas* study. The last NPC study of crude oil was done in 1994 and addressed Marginal Wells only. The 1999 study concluded that U.S. demand for natural gas would increase by over 30 percent during the next ten years. It also identified four general areas that must be addressed to assure that this clean burning fuel will be adequately supplied to America's consumers. These are: access to capital, access to

the national resource base, access to technology, and access to human resources. The federal government is a significant—if not pivotal—factor in two of them: access to the resource base and access to capital. The federal tax code plays an integral part in providing access to the capital essential to develop domestic resources—both natural gas and crude oil.

Federal tax policy has historically played a substantial role in developing America's natural gas and crude oil. Early on, after the creation of the federal income tax, the treatment of costs associated with the exploration and development of this critical national resource helped attract capital and retain it in this inherently capital intensive and risky business. Allowing the expensing of geological and geophysical costs and percentage depletion rates of 27.5 percent are examples of such policy decisions that resulted in the United States' extensive development of its petroleum.

But, the converse is equally true. By 1969, the depletion rate was reduced and later eliminated for all producers except independents. However, even for independents, the rate was dropped to 15 percent and allowed for only the first 1,000 barrels per day of crude oil (or equivalent natural gas) produced. A higher rate is allowed for marginal wells, which increases as the crude oil price drops, but even this is constrained—*in the underlying code*—by net income limitations and net taxable income limits. In the Windfall Profits Tax, federal tax policy extracted some $44 billion from the industry that could have otherwise been invested in more production. Then, in 1986 as the industry was trying to recover from the last long petroleum price drop before the 1998–99 crisis, federal tax policy was changed to create the Alternative Minimum Tax that sucked millions more dollars from the exploration and production of crude oil and natural gas. These changes have discouraged capital from flowing toward this industry. And, without capital the ultimate result is lower production. Since 1986, domestic crude oil production has dropped by over 2.5 million barrels per day.

Now, independent producers are recovering from the low prices of 1998–99 that starved the industry of funds to maintain existing production and to explore and generate new production—production of both crude oil and natural gas. Today, we look at a world where petroleum production is perilously close to petroleum demand. In late 2000 essentially all countries except Saudi Arabia were producing at full capacity. Later this year as seasonal demand increases, we could well return to a similar situation. Today, we look at natural gas and crude oil supplies struggling to meet demand in the United States primarily because of the loss of capital when crude oil prices fell. Today, we have a domestic industry ready to find and produce energy for the nation's consumers, but this inherently risky industry must compete for funds against other more appealing investments and the lure of lower costs to produce foreign oil.

Hearings throughout Congress have echoed with the statements of members from producing and consuming states alike that more must be done to increase domestic production. The question is how. Much of that answer lies within this Committee.

Near Term Actions

In the near term there are a number of actions that can be taken. In fact, there has been wide agreement on these actions between Republicans and Democrats. Numerous bills have been introduced in the House and Senate with substantial sponsorship during the 106th Congress and now in the 107th Congress. In the House, H.R. 805 has been introduced with a number of exploration and production provisions and in the Senate S. 389 and S. 596—both of the comprehensive energy bills—include a tax title with key provisions.

First, action should be taken to clearly allow expensing of geological and geophysical costs and of delay rental payments. Congress has passed these changes. These changes would clearly aid the development of new wells and they reflect historic practice in treating these costs. (IPAA Fact Sheets detailing these issues follow this testimony.)

Second, there is wide support for a countercyclical marginal well tax credit. This approach was recommended by the National Petroleum Council in its 1994 *Marginal Wells* study. This tax credit today can be crafted with a negligible impact on the federal budget, but at the same time create an important safety net for the most vulnerable American producing wells—wells that produce petroleum roughly equivalent to imports from Saudi Arabia—wells that are the nation's true strategic petroleum reserve. (An IPAA Fact Sheet detailing this issue follows this testimony.)

Third, Congress has suspended the property taxable income limitation on percentage depletion for marginal wells through 2001. The tax bill passed by the 106th Congress would have suspended this provision through 2004. The suspension that was in place in 1998 and 1999 saved many marginal wells during the price crisis.

This provision should be permanently eliminated to provide domestic producers of these wells an incentive not to plug the wells during a low price cycle. Once the well is plugged, the potential to produce the remaining reserves is lost forever. (An IPAA Fact Sheet detailing this issue follows this testimony.)

Fourth, the 106th Congress' tax bill would have also suspended through 2004 the 65 percent net overall taxable income limit on percentage depletion. This constraint on independent producers limits the amount of capital that can be retained for reinvestment into existing and new production. In an industry that typically reinvests 100 percent of its profits back into the industry, this constraint means less domestic crude oil and natural gas. It too should be eliminated. (An IPAA Fact Sheet detailing this issue follows this testimony.)

The number of independent producers qualifying for percentage depletion has decreased. Percentage depletion has been further limited as a result of mergers and acquisitions of the various producers as they seek ways of reducing their costs, consolidating production fields, and operating more efficiently. However, percentage depletion remains very important to the small producer with marginal well production. Limiting the number of barrels qualifying for percentage depletion and artificially lowering the rate in a declining industry is counterproductive. Increasing the number of barrels qualifying and/or increasing the depletion rate would go a long ways to help the small independent when prices are low.

Fifth, the 106th Congress' tax bill extended the net operating loss carryback period for independent producers to five years. This approach or one that would allow for the carryback of carried over percentage depletion that was limited by the 65 percent net taxable income limit both have been introduced in the 107th Congress. Taken together with the changes passed regarding percentage depletion, millions of dollars would be made available based on costs and losses already incurred to enhance domestic production.

Collectively, these provisions have wide support. They would be of significant national value. They should be enacted now. Equally important, they must be crafted in such a manner to assure that the Alternative Minimum Tax does not nullify the benefits that they would create. The mistake of 1986 should not be repeated. When the industry is in desperate need of capital, it should not be stripped away.

Next Steps

For the future, the country needs to look toward tax policies to encourage domestic production of its crude oil and natural gas. The AMT remains a constriction. While the AMT was modified to exclude percentage depletion from the calculation of the alternative minimum taxable income (AMTI), independent producers remain subject to the AMT with regard to intangible drilling costs (IDCs). Specifically, if "excess intangible drilling costs" exceed 65 percent of net income from all oil and gas production, these costs are "potential preference items." AMTI cannot be reduced by more than 40 percent of the AMTI that would otherwise be determined if the producer was subject to the IDC preference. This 40 percent rule forces some independent producers—particularly smaller ones—to curtail drilling once the expenditures become subject to the AMT. Now is a time when drilling needs to increase significantly. The 1999 NPC *Natural Gas* study estimates that the number of wells drilled needs to double over the next fifteen years. Independent producers drill 85 percent of domestic oil and gas wells. It makes no sense for the federal tax code to be a barrier to this effort.

Some of the future focus also needs to be directed to getting more out of existing resources. For example, it is clear that the Enhanced Oil Recovery tax credit has added millions of barrels of crude oil production and continues to assist in recovering the economically higher-cost significant heavy oil reserves using technologies that have been proved to work for more than twenty years. This provision should be reviewed with the intent of examining and adding appropriate EOR methods as qualified methods. (An IPAA Fact Sheet detailing this issue follows this testimony.)

Equally significant, policies need to address encouraging more new development. Proposals to encourage domestic exploration and production should be created. A number of concepts are already in play and need to be more fully evaluated.

For example, the Section 29 tax credit for unconventional fuels proved to be a strong inducement to developing those resources. It applies to wells drilled prior to 1993 and uphole completions thereafter. Just last July, the Federal Energy Regulatory Commission acted to reinstate its certification process to address many wells that would otherwise qualify for the Section 29 tax credit. But, the existing credit expires in 2003 and provides no incentive for current development since the qualifying wells had to have been drilled before 1993. S. 389 extends the existing credit and creates a second drilling window that also applies to heavy oil. In early May, Steve Williams, President of Petroleum Development Corporation in Bridgeport,

West Virginia—and a member of IPAA's Tax Committee—testified regarding Section 29 before this subcommittee. His testimony included several recommendations regarding Section 29 and IPAA commends that testimony for your consideration.

Fundamentally, the question facing the nation is how to marshal the capital to develop its domestic resources.

The 1999 NPC *Natural Gas* study estimates that an additional $10 billion over and above the current expenditure level will need to be invested annually in domestic production over the next fifteen years to meet the expected demand. This investment is essential to provide for the supply increase of approximately 30 percent over this time period. So far, this target does not appear to have been met. The NPC study was based on 1998 actual information. From 1998 through 2000, domestic natural gas production has increased by about two percent—an average one percent per year —roughly half the amount needed. Some of this limitation reflects the consequences of the 1998–99 oil price crisis as it played out in natural gas development. Now, natural gas drilling rigs are at record levels constrained in part because of rig availability. The success of this activity is showing up in increased natural gas reserves, but it is important to recognize that—over the past five years—domestic natural gas reserve replacement has essentially stayed even. To meet future demand increases reserves must grow appreciably. Moreover, in recent years the depletion rate for domestic production has increased substantially to now average 24 percent per year—with some significant Gulf of Mexico fields depleting at rates exceeding 40 percent per year. New production must not only overcome this depletion, it must grow in absolute terms.

With regard to domestic oil production, the challenge is to maintain existing production levels to (1) reduce foreign dependence and (2) to assure the existence of a healthy domestic exploration and production industry. For example, while natural gas drilling rig counts are at record rates, domestic oil rig counts are essentially half of their 1997 level. Heavy oil production and development budgets in California has been drastically cut as the result of: (1) record high Southern California border natural gas prices, (2) the California utilities cash-flow problems including a bankruptcy, and (3) the non-payment to some qualified facilities (QF's) that produce electricity for sale. The sale of electricity offsets the cost of the co-generation steam, which is injected into the reservoir and is critical for heavy oil production. At issue, then, is how to obtain the continuing capital essential for domestic development. One source is the capital markets and some of this amount will come from there, but it has significant drawbacks. First, the capital markets have yet to show a strong interest in the oil and gas exploration and production industry despite the recent high prices of both commodities. Second, where the capital markets are likely to focus their attention will be on large companies. So, while some large independents may derive some of their capital from these markets, it will only be a portion and smaller independents will need to look elsewhere. Third, there is no guarantee that such capital will go into domestic production because even with regard to investment in exploration and production activities, capital must compete against other projects including international ones.

The next source of capital will be from the revenues generated by higher production and higher prices. First, the magnitude of this capital may be overstated because just as prices for oil and natural gas have increased, prices for drilling rigs and other costs are also increasing which will squeeze the capital that is available. Second, this capital will also be directed to the most promising projects, so there is no guarantee that it will be invested domestically. Third, this revenue will be significantly reduced by taxes.

The challenge, then, is to create a mechanism to direct the capital to domestic production. One such approach would be to create a "plowback" incentive that would apply to expenditures for *domestic* oil and natural gas exploration and production. This type of proposal would encourage capital formation and development of domestic wells provided it was immediately beneficial. Therefore, it would have to be creditable against both regular and AMT taxes and any excess available for carryback and carryforward. It would address the compelling need to improve natural gas supply as well as reduce the growing dependency on foreign oil. It must, in fact, apply to both oil and natural gas because they are inherently intertwined—often found together. Moreover, because of their inherent link, a healthy domestic natural gas exploration and production industry cannot exist without a healthy comparable oil industry. IPAA has identified two alternatives to create a plowback incentive.

The first would be a special deduction from gross income from the well. The deduction would be allowed for an amount equivalent to 50% of the costs incurred in the drilling and development of domestic oil and natural gas wells after December 31, 2001. These costs would include all Intangible Drilling Costs, Geological & Geophysical costs, equipment and related costs. In the event of a dry well, the costs

would be allowed to offset qualifying gross income from other productive wells with any excess carried forward to offset future qualifying income of the taxpayer. Qualifying income is gross income from an oil or gas well, which was completed or recompleted by incurring additional qualifying costs after December 31, 2001. The deduction would be from gross income and would not reduce the costs or deductions generated by the expenditures themselves. Deductions in excess of gross income from a well could be carried forward or carried back to offset qualifying income from that well. If a well were plugged and abandoned prior to complete utilization of the deduction, the balance would be treated similarly to dry hole costs.

The second approach would be a 10% tax credit, based on the total drilling and development costs for wells drilled after 2001. These costs would include all Intangible Drilling Costs, Geological & Geophysical costs, equipment and related costs. The credit would apply against both the regular tax and the Alternative Minimum Tax. It could be carried back and carried forward. In order to obtain the credit, the taxpayer must be able to demonstrate that he has expended a like amount on similar development activity within 12 months following the end of the tax year to which the credit applies.

Structuring the federal tax code to allow greater revenues to be retained by energy producers who reinvest those revenues into new exploration and production can then enhance domestic investment. (An IPAA Fact Sheet detailing this issue follows this testimony.)

Conclusion

If Congress wants to see more *domestic* crude oil and natural gas production, it must recognize that federal tax policy plays a critical role in whether capital will flow toward this industry and the production of this resource. That has always been the case and it will continue to be. Domestic producers have always been "risk takers." During these times of plentiful investment opportunities, they need some assistance in attracting capital (or retaining it for use internally) and directing it towards domestic projects. There are immediate actions that can and should be taken. The time is right. The nation is seeking a more stable energy supply. Congress should act.

Independent Petroleum Association of America

FACT SHEET

Geological And Geophysical Costs

Geological and geophysical (G&G) surveys are used to locate and identify properties with the potential to produce commercial quantities of oil and natural gas, as well as to determine the optimal location for exploratory and developmental wells.

Proposal

Allow current expensing of geological and geophysical costs incurred domestically including the Outer Continental Shelf.

G&G expenses include the costs incurred for geologists, seismic surveys, and the drilling of core holes. These surveys increasingly use 3–D technology rather than the conventional 2–D technology used for most of the last seven decades. Previously only very large companies were able to utilize this state-of-the-art, computer-intensive, 3–D technology because of its high cost and the considerable technical expertise it requires. However, as the costs of computer technology have declined, more and more domestic independent producers are making use of this technology. Still, while 3–D seismic provides a vastly superior tool for exploration, it is far more expensive than 2–D technology. 3–D seismic surveys usually cost between five or six times more per square mile onshore than the older technology and, in some instances can account for two-thirds of the costs of some wells. Encouraging use of this technology has many benefits:

- **More detailed information.** Conventional 2–D seismic is only able to identify large structural traps while 3–D seismic is able to pinpoint complex formations and stratigraphic plays.
- **Improved finding rates.** Producers are reporting 50–85% improvements in their finding rate. In prior years a producer might have to drill three to eight wells in order to find commercially viable production.
- **Reduced environmental impact.** Because the use of advanced seismic technology significantly improves the odds of drilling a commercially viable well on the first try, this reduces the number of wells that are drilled and, thus, reducing the footprint of the industry on the environment.

• **Investment capital.** Many investors are requiring producers to provide 3–D seismic surveys of potential development before committing their capital to the project in order to minimize their risk.

Current law treatment

G&G costs are not deductible as ordinary and necessary business expenses but are treated as capital expenditures recovered through cost depletion over the life of the field. G&G expenditures allocated to abandoned prospects are deducted upon such abandonment.

Reasons for change

These costs are an important and integral part of exploration and production for oil and natural gas. They affect the ability of domestic producers to engage in the exploration and development of our national petroleum reserves. Thus, they are more in the nature of an ordinary and necessary cost of doing business.

These costs are similar to research and development costs for other industries. For those industries such costs are not only deductible but a tax credit is available.

Crude oil imports are at an all-time high, which makes the U.S. vulnerable to sharp oil price increases or supply disruptions. The National Petroleum Council *Natural Gas* study concluded that natural gas supplies need to increase by over 30 percent by 2010 to meet demand. Domestic exploration and production must be encouraged now to offset this potential threat to national security, to meet future needs, and to enhance our economy. Allowing the deduction of G&G costs would increase capital available for domestic exploration and production activity.

The technical "infrastructure" of the oil services industry, which includes geologists and engineers, has been moving into other industries due to reduced domestic exploration and production. Stimulating exploration and development activities would help rebuild the critical oil services industry.

Encouraging the industry to use the best technology available and to reduce its environmental footprint are important public policy reasons to clarify that these ordinary and necessary business expenses for the oil and gas industry should be expensed.

Status

The Taxpayer Refund And Relief Act Of 1999 included a provision to allow expensing of G&G costs, but the bill was vetoed. Congress needs to pass legislation now to implement this common objective to enhance and preserve domestic oil and natural gas production.

Independent Petroleum Association of America

FACT SHEET

Tax Treatment of Delay Rentals

Delay rental payments are made by producers to an oil and gas lessor prior to drilling or production. Unlike bonus payments (made by the producer in consideration for the grant of the lease) which generally are treated as an advance royalty and thus capitalized, producers have historically been allowed to elect to deduct delay rental payments under Treasury Regulations 1.612–3(c). However, in September 1997, the IRS issued a coordinated issues paper stating that such payments are preproduction costs subject to capitalization under Section 263A of the Internal Revenue Code. The legislative history of Section 263A is unclear and subject to varying interpretation.

Proposal

Clarify that delay rental payments are deductible, at the election of the taxpayer, as ordinary and necessary business expenses.

Reasons for change

In passing the Section 263A uniform capitalization rules, Congress broadly intended to only affect the "unwarranted deferral of taxes." Congress did not intend to grant the IRS the authority to repeal the well-settled industry practice of deducting "delay rentals" as ordinary and necessary business expenses.

Treas. Reg.1.612–3(c) states that, "a delay rental is an amount paid for the privilege of deferring development of the property and which could have been avoided by abandonment of the lease, or by commencement of development operations, or by obtaining production." Such payments represent ordinary and necessary business expenses, not an "unwarranted deferral of taxes." Given the clear disagreement over the legislative history and the likelihood of costly and unnecessary litigation to re-

solve the issue, clarification would eliminate administrative and compliance burdens on taxpayers and the IRS.

Status

The Taxpayer Refund And Relief Act Of 1999 included a provision to clarify that delay rental payments could be expensed, but the bill was vetoed. Congress needs to enact legislation to implement this common position if the Administration is unwilling to correct the current confusing interpretation of the tax code.

March 2001

Independent Petroleum Association of America

FACT SHEET

Marginal Well Tax Credit

Summary of Legislation

The Marginal Well Production Tax Credit amendment to the Internal Revenue code will establish a tax credit for *existing* marginal wells. Marginal oil wells are those with average production of not more than 15 barrels per day, those producing heavy oil, or those wells producing not less than 95 percent water with average production of not more than 25 barrels per day of oil. Marginal gas wells are those producing not more than 90 Mcf a day. The amendment will allow a $3 a barrel tax credit for the first 3 barrels of daily production from an existing marginal oil well and a $0.50 per Mcf tax credit for the first 18 Mcf of daily natural gas production from a marginal well.

The tax credit would be phased in and out in equal increments as prices for oil and natural gas fall and rise. Prices triggering the tax credit are based on the annual average wellhead price for all domestic crude oil and the annual average wellhead price per 1,000 cubic feet for all domestic natural gas. The credit for the current taxable year is based on the average price from the previous year. The phase in/out prices are as follows:

OIL—phase in/out between $15 and $18;

GAS—phase in/out between $1.67 and $2.00.

The amendment would allow the tax credit to be offset against regular and the alternative minimum tax (AMT). In addition, for producers without taxable income for the current tax year, the amendment would provide a 10-year carryback provision allowing producers to claim the credit on taxes paid in those years. The carryback credit may be used to offset regular tax and AMT.

Reasons For Change

The 1994 National Petroleum Council's *Marginal Wells* report concluded:

Preserving marginal wells is central to our energy security. Neither government nor the industry can set the global market price of crude oil. Therefore, the nation's internal cost structure must be relied upon for preserving marginal well contributions.

Marginal wells account for approximately 20 percent of domestic oil production, amount roughly equivalent to imports from Saudi Arabia. Producing an average of 2.2 barrels per day, these roughly 400,000 wells are the nation's true strategic petroleum reserve. They are, however, particularly at risk during periods of low prices. Therefore, a principal recommendation of the Marginal Wells report was the creation of a countercyclical marginal well tax credit.[1] The Dept. of Energy has evaluated the benefits of a tax credit and believes that it could prevent the loss of 140,000 barrels per day of production if fully employed during times of low oil prices like those of 1998 and 1999.

As the 107th Congress begins, legislation has been introduced in both the House and Senate to create a tax credit. If enacted now, this countercyclical credit would establish a safety net of support for these critical wells. As Congress addresses energy policy issues, IPAA believes a marginal wells tax credit should be an essential component.

March 2001

[1]It also recommended expanding the Enhanced Oil Recovery tax credit, an inactive well recovery tax credit, and expensing of capital expenditures associated with marginal wells.

Independent Petroleum Association of America

FACT SHEET

Eliminate The Net Income Limitation On Percentage Depletion

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, the percentage depletion 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. These limitations apply both for regular and alternative minimum tax purposes.

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. The typical independent producer can have numerous oil and gas properties, many of which could be marginal properties with high operating costs and low production yields. During periods of low prices, the producer may not have net income from a particular property, especially from marginal properties. When domestic production is most susceptible to being plugged, the net income limitation discourages producers from investing income to maintain marginal wells.

Proposal

Eliminate the net income limitation on percentage depletion.

Reasons for change

Marginal oil wells—those producing on average 15 barrels per day or less or producing heavy oil—account for approximately 20 percent of domestic oil production, an amount roughly equivalent to imports from Saudi Arabia. The U.S. is the only country with significant production from marginal wells. Once wells are plugged, access to the remaining resource is often lost forever. Eliminating the net income limitation on percentage depletion would encourage producers to keep marginally economic wells in production and enhance optimum oil and natural gas resource recovery.

The current requirement creates a paperwork and compliance nightmare for taxpayers and the Internal Revenue Service. Eliminating the net income limitation on percentage depletion would simplify recordkeeping and reduce the administrative and compliance burden for taxpayers and the IRS.

Current Status

The Taxpayer Relief Act of 1997 created a two-year suspension of the net income limitation on percentage depletion; this suspension has been extended through 2001. However, it is time to make this suspension permanent. If the country learned anything from the high oil and natural gas prices of 2000, it is that America needs to maintain and enhance its domestic oil and natural gas production. This tax reform allows more capital to be retained by producers where it can do the most good—producing more domestic oil and natural gas.

Legislation has been introduced to eliminate or further suspend the net income limitation provision for marginal wells. It should be enacted prior to 2002 when the current suspension ends.

March 2001

Independent Petroleum Association of America

FACT SHEET

Percentage Depletion Expansion and Carryback Proposal

Current tax law limits the use of percentage depletion of oil and gas in several ways. First, the percentage depletion 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, the net income limitation requires percentage depletion to be calculated on a property-by-property basis.[2] It prohibits percentage depletion to the extent it exceeds the net income from a particular property. Fourth, the

[2] The net income limitation for marginal wells is suspended through 2001.

deduction is limited to 65% of net taxable income. These limitations apply both for regular and alternative minimum tax purposes.

Percentage depletion in excess of the 65 percent limit may be carried over to future years until it is fully utilized. Many independent producers have been limited in the past because they have spent their income on continuing development of their properties, thereby reducing their taxable income. When oil prices dropped to historically low levels independent producers were unreasonably constrained by these tax provisions limiting their cash flow. They cannot use these carried over deductions. Now, when capital to develop oil and natural gas should be maximized, producers can be constrained due to the alternative minimum tax (AMT). Even if they could use the deductions, they may not benefit to the fullest extent possible from actual tax savings. This proposal would alleviate these limits by implementing the following changes:

• By annual election, the 65 percent taxable income limitation would be reduced or eliminated for current and future tax years.

• Carried over percentage depletion could be carried back for ten years subject to the same annual election on taxable income limitation.

Status

Legislation has been introduced in the 107th Congress to eliminate or suspend the 65 percent net taxable income limit and to provide for carryback of carried over deductions.

Congress needs to include such provisions in future tax reform bills and the Administration needs to support such provisions to enhance and preserve domestic oil and natural gas production.

March 2001

Independent Petroleum Association of America

FACT SHEET

Enhanced Oil Recovery

Section 43 of the Internal Revenue Code provides an enhanced oil recovery (EOR) credit equal to 15 percent of the qualified enhanced oil recovery costs incurred in a tax year. Existing Treasury guidelines for the section 43 tax credit are very narrow, generally including only expensive EOR processes—many of which are no longer in use. It excludes, however, many EOR processes that are the result of technological advances now considered common in the industry.

The Petroleum Technology Transfer Council (PTTC) in March 1997 compiled a list of EOR methods that should be included under section 43. This study was part of an industry effort to expand the EOR definition to include technologies that have proven potential for mitigating well abandonment and increasing oil production and resource recovery.

Proposal

Have the IRS review and expand the definition of methods qualifying for the EOR tax credit.

Reason for Change

The existing Treasury guidelines are based on 1979-vintage technology. This list has not kept pace with technology. A second rationale is the incentive generated by allowing domestic producers to position themselves to glean existing reservoirs in order to maximize production of existing reserves.

Two additional categories to the EOR list are proposed. Those categories include Enhanced Gravity Drainage (EGD) and Marginally Economic Reservoir Repressurization (MERR). Included under EGD would be horizontal drilling, multilateral well bores and large diameter lateral well bores. Included in MERR would be natural gas injection and waterflooding. Certain qualifiers and limiting factors include economic criteria for approved projects and incremental production limitations on each project.

By redefining the definition of EOR projects to include both EGD and MERR technologies, the EOR tax credit will encourage conservation measures to expand recovery of existing crude oil reservoirs and promote new drilling activity.

The benefit of these changes is well stated in the *National Energy Policy* report:

Anywhere from 30 to 70 percent of oil, and 10 to 20 percent of natural gas, is not recovered in field development. It is estimated that enhanced oil recovery projects, including development of new recovery techniques, could add about 60 billion barrels of oil nationwide through increased use of existing fields.

Congress needs to enact legislation to implement these definitional changes if the Administration is unwilling to correct the current constrained interpretation of the tax code.

June 2001

Independent Petroleum Association of America

FACT SHEET

Plowback Incentive

Fundamentally, the question facing the nation is how to marshal the capital to develop its domestic resources. The 1999 NPC *Natural Gas* study estimates that an additional $10 billion over and above the current expenditure level will need to be invested annually in domestic production over the next fifteen years to meet the expected demand. To date this target has not been met; capital expenditures are essentially flat. At issue is how to obtain capital for domestic development. Independent producers are risk takers who will invest capital if it is available to find and produce more oil and natural gas. To encourage additional investment a method needs to be created to "plow back" as much of the revenue from oil and natural gas sales as possible to develop new production. Structuring the federal tax code to allow greater revenues to be retained by energy producers who reinvest those revenues into new exploration and production can enhance domestic investment.

Proposal Alternatives

(1) A special deduction from gross income from the well would be allowed for an amount equivalent to 50% of the costs incurred in the drilling and development of domestic oil and natural gas wells after December 31, 2001. These costs would include all Intangible Drilling Costs, Geological & Geophysical costs, equipment and related costs. In the event of a dry well, the costs would be allowed to offset qualifying gross income from other productive wells with any excess carried forward to offset future qualifying income of the taxpayer. Qualifying income is gross income from an oil or gas well which was completed or re-completed by incurring additional qualifying costs after December 31, 2001. The deduction is from gross income and would not reduce the costs or deductions generated by the expenditures themselves. Deductions in excess of gross income from a well could be carried forward or carried back to offset qualifying income from that well. If a well were plugged and abandoned prior to complete utilization of the deduction, the balance would be treated similarly to dry hole costs.

(2) A 10% tax credit, based on the total drilling and development costs for wells drilled after 2001. These costs would include all Intangible Drilling Costs, Geological & Geophysical costs, equipment and related costs. The credit would apply against both the regular tax and the Alternative Minimum Tax. It could be carried back and carried forward. In order to obtain the credit, the taxpayer must be able to demonstrate that he has expended a like amount on similar development activity within 12 months following the end of the tax year to which the credit applies.

Reason for Change

The challenge is to create a mechanism to direct the capital to domestic production. One such approach would be to create a "plowback" incentive that would apply to expenditures for domestic oil and natural gas exploration and production. This type of proposal would encourage capital formation and development of domestic wells provided it was immediately beneficial. It would address the compelling need to improve natural gas supply as well as reduce the growing dependency on foreign oil. It must, in fact, apply to both oil and natural gas because they are inherently intertwined—often found together. Moreover, because of their inherent link, a healthy domestic natural gas exploration and production industry cannot exist without a healthy comparable oil industry.

May 2001

Chairman MCCRERY. Thank you, Mr. Hall.

Mr. MacFarlane, I want to talk about the part of your testimony dealing with our foreign tax provisions in the Tax Code because I think probably that is an area that is just not familiar to a lot of

people, including some Members of the Ways and Means Committee, so I would like for you to expound a little bit on that.

Particularly, tell us what benefits would be derived from the changes you suggest in terms of domestic jobs, the economic benefits. Tell us why we should change our foreign tax rules to benefit the people here in the United States. How does it benefit us?

Mr. MACFARLANE. Sure, I would be happy to. We support increased domestic production but I think we all realize that that alone will not be enough and that we are going to have to have access to oil from outside the United States, oil and gas. And the foreign tax credit system and the U.S. tax system that applies to U.S. companies is a little different than it is for some of the other competitors that we face in the international arena.

Non-U.S.-based companies typically have a tax system that is a territorial system, so they would only tax income which arose in their country, or they may have a credit system like we do, but it may be more fully effective.

What we have in the United States is a credit system where the worldwide income of U.S.-based companies is taxed and it comes back into the U.S. tax return and you are allowed a foreign tax credit against that for the taxes that are paid to foreign governments.

There are some limitations in that system that are not suffered by our competitors that are not U.S.-based companies and we feel that there are several reasons why it is important for U.S. companies to be involved in the development of foreign oil reserves and production.

One is that the more different sources of oil that you may have, the better the security situation is because you can look to a variety of sources and this allows you to compete in more places. It also helps that U.S. companies are involved in this. It creates jobs back in the United States, people supporting these efforts creating technical expertise and bringing that to bear to produce oil in the foreign locations. And it is better that the U.S.-based companies be involved in that than leave it to others from outside the United States.

Chairman MCCRERY. So in other words, some of the foreign tax provisions in our Tax Code make American companies less competitive with foreign companies doing the same business overseas.

Mr. MACFARLANE. That is correct. When we look at an oil and gas investment—exploration, production, development—these are long lead-time high risk ventures, so we look very carefully at what we anticipate the returns would be on these investments. And if we suffer costs from additional compliance or the foreign tax credit system not working as well as it might, then the return that we can get is not equal to that of our foreign competitors and therefore we can lose the business.

Chairman MCCRERY. Thank you for expounding on that.

I want to let you talk and Mr. Hall talk about the AMT. A lot of the provisions that you all talked about and previous panels have talked about, we are going to try to get in a tax bill. They do not cost much, frankly, so we think we might be able to squeeze some of the incentives for production of oil and gas, some of the incentives for alternative fuels, renewable fuels, some of the incen-

tives for conservation into a tax bill and get it through to the president, but when you are talking about the AMT, you are talking big bucks.

However, when I go home to Shreveport, Louisiana and talk to small independent producers, they tell me the thing that just kills them is the AMT.

I will start with you, Mr. Hall, since you represent the independent producers. Can you explain why my guys complain so much about the AMT? Explain it to the Subcommittee.

Mr. HALL. If I can say it in such a manner that everybody understands, depreciation is probably the big issue. As we invest back into the industry and do more exploration and development, we incur depreciation. That depreciation limits the ability we can take our credits, and so forth. So having more credits does not always benefit us. If we have alternative minimum tax that puts a threshold to not being able to utilize those credits. So we cannot monetize our credits, which means we cannot put that money back into the ground because as Berry Petroleum, we take our money internally from what is generated from our production and put it back into our development program. So if we are——

Chairman MCCRERY. So number one, it discourages reinvestment.

Mr. HALL. That is correct.

Chairman MCCRERY. OK, what is number two? What if you have a bad year?

Mr. HALL. Well, bad year, you may still have AMT involved because you may have production from the prior year. So the first 2 to 3 years of depreciation limits your ability to claim credits before the AMT turns around and works to your advantage. So if you are constantly on a drilling program and moving forward on a constant basis, you never get to that third year. You have to have two or three bad years in a row and then you have other problems.

Chairman MCCRERY. So the AMT is a rather perverse——

Mr. HALL. Big-time problem for the small independent producer, big-time problem.

Chairman MCCRERY. What about the big guys, Mr. MacFarlane? Is it for them, as well?

Mr. MACFARLANE. We also find AMT to be a problem. I think Mr. Hall said it well. The problem is that some of the incentives we are talking about here, you do not get them if you are subject to AMT. The other problem is that AMT tends to hit you the hardest in the bad years. It has the effect of making you pay taxes when basically you do not have the income that would warrant it. So it is a difficult situation to deal with when you are trying to encourage investment.

Chairman MCCRERY. Well, that is the third point, getting outside investors to even look at financing an oil and gas deal. When they can put their money into bonds or something that is safe and get a fairly good rate of return, they look at the oil and gas deal and say well, even if the deal works, if the price goes down we have a bad year, we do not make money, we are still going to have a tax liability. Not a real good selling point.

So I am hopeful that this Congress will finally come to grips with the alternative minimum tax, not just for the oil and gas industry

but for our whole economy it is a relic of past tax policy; it has no place in our Tax Code today. Yes, it is going to be expensive to do away with it but we ought to do that. But we will particularly look at the effects on additional incentives that we put in the Tax Code, trying to at least insulate those from the effects of the AMT. So I appreciate your testimony.

Mr. McNulty.

Mr. MCNULTY. Thank you, Mr. Chairman. I have no questions. I just want to thank all the witnesses for their testimony. I especially want to thank Mr. Van Son for his focus on renewables and I certainly hope that legislation with regard to those issues will be included in our final legislative package. Thank you, Mr. Chairman.

Chairman MCCRERY. Mr. Brady.

Mr. BRADY. Thank you, Mr. Chairman.

First, Mayor McHugh, I know that the Internal Revenue Service's job is to collect revenue but I am always constantly amazed at how good a job they do. When organizations work hard to try to get the most efficient, the most affordable cost for their customers it has to be frustrating to have a Federal agency step in and negate those very gains you have made for your own customers. So I am hopeful that we can help in that area.

For Mr. Van Son, you put a big emphasis on conservation. I appreciate the point you make, too, which is it is not either conservation or supply; it is not either conservation or technology. We have to have all three in a balanced approach—some help short term, some help long.

But the main point that you make, the Green Power Group supports immediate renewal of section 45 and the expansion of it; is that included in the president's energy proposal?

Mr. VAN SON. I'm sorry; could you please repeat the second half of your question?

Mr. BRADY. The section 45, your main proposal, immediate renewal of 45, the production tax credit for wind and closed loop biomass and then the extension of it. Is that included in the president's plan?

Mr. VAN SON. Yes. Actually, many of the comments I said today are consistent with what is outlined in the national energy policy document recently published. In particular, the extension of section 45 should include landfill gas to energy projects for both the production of electricity, as well as direct use applications by conversion to a BTU credit as in some cases it is more efficient to route the methane directly to a boiler or other application.

Mr. BRADY. Sure, thank you.

And Mr. MacFarlane and Mr. Hall, it seems to me that the issue of energy security is more than just economics; it is a matter of national security. And as long as our country continues to rely on foreign sources for more than half of our daily needs, we are vulnerable. It also seems like as one of the most prosperous nations in the world, there is no responsible reason we ought not be taking more care of our own energy needs.

From the national security standpoint, because no one pays much attention to you when oil is $10 or $12 a barrel but part of your effort at encouraging domestic supply in a consistent and af-

fordable manner, does that not contribute to our National security efforts, just to have more control over our own daily energy needs so that we again have more strength when dealing with circumstances that are beyond our control? Either one of you may answer.

Mr. MACFARLANE. Certainly I would agree. It is important to produce what we can from this country. I think it gives us more options from a security point of view and it is important. I do not think it is the total answer but I think it is a very important part of it.

Mr. HALL. Coming from the independent producer side of it, the issue becomes when you have low oil prices and you stop producing, you have these marginal wells that may be shut in on a permanent basis, which means you have lost that reserve for a long period of time, if not forever. They may not come back. They may not be brought back ever.

So every barrel that we import, every barrel we do not produce internally, or domestically we have to import from someplace else, which means there are a lot of environmental issues, as well, by bringing tankers in and everything else. So there are multiple facets to that issue and we do concur with you. That its a National Security issue as well

Mr. BRADY. Right. Well, thank you to the panelists and thank you, Mr. Chairman.

Chairman MCCRERY. Thank you, Mr. Brady. And thank all of you for your testimony today. We appreciate your helping us to try to craft a national energy policy that makes sense.

Now we will go to our third panel. Jerry D. Williams, general manager and CEO of Claiborne Electric Co-op, Homer, Louisiana on behalf of the National Rural Electric Cooperative Association; John Tiencken, president and CEO of South Carolina Public Service Authority on behalf of the American Public Power Association; Greg Nelson, vice president and tax counsel, Ameren Corporation, St. Louis, Missouri on behalf of the Edison Electric Institute.

Welcome to all of you, gentlemen, and a particular welcome to Mr. Jerry Williams, who is from north Louisiana and my congressional district and I have worked with him on electric co-op issues for quite a number of years. He always brings a load of expertise and common sense to our discussions so I welcome him particularly. And Mr. Williams, since you are from my district, you get to go first.

STATEMENT OF JERRY D. WILLIAMS, GENERAL MANAGER AND CHIEF EXECUTIVE OFFICER, CLAIBORNE ELECTRIC CO–OP, INC., HOMER, LOUISIANA, ON BEHALF OF THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. WILLIAMS. Thank you, Mr. Chairman and Members of the Committee. I am Jerry Williams, the general manager and CEO of Claiborne Electric Co-op in Homer, Louisiana. I appreciate the opportunity to appear before you today to discuss tax law changes that are needed to ensure adequate power supplies and to facilitate fair competition for all electric utilities in the move toward a more competitive marketplace.

Mr. Chairman, my verbal testimony will summarize Rural Electric Co-op's strong support for the bipartisan legislation H.R. 1601 introduced by Representative Scott McInnis and John Tanner, and please refer to my written statement for background information and an explanation on the need to provide rural electric co-ops with tradable tax credits.

As you are aware, electric cooperatives have a different tax status. Because cooperatives are not-for-profit businesses, they are owned and operated for the benefit of consumer owners. It is particularly important that in an era of restructuring that tax policy adjust to keep the cooperative business structure viable. All three sectors of the utility industry agree that legislative tax fixes are needed to keep pace with the changes occurring in the industry.

An electric cooperative is tax-exempt as long as 85 percent or more of its annual income comes from Members. Even though tax-exempt, income derived from business lines unrelated to the co-op's tax-exempt purpose is still taxed under the unrelated business income tax. If restructuring were accompanied by a loss of the tax-exempt status of electric cooperatives, the prices cooperative members face might rise as a result of it.

The 85/15 percent test posed few problems for cooperatives prior to retail competition, mainly because cooperatives, like all electric providers, had exclusive service territories. But with retail competition, the very nature of the business is changing. The 85/15 percent test was enacted in 1924 and has not been substantially altered in 75 years.

To compute a co-op's income, the tax code currently ignores two type of revenue. H.R. 1601 proposes eight additional exclusions from the income test. The first exclusion is income earned by a subsidiary is fully taxed at the subsidiary level and would not be counted in the 85/15 test until paid to the co-op.

Second, in order to operate on an at-cost basis, rural electric co-ops are required to assign and distribute capital credits, also called patronage dividends, to their Members. These capital credits represent the difference between revenue received from a member less the operating cost to serve that member. In a competitive market, certain members may be willing to forego their capital credits in exchange for lower rates and the donated capital would not be considered for the 85/15 test.

And third, for competitive reasons, a rural electric co-op may need to sell electricity below fully allocated cost and at a price based on incremental cost in order to meet market rates and such income would be excluded from the 85/15 test. An example of this, Mr. Chairman, would be the rates that Claiborne Electric offered Con-Agra to build a poultry plant near Farmerville, Louisiana.

And fourth, the nuclear decommissioning investment income would also be excluded. As the Nuclear Decommissioning Fund grows over the life of a nuclear power plant, investment earnings on the fund could cause the co-op to fail the 85/15 test.

Fifth, condemnation income would not be considered. Nationwide, rural electric cooperatives suffer the condemnation and annexation of their service territories by municipalities. This would not limit a municipality's right or authority to condemn territory.

Sixth is prepaid income that would not be considered income to rural electric co-ops. This is a clarification that is important because approximately 20 percent of all the rural electric cooperatives have prepaid their debt to the RUS. Because the present value payment is a discount from the par value of the debt, the IRS presently considers the discounted amount to be nonmember income.

And seventh, H.R. 1601 excludes contributions in aid of construction by members or nonmembers to build new lines or improve electric service from the 85 percent Member income test.

And eighth, H.R. 1601 provides that if a rural electric co-op enters into a mutually beneficial agreement to sell, lease or swap service territory or other assets, the capital gains from that transaction are excluded from the 85/15 test.

In addition to the exclusions from member income that I have just described, four other types of income would be considered member income under H.R. 1601. In general, this is income that was member income prior to restructuring.

Those four are first, wheeling income and, as an example, Claiborne Electric may be required to transmit or wheel electricity through our lines for other utilities or third parties.

Second would be regional transmission organization income. It is quite likely that either a statute, regulation or market condition would force the rural electric co-ops to participate in regional transmission organizations.

And third is unbundled income and electric energy sales income. The income of co-ops may be unbundled and charges for things like billing, collecting, et cetera may be broken out and these transactions with or for our members would be considered member income, even if we actually collected it from a third party.

And then fourth, replacement electric energy sales income. If a rural electric cooperative loses kilowatt-hour sales in an open market, the co-op would be allowed to replace those sales with an equal amount of outside sales.

Mr. Chairman, the bill also provides generally the same relief for taxable co-ops.

In conclusion, 75 years ago when the 85/15 percent test was established it was impossible to contemplate what is going on in the industry today. We respectfully request that Congress recognize the changing market and revise the 85/15 percent test to ensure that cooperatives are part of the future competitive landscape of the electric industry.

Thank you for the opportunity to appear before you today.

[The prepared statement of Mr. Williams follows:]

Statement of Jerry D. Williams, General Manager and Chief Executive Officer, Claiborne Electric Co-op, Inc., Homer, Louisiana, on behalf of the National Rural Electric Cooperative Association

Good morning Mr. Chairman and Members of the Committee. My name is Jerry Williams, and I am the General Manager and CEO of Claiborne Electric Co-op in Homer, Louisiana. I greatly appreciate the opportunity to appear before you today to discuss tax law changes that are needed to ensure adequate power supplies and to facilitate fair competition for all electric utilities in the move toward a more competitive marketplace.

Mr. Chairman, my verbal testimony will summarize rural electric co-op's strong support for the bipartisan legislation, H.R. 1601—The Rural Electric Tax Equity Act, introduced by Representatives Scott McInnis and John Tanner and cosponsored

by several other Members of this Committee. Please refer to my written statement, Addendum A, for background information and an explanation of the need to provide rural electric co-ops with tradable tax credits. Secondly, we respectfully urge Congress to provide tradable tax credits to rural electric co-ops if other sectors of the electric utility industry receive broad new tax incentives for environmental protection, electric generation, and the commercialization of clean coal technology.

Claiborne Electric serves 22,000 customers in northwest Louisiana. We are one of 12 Louisiana electric cooperatives serving over 350,000 customers in the state. Nationally, there are nearly 1,000 electric cooperatives serving over 35 million consumers in 46 states.

The table in Addendum B shows an overview of the electric industry, and illustrates that one of the co-op industry's greatest challenges is the lack of customer density. On average, electric cooperatives serve 6 consumers and generate $7,000 per mile of line; whereas investor-owned utilities (IOUs) have 35 consumers and generate $60,000 per mile of line. At Claiborne Electric we average just over 5 consumers per mile of line.

Nationally, co-ops are the smallest sector of the utility industry but are burdened with some of the highest costs. As Addendum C illustrates, our industry serves a disproportionate number of residential consumers.

As you are aware, electric cooperatives have a different tax status because cooperatives are not-for-profit businesses that are owned by and operated for the benefit of consumer-owners. There is, of course, a place in the market for all types of utilities. It is particularly important that, in an era of restructuring, tax policy be adjusted to keep the cooperative form of business structure viable.

In addition to electric energy, cooperatives serve many other sectors of our economy, such as agriculture, finance, retailing, telecommunications, housing and energy. The 45,000 member-owned co-ops nationwide provide $500 billion worth of goods and services annually in the United States.

Ensure competitive parity in tax relief

As the Committee Members know, 24 states have passed legislation to restructure parts of the electric utility industry; others states have similar proposals or are studying the issue. In Louisiana, although the Public Service Commission has formulated a deregulation plan, they are not implementing the plan while they watch the issue unfold in other states. The business environment for electric utilities is changing rapidly due to federal and state legislative and regulatory actions. It is imperative that tax provisions, advanced in any budget, tax, or utility restructuring proposals provide for a smooth transition for electric cooperatives to ensure that all electric consumers can benefit.

All sectors of the utility industry—the investor-owned utilities (IOUs), the publicly-owned municipal utilities (munis) and the consumer-owned cooperative utilities (co-ops)—agree that legislative "tax fixes" are needed to keep pace with the changes occurring in the electric utility industry.

To continue to be able to function as self-reliant, at-cost providers of electricity and electricity services, electric cooperatives must receive comparable treatment. Restructuring of the electric utility industry could force cooperatives to accept non-member revenues that jeopardize their federal tax-exempt status. Therefore, comparability with the other sectors of the utility industry also requires changes in the 85/15 member-non-member income test.

Tax Treatment of Electric Cooperatives

An electric cooperative is tax-exempt so long as 85 percent or more of its annual income comes from members. Even though tax-exempt, income derived from business lines unrelated to the co-op's tax-exempt purpose is still taxed under the unrelated business income tax (UBIT).

Substantially all of the approximately 900 electric distribution cooperatives throughout the nation annually pass the 85 percent member income test and thus qualify for tax-exempt status. These distribution cooperatives are fully taxable on unrelated business income.

An electric cooperative which does not pass the annual 85 percent member income test is treated as a taxable entity. Nationally, most of the largest electric generating cooperatives (G&Ts)—as opposed to distribution cooperatives—throughout the nation derive more than 15 percent of their income from non-members and are taxable entities. As a consequence, over 80 percent of the electricity generated by the cooperative segment of the electric utility industry was produced and sold by taxable electric cooperatives.

The 85/15 test posed few problems for cooperatives prior to retail competition, mainly because cooperatives (like all electricity providers) had exclusive service ter-

ritories. But with retail competition, the very nature of the business is changing. For example, cooperatives will be collecting "wire charges" when competitors sell power to cooperative customers over cooperative-owned power lines. As I will explain later, cooperatives may also sell power to non-cooperative members and there are other transactions in which cooperatives may become involved with non-members.

The 85/15 test was enacted in 1924 and with a few limited exceptions has not been substantially altered in 75 years. Given today's electric industry and given the fact that most other kinds of cooperatives do not have a 85/15 test comparable to the one for rural electric cooperatives, I believe that changes are in order.

The Joint Committee on Taxation, in its October 1997 report of tax issues related to restructuring, recognized the problem. It noted that:

"With electric power industry restructuring, it is not clear that a rural electric cooperative can be assured that it will receive 85 percent of its income from its members because fees that the cooperative receives for wheeling electricity through its system and sales of surplus electricity will not be income from members."

The report goes on to state:

"If restructuring were accompanied by a loss of the tax-exempt status of electric cooperatives, the prices cooperative members face might rise as a result . . ."

H.R. 1601, THE RURAL ELECTRIC TAX EQUITY ACT

As you are aware, NRECA strongly supports H.R. 1601, the Rural Electric Tax Equity Act, introduced by Representatives Scott McInnis, John Tanner and others. This legislation updates the tax laws to reflect the changes that have occurred in the deregulating electricity marketplace over the past few years, as well as anticipated changes. It is important to note that last year the Joint Committee on Taxation provided a revenue estimate of $164 million over ten years on legislation virtually identical to H.R. 1601.

Exclusions from Member Income Test

As mentioned earlier, the Tax Code provides that rural electric co-ops are exempt from federal income taxes if 85 percent or more of their income consists of amounts collected from members for the sole purpose of meeting loses and expenses. To compute a co-op's income, the Tax Code currently ignores two types of revenue. H.R. 1601 proposes eight additional exclusions from the income test.

1. Income Earned by Affiliates

The threat of competition has brought significant changes to the electric marketplace. Consumers are asking for more efficient methods of delivery of not only electricity, but also related services.

H.R. 1601 excludes the income of subsidiaries from the 85/15 test until a dividend is paid by the subsidiary to the cooperative. Rural electric co-ops have formed subsidiaries to provide their members non-electric services—to meet the menu of services offered by rural electric competitors and in response to member demand for these services. Many states require that a subsidiary be formed if an REC is to offer non-electric services. This bill provides that subsidiary income is fully taxed at the subsidiary level. Subsidiary dividend payments flowing back to the parent co-op are considered non-member income except in those states that prohibit non-electric services from being provided on a cooperative basis.

2. Waiver Income

H.R. 1601 excludes waiver income from the 85/15 test calculation. In order to operate on an at-cost basis, rural electric co-ops are required to assign and distribute capital credits (or "patronage dividends") to their members. This capital credit or patronage dividend represents the difference in revenue received from a member less the operating cost to serve that member. For example, if a rural electric co-op collects $11 million in revenues and incurs $10 million in operating costs, the excess $1 million in revenue is allocated and distributed to the rural electric co-op's members in proportion to each member's electric use. In a competitive market, certain members may be willing to forego their capital credits or patronage dividends in exchange for lower rates.

3. Incremental Cost Electric Energy Income

H.R. 1601 excludes the incremental cost of the electric energy income from the 85/15 test. For competitive reasons, a rural electric co-op may need to sell electricity below fully allocated cost and at a price based on incremental cost in order to meet market rates (any price above incremental cost lowers the remaining fixed cost the other rural electric co-op members must cover).

4. Nuclear Decommissioning Income

In addition, nuclear decommissioning investment income is not considered when calculating the 85/15 test. A number of electric generation and transmission co-ops are part owners of nuclear power plants with other utilities. Under current tax law, investment income is treated as non-member income for purposes of the 85/15 test. As the nuclear decommissioning fund grows over the life of the nuclear power plant, investment earnings on the fund could cause the electric generation and transmission co-op to fail the 85/15 test.

5. Condemnation Income

Furthermore, condemnation income under H.R. 1601 is not considered when performing a calculation of the 85/15 test. Nationwide, rural electric co-ops suffer from the condemnation and annexation of their service territories by municipalities. Under current tax law, condemnation income is non-member income for purposes of the 85/15 test. This provision will not limit a municipality's right or authority to condemn territory. It merely will allow the rural electric co-op to exclude the income from the condemnation from the 85/15 test, so that the condemnation cannot threaten the rural electric co-op's tax-exempt status.

6. Prepayment Income

Approximately 20 percent of all rural electric co-ops have prepaid their debt to the Rural Utilities Service, an agency of the United States Department of Agriculture. Because the present-value payment is a discount from the par value of the debt, the IRS presently considers the discounted amount to be non-member income. H.R. 1601 proposes that gain from the prepayment of Rural Utility Service debt not be considered income to rural electric co-ops.

7&8. Contributions in Aid of Construction Income and Property Transfer Income

Finally, H.R. 1601 excludes contributions by members or non-members to facilitate establishing or improving electric service from the 85% member income test. In addition, H.R. 1601 provides that if an rural electric co-op enters into a mutually beneficial agreement to sell, lease or swap service territory or other assets, the income from that transaction is excluded from the 85/15 test.

Income Included as Member Income

In addition to the exclusions from member income described above, H.R. 1601 deems other types of income to be member income for the 85/15 test. In general, the items deemed to be member income are those which were member income or patronage-sourced income prior to electricity industry restructuring. These newly defined income sources include:

- **Wheeling Income**

H.R. 1601 clarifies that income from transmission and distribution wheeling transactions conducted to, with or for co-op members, even if actually collected from a third party, are member income for purposes of the 85/15 member income test. Wheeling is the transmission of electricity by an entity that does not own or directly use the power it is transmitting. Wholesale wheeling means bulk transactions in the wholesale market. Retail wheeling allows power producers direct access to retail customers.

- **Regional Transmission Organization Income**

H.R. 1601 also provides that, if properly authorized, regional transmission organization income will be considered member income for the 85/15 test. This provision is needed because it is quite likely that either a statute, regulation or market condition will force rural electric co-ops to participate in regional transmission organizations, placing the co-op's transmission assets or control of its transmission assets within the organization.

- **Unbundling Income and Electric Energy Sales Income**

H.R. 1601 provides that unbundling income and electric energy sales income will both be considered member income when calculating the 85/15 test. Member income currently includes income received from billing and collection services. This bill clarifies that should restructuring require the unbundling of the rural electric co-op's services such income from electric energy sales transactions conducted to, with or for co-op members, even if collected from a third party continues to be defined as member income.

- **Replacement Electric Energy Sales Income**

H.R. 1601 identifies replacement electric energy sales income as member income for the 85/15 test. To the extent that a rural electric co-op loses kilowatt-hour sales in an open market, the co-op will be allowed to replace those sales with an equal

amount of outside kilowatt-hour sales and treat such outside sales as member income.

Taxable Cooperatives

This bill also provides generally the same level of relief for taxable cooperatives. By defining these similar types of income as patronage-sourced income, taxable electric cooperatives are able to participate in the open competitive market without increased tax liability.

CONCLUSION

All sectors of the electric industry have tax concerns due to restructuring. For the cooperative sector, it is clear that the 85/15 test, when imposed 75 years ago, never contemplated the vast changes the industry is poised to undergo today.

We respectfully request that Congress recognize the changing market and revise the 85/15 test to ensure that cooperatives are part of the future competitive landscape of the electric industry by passing H.R. 1601.

Thank you for the opportunity to appear before you today. I would be pleased to answer any questions that you may have.

Addendum A

TRADABLE TAX CREDITS TO INCREASE RENEWABLE ENERGY SUPPLY

In light of ongoing energy supply shortages and environmental challenges throughout the nation, Congress and the Administration should continue to pursue legislative options to promote the production of domestic, low-cost, efficient and clean energy supplies. However, tax benefits that create financial incentives for IOUs do not create incentives for rural electric or publicly owned electric utilities because these entities are not-for-profit, and do not generate federal income tax liability from which to deduct the credits.

In order to establish comparability and fairness with the IOUs, cooperatives and other not-for profit electric utilities must be provided with tradable tax credits. Furthermore, cooperatives must be permitted to sell, trade or transfer the tax credits to private entities that can utilize them. Proceeds from such sales provide comparable incentives for cooperatives' investment in new energy production similar to what is being proposed for the IOUs.

Benefits of Providing Tradable Tax Credits

A competitive electricity market rewards efficient energy production: Providing tax benefits to only one sector of the industry provides a competitive advantage for IOUs and a competitive disadvantage for the nearly 900 cooperatives and 2000 publicly owned utilities that comprise 25 percent of the nation's electricity load. Offering incentives that are not usable by this significant segment of the market removes the opportunity to employ the existing capacity of cooperative and publicly owned utilities to deploy their expertise and resources in seeking solutions to the nation's energy challenges.

Because renewable energy sources and environmentally clean, advanced fossil fuel technologies usually are more expensive to operate than traditional sources, the federal government has made it a policy to provide investment incentives to encourage IOUs to build these facilities. The rewards are cleaner, more secure, independent, and diverse energy sources. Without comparable incentives, rural electric cooperatives and publicly owned electric utilities are not afforded the same opportunities to make these investments.

How Would a Tradable Tax Credit Work?

- The cooperative builds an energy facility eligible for tax incentives.
- The cooperative is then eligible to receive federal tax credits comparable to those of IOUs.
- The cooperative may, under the Internal Revenue Code (IRC), sell, transfer or assign those credits to another entity that could presumably use the credits to reduce tax liability.
- Neither the tax credits nor the proceeds from a sale would result in federal taxable income.
- Taxpayers using the credits would not have their alternative minimum tax increased as a result of using the credits.

Parallels in Law Supporting Tradable Tax Credit Proposal

There are several provisions in the Tax Code similar to the tradable tax proposal. The only way to benefit from nearly all of the tax credits in the IRC is to have tax liability equal to or in excess of the credits. Exempt organizations can qualify for

tax credits by engaging in an unrelated trade or business; however their ability to benefit from the general business credit (the term used to include virtually all credits) is extremely limited. However, some of the credits are directed toward the economic event targeted in the law as opposed to taxpayer's investing in the property or activity generating the credit. For example,

• Section 41 Research credits are allowed for qualified research expenses paid to tax exempt universities;

• Section 38(b)(3) Alcohol fuel credits apply to the alcohol sold or used as fuel, regardless of the tax status of the producer or user;

• Section 47(a) credit addressing, in part, certified historic structures, allows the credit even though the structure may be used by a tax exempt entity; and

• Sections 613A and 619 provide for the depletion allowance for oil and gas and timber, regardless of the tax status of the owner of the property.

Each of these examples advance the public policy without penalizing any member of the economy that implements the public policy objective. In addition, while not a tax provision, an excellent and parallel example of the Tradable Tax Credit proposal is found in the tradable credits of 1990, 42 U.S.C. section 7651 et seq. The Clean Air Act Amendments of 1990 established a system to issue emission allowances for airborne pollutants, implemented by the Environmental Protection Agency. Electric utilities were issued emission allowances authorizing the emission of a specified amount of airborne pollutants by the utility during a specified calendar year or later period. Starting in 1993, unused allowances may be sold, traded or held in inventory for use against emissions in future years.

Addendum B

ELECTRIC UTILITY COMPARISONS

	Investor owned	Publicly owned	Cooperatives [1]	Industry
Number of organizations	190	2,000	930	3,120
Number of total customers	92m	18m.	14m	125
Size (median number of customers)	230,000	1,800	10,600	.....
Customers, % of total	74%	15%	11%	.....
Revenues, % of total	76%	15%	9%	.....
kWh sales, % of total	75%	15%	9%	.....
Sales (billions kilowatt hours):				
Residential	804	172	165	1,141
Commercial	767	155	52	974
Industrial	768	145	63	976
Other	64	27	6	97
Total	2,403	499	286	3,188
Density (consumers/mile of line)	35	39	6	32
Revenue/mile of line (dollars)	62,866	63,988	8,156	57,563
Distribution plant investment per consumer (dollars)	2,080	2,053	2,446	2,112
Assets ($ billions)	606	126	70	802
Equity ($ billions)	188	38	20	246

[1] 870 Distribution, 60 Generation & Transmission cooperatives.

kWh = kilowatt hours.

Sources: 1999 Dept. of Energy/Energy Information Agency, NRECA Strategic Planning & Analysis, Feb 2001.

Chairman McCrery. Thank you, Mr. Williams. Mr. Tiencken.

STATEMENT OF JOHN H. TIENCKEN, PRESIDENT AND CHIEF EXECUTIVE OFFICER, SOUTH CAROLINA PUBLIC SERVICE AUTHORITY, MONCKS CORNER, SOUTH CAROLINA, ON BEHALF OF THE AMERICAN PUBLIC POWER ASSOCIATION, AND THE LARGE PUBLIC POWER COUNCIL

Mr. Tiencken. Thank you, Mr. Chairman. My name is John Tiencken and I am president and chief executive officer of the

South Carolina Public Service Authority, also known as Santee Cooper. I am here today on behalf of the American Public Power Association, which represents more than 2,000 publicly owned utilities across this nation, and also on behalf of the Large Public Power Council, which represents 21 of the nation's largest publicly owned utilities.

I would like to address certain aspects of H.R. 1459, which deal with tax-exempt bonds, which public power has traditionally issued to build its facilities. This tax-exempt debt is subject to a strict set of Federal tax rules which limit the amount of power that can be sold to private parties and the amount of transmission service that we can provide to private parties.

Now these rules, which perhaps made sense in a regulated noncompetitive world, are problematic in the world in which we now do business and are a barrier to our ability to deliver electricity at a time when our Nation is experiencing power shortages.

I want to emphasize that the private use rules are a real-world problem. They are one that weaves its way into the fabric of our decisionmaking at our utility and I wanted to give you a few examples of that, to describe how we run into this very frequently during our business transactions.

Private use rules restrict public power systems from opening up our transmission to use by all parties and even though the 2001 IRS temporary regulations permit public power to participate in transmission open access without creating private use on existing lines, the regulations are only temporary and will expire in 3 years unless extended or made permanent.

Now public power cannot make a long-term commitment to open access when the door may be closed in a 3-year timeframe. I will also point out that we cannot build new transmission lines with tax-exempt debt if we participate in open access.

Another limitation on our ability to provide open access is that public power is restricted by private use rules from joining regional transmission organizations. Although the 2001 temporary tax regs again provide some relief, that relief is, in fact, limited to only a timeframe of 3 years and may expire in 2004.

Private use rules also limit our ability to sell surplus power into wholesale markets. My utility, for instance, is a net power purchaser now but at other times may be selling into the wholesale market. Under the 2001 temporary regulations, we may only make wholesale sales which are less than 1 year in duration. However, long-term contracts are, in fact, favored in the electric industry now and you do not have to look much further than California to see the value of long-term contracting for electric supply. The proposed bill will also allow longer term sales under certain conditions.

Finally, I want to address the complexity of private use rules and the lack of clarity in their interpretation and how this creates a challenge to us and a chilling effect on our ability to do transactions. As an example, Santee Cooper, along with a number of other public power entities, formed an organization by the name of The Energy Authority to market and purchase power for us. The sales that The Energy Authority makes are sales which are governed by the private use rules.

Now what is not evident to most folks is the amazing complexity of these private use rules. I was a tax lawyer in a former life and I can tell you that this area is as complex as any that I have had to deal with in my tenure. To give you an example, I have been on the phone with five tax lawyers and bond lawyers to try to determine whether we could do a specific transaction for The Energy Authority. You can imagine that there is going to be a difference of opinion in whether or not that can be done.

So what you find is that the complexity and the lack of clarity in this set of arcane rules makes us seek the lowest common denominator among the divergent opinions, so you end up with in many instances not being able simply to do a deal.

What H.R. 1459 does and will do is provide us with clarity and it will enhance our ability to provide open access and compete in the new competitive world. So I appreciate your consideration and thanks for your time.

[The prepared statement of Mr. Tiencken follows:]

Statement of John H. Tiencken, President and Chief Executive Officer, South Carolina Public Service Authority, Moncks Corner, South Carolina, on behalf of the American Public Power Association, and the Large Public Power Council

My name is John Tiencken and I am chief executive officer of the South Carolina Public Service Authority ("Santee Cooper"). I appear today on behalf of the American Public Power Association (APPA) and the Large Public Power Council (LPPC) and the American Public Power Association (APPA) in support of H.R. 1459, the Electric Power Industry Tax Modernization Act. The purpose of the bill is to remove federal tax impediments to effective use of the electric transmission grid and to the expansion of generation and transmission capacity.

APPA is the national service organization representing the interests of over 2,000 community-owned public power systems throughout the U.S. APPA member systems account for about 14 percent of all kilowatt-hour sales to ultimate U.S. consumers, located in some of the nation's largest cities as well as in numerous small and medium-sized communities. LPPC is an organization of 21 of the largest public power systems in the United States. APPA members comprise virtually all of U.S. public power systems. All members of both organizations are state or local governmental units overseen run by elected or appointed public officials.

H.R. 1459, introduced by Congressman J.D. Hayworth and co-sponsored by 16 other Members of the Ways and Means Committee, represents a landmark effort to accommodate the often-divergent positions of public power and investor-owned utilities on a range of federal tax issues. The bill's contains four key elements that remove federal tax impediments that hamper effective use of the transmission grid and expansion of generation and transmission capacity. Key provisions include the following:

- Private Use: With respect to In connection with the "private use" rules that apply to public powers' electric facilities financed by public power using tax-exempt bonds:
  - The bill allows any public power system to elect to terminate issuing new tax-exempt bonds to finance most generation facilities, in return for an exemption from "private use" rules for its existing tax-exempt bonds.
  - Private use rules that remain applicable to non-electing systems are modernized in order to permit such systems to provide open access transmission and distribution services, to join regional transmission organizations (RTOs), and—if they provide open access services—to make certain sales free of the private use rules to retain and replace existing customers' electric loads.
  - The bill restricts the use of tax-exempt bonds to finance transmission lines not necessary to service public power systems' governmental units' electric loads or to finance start-up utilities' distribution facilities.
- CIAC: The bill excludes contributions-in-aid-of construction (CIAC) for electric transmission and distribution facilities from gross income.
- Transcos: The bill allows taxable entities to sell or spin off transmission facilities to independent FERC-approved RTOs without recognition of gain.

• Nuclear Decommissioning: The bill modifies federal income tax treatment of nuclear decommissioning funds.

I appreciate the opportunity to provide the views of APPA and LPPC and APPA to the Committee. My testimony will focus on the private use provisions of the bill and certain important aspects of the CIAC provisions. EEI's witness will address the CIAC, transco and nuclear decommissioning provisions in detail.

In addition, I want to state for the record that both APPA and LPPC and APPA support H.R. 1601, the Rural Electric Tax Equity Act.

ENERGY POLICY CONTEXT

Before I address the private use and CIAC provisions in more detail, I would like to explain why these tax issues are not just a technical problem that keeps lawyers and accountants busy. Rather, they deal with one of the key problems we face today in our industry—how to move electric power from generation to load. In almost every area of the country, we face electric transmission constraints—bottlenecks in our electric grid that keep us from delivering power where we need it. In some regions, we are unable to deliver available electric power needed to keep the lights on. This is the case in California, where transmission constraints into the State, and between the northern and southern parts of within the State, can trigger rolling blackouts. Elsewhere in the country, these constraints keep us from importing low-cost power into high load areas and require instead that we use expensive local generation. Physical limitations on the transmission system are largely responsible for these constraints. But the reason we are here today is to explain why federal tax law makes these transmission constraints worse by limiting. These federal tax laws restrict the use of public power's existing transmission lines and by restricting limit public power's ability to expand and to improve these lines. The tax rules also, prevent public power from making its surplus electricity available in the most economic manner. The purpose of H.R. 1459 is to remedy these problems.

Access to the Transmission Grid

The first issue is that the private use rules limit the extent to which state and local governmental units that own transmission facilities financed by tax-exempt bonds are allowed to let non-governmental entities use those facilities. Violation of these rules results in loss of tax-exempt status for the bonds (in some cases retroactively to the date of issuance). By way of background, 8% of transmission nationally is owned by public power. In some states, the percentage is much higher. In California, for example, about 25% of the transmission is controlled by municipal systems. One of the nation's our important national goals right now is to ensure that the entire transmission grid (including public power transmission facilities) is fully and efficiently utilized. The Federal Energy Regulatory Commission (FERC), which regulates investor-owned utilities, has adopted policies to open access to transmission lines to all potential users in a manner that does not allow transmission owners to favor their own sales. This is known as "non-discriminatory" open access transmission. Open access transmission is mandatory for investor-owned utilities subject to FERC jurisdiction, but is largely voluntary for public power systems. FERC has also adopted policies encouraging formation and membership in RTOs. The essential purpose of these RTOs is to enhance non-discriminatory, open access transmission by coordinating transactions among transmission lines that have historically been owned and operated by different utilities. FERC has adopted open access transmission policies that are designed to open up the grid to all potential users on a non-discriminatory basis. Open access transmission is mandatory for investor-owned utilities subject to FERC jurisdiction, but is largely voluntary for public power systems. FERC also has adopted policies encouraging formation of and membership in RTOs. Carrying out these policies is critically necessary to getting power where we need it on the existing grid.

Prior to 1998, the private use rules barred public power from committing to providing full open access transmission and from joining RTOs. Treasury temporary regulations issued by Treasury in 1998 and reissued in 2001, provided partial temporary relief from these rules. But because the rules are only temporary, they do not permit us to make long-term commitments to open access transmission and to RTOs and they frustrate long-term planning. More importantly, under the temporary regulations, no real relief is available for transmission facilities financed by recently issued tax-exempt bonds. If the issuer reasonably could expect that the transmission facilities are reasonably expected to be used to provide open access transmission service, tax-exempt bonds cannot be used. This means not only that public power systems that issued bonds to finance transmission after open access requirements were establishedbecame the norm are barred from offering open access

transmission and joining RTOs., Moreover, but also that public power systems now in RTOs or now providing open access, cannot continue to provide open access or remain members of RTOs if they use tax-exempt bonds to finance badly-needed transmission upgrades. This is backwards. We should encourage—not deter—expansion of the grid in these circumstances. H.R. 1459 fixes this problem by providing the same relief to new issuers as is provided to other transmission owners and by making the relief permanent for both new and existing issuers.

Sales Rules

Another impediment to opening up the grid under the private use rules is how those rules deal with power sales from tax-exempt financed generation to non-governmental entities. Providing open access transmission service exposes transmission owners to competition, because their wholesale customers can switch to other suppliers. Transmission owners will not voluntarily provide this service if they will lose sales to existing customers and, because of private use limitations, are unable to sell that power to other new customers. To protect against or mitigate such losses, these public power systems need to be allowed to negotiate rates for sales of power, something they cannot do under private use rules as they currently exist.unless they can offer negotiated rates to retain existing customers and to replace the loads of departing customers. The current private use rules, including the temporary regulations, impose significant constraints on public power systems that need to use negotiated rates to retain or replace existing customers. H.R. 1459 modernizes the private use sales rules to remove this disincentive to open access transmission by permitting negotiated sales to existing customers and by providing a reasonable transition period during which sales can be made to replace lost customers.

H.R. 1459 also enhances our ability to sell our surplus power under long-term contracts. Our experience in California over the last 18 months has taught all of us that long-term contracts are key to disciplining market power and market volatility and ensuring that customers receive reliable and economic service. Public power systems have surplus power that can be sold into wholesale markets under long-term contracts. However, the private use rules significantly restrict our ability to do so. The current temporary regulations impose a one-year limit on power sales made to non-governmental entities. H.R. 1459 will liberalize theses rules for public power systems that offer voluntary open access transmission and/or open retail access. In particular, public power systems that lose load because of open access transmission can make replacement sales for up to a seven-year term under the bill. Long-term contracts are also permitted for certain sales to existing customers.

New Generation Interconnection

A key national objective for the electric power sector is new generation capacity. We need not only to build these units, but also to expand the transmission grid to accommodate them. The current tax treatment of contributions-in-aid-of-construction drives up the cost of transmission facilities necessary for new generators. Typically, the owner of a new unit must pay the transmission owner for transmission upgrades necessary to connect up to the grid. If the transmission owner is an investor-owned utility, the payment is included in gross income in the year received and, as a general practice, the amount due the transmission owner is increased ("grossed-up") by about one-third to reflect the tax due. H.R. 1459 changes the tax treatment of these payments by excluding CIAC from income for transmission and distribution facilities. This change permits our generation and that of independent power producers to be hooked up to the grid without paying the gross-up.

Other Provisions

In addition to the provisions discussed above, the bill also modifies the private use rules to accommodate retail competition policies in states that have opted for retail competition. Under H.R. 1459, private use rules will not bar a public power system from providing open access to its distribution facilities, or from making sales under negotiated contracts to "on-system" customers (in general, these are regular customers that are directly connected to the seller's facilities).

The bill also contains new restrictions on the use of tax-exempt financing to build new transmission lines outside of a public power system's distribution area and not necessarily to serve public power loads. This is designed to preclude the use of tax-exempt financing for these "merchant transmission lines," but will not to restrict necessary additions and upgrades to existing transmission facilities or transmission necessary to serve public power loads.

Finally, the bill permits public power systems that are willing to forego issuing new tax-exempt bonds for generation facilities (subject to limited exceptions) to be relieved of private use constraints for their existing tax- exempt bonds. Public power systems in highly competitive situations would be able to play under the same rules

as other players if they give up future tax-exempt financing for their generation units.

Conclusion

The provisions of H.R. 1459 thatwhich I have described above will assist us in meeting the national need to use our existing transmission grid more effectively, to expand it where necessary, to accommodate new generation, and to make surplus power more readily available under long-term contracts. We urge the Congress to take expeditious action on H.R. 1459.

A detailed explanation of the private use provisions of the bill appears below.

TECHNICAL EXPLANATION OF PRIVATE USE PROVISIONS OF H.R. 1459

A. Election to Terminate Issuing New Tax-Exempt Bonds

1. Termination Election

H.R. 1459 provides that public power systems can elect to permanently terminate issuing most new tax-exempt bonds, in return for an exemption from private use rules for all of their existing tax-exempt bonds issued before the date of enactment. However, an electing system may continue to issue certain tax-exempt bonds which are described below.

2. Tax-Exempt Bonds That May Be Issued After a Termination Election

Qualified bonds and refunding bonds.—An electing system may continue to issue any qualified bond as defined in Section 141(e) of the tax code. (These are tax-exempt bonds that are currently free of most private use constraints.) An electing system may also issue any eligible refunding bonds. An eligible refunding bond is a state or local bond issued after the system makes the election, that directly or indirectly refunds tax-exempt bonds that were issued before the system made the election, provided the weighted average maturity of the refunding bonds does not exceed the remaining average maturity of the refunded bonds.

Qualifying transmission and distribution facilities.—An electing system may continue to issue bonds to finance a local transmission facility over which the system provides open transmission access (a qualifying transmission facility); and a distribution facility over which the system provides open retail access (a qualifying distribution facility). New transmission and distribution bonds issued under this exception are subject to private use rules, as modified by the bill.

Repairs.—An electing system may continue to issue tax-exempt bonds for repair of electric generating facilities that were in service on the date of enactment or construction of which was commenced prior to June 1, 2000. Repair may include replacement of components of the electric generating facilities, but does not include replacement of an electric generating facility. The repairs performed with the tax-exempt financing may not increase the capacity of the generating facility by more than 3% of base year capacity.

Environmental.—An electing system may also continue to issue tax-exempt bonds to meet federal or state environmental requirements applicable to electric generating facilities that were in service on the date of enactment or construction of which was commenced prior to June 1, 2000.

Renewables.—An electing system may issue tax-exempt bonds for renewable energy generation facilities during any period in which tax credits for the same type of facility are available to private entities. Tax credits are currently available for solar, wind, geothermal and closed-loop biomass generating facilities.

B. Updated Private Use Rules for Non-electing Systems

Under the bill, public power systems that do not make the termination election remain subject to private use rules. However, the bill would modify the private use rules applicable to public power systems that do not make the termination election to permit open access transmission and distribution; and to permit public power systems to make certain electric sales not subject to private use rules in order to retain or replace certain load.

1. Open Access

The following open access transmission and distribution activities do not constitute a private business use: (1) providing non-discriminatory open access transmission service; (2) participation in an ISO or RTO approved by FERC; and (3) providing nondiscriminatory open access to distribution facilities for retail delivery of electricity sold by other suppliers. Open access transmission must be provided under a FERC-approved RTO agreement or pursuant to an open access tariff approved by

FERC. If the open access tariff has been filed voluntarily, the public power system must comply with requirements of FERC Order No. 2000 concerning reporting its plans for regional transmission organizations. For certain Texas utilities, approvals are by the Public Utility Commission of Texas, rather than by FERC.

2. Sales

Wholesale sales by open access transmission utilities.—Public power systems that do not make the termination election and that provide open access transmission service are permitted to make certain wholesale sales not subject to private use rules from generation facilities in service on the date of enactment or construction of which commenced prior to June 1, 2000. To qualify under this provision, the sale must be to a "wholesale native load purchaser" or a "wholesale stranded cost mitigation sale."

A wholesale native load purchaser is a wholesale purchaser to whom the public power system had a service obligation in the base year, or an obligation in the base year under a requirements contract or firm sales contract that has been in effect for, or has an initial term of, 10 years or more.

A wholesale stranded cost mitigation sale is a wholesale sale to an existing or new wholesale customer which replaces lost wholesale native load. Lost load is measured by the difference between base year sales to wholesale native load purchasers and the sales to such purchasers during recovery period years. The recovery period is a seven year period beginning with the start-up year; however, there is a limited one year carry-over to an eighth year. At the election of the public power system, the start-up year is the year the system first offers open transmission access, the first year in which at least 10% of the system's wholesale customers' aggregate retail load is open to retail competition or, the year of enactment, if later. The base year is the year of enactment or, at the election of the public power system, one of the two preceding years.

On-system sales by open access transmission and distribution utilities.—Public power systems that do not make the termination election and that provide open access transmission (if the system owns or operates transmission) and open access distribution service may also make sales not subject to private use rules to an "on-system purchaser" from generation facilities in service on the date of enactment or construction of which commenced prior to June 1, 2000. An on-system purchaser is specifically defined as one whose facilities or equipment are directly connected with the public power system's transmission or distribution facilities and who purchases electricity from such system and is either a retail purchaser within the area in which the system provided distribution services in the base year or is one to whom the system has a service obligation, or who is a wholesale native load purchaser from the system.

C. Limits on New Tax-Exempt Financing for Certain Transmission and Distribution Facilities

1. Transmission

Local transmission facilities limitation.—Pursuant to the bill, whether or not they make the termination election described above, public power systems may issue new tax-exempt bonds for transmission facilities only if the facilities are "local transmission facilities." Local transmission facilities are transmission facilities located in a public power system's existing distribution area or facilities which are, or will be, necessary to serve its wholesale or retail native load. A system's retail native load is the load of end-users served by its distribution facilities. A system's wholesale native load is its wholesale sales to its wholesale native load purchasers (or purchasers under wholesale requirements or other firm contracts that were in effect in the base year), or the electric load of end-users served by any such wholesale purchaser's distribution facilities. Electric reliability standards of national or regional reliability organizations, or decisions of RTOs or state or federal agencies shall be taken into account in determining whether facilities are or will be necessary to serve wholesale or retail native load. Transmission siting and construction decisions of RTOs and state and federal agencies shall be presumptive evidence as to whether transmission facilities are necessary to serve native load.

Exceptions.—Tax-exempt bonds may also be issued to finance any repair, replacement or qualifying upgrade of an existing transmission facility that is not a local transmission facility or to comply with an obligation under an existing shared transmission agreement. However, repair or replacement may not increase the voltage level nor may it increase thermal load limit by more than 3%. A qualifying upgrade is defined as an improvement to existing transmission facilities ordered or approved by an RTO or ordered by a state or federal regulatory or siting agency.

2. Distribution

As under current law, a public system can use tax-exempt financing to construct distribution facilities to serve its customers or existing customers of other utilities as governed by state law. However, under the bill, a public power system which begins operation after the date of enactment would be precluded from issuing tax-exempt bonds for distribution facilities until it has been in operation for 10 years. In addition, except for certain transactions, public power systems could no longer issue tax-exempt bonds under the state volume cap to purchase distribution facilities owned by non-governmental utilities.

Other Provisions

The CAIAC, transco and nuclear decommissioning provisions of the bill are described in detail in EEI's testimony.

Chairman MCCRERY. Thank you, Mr. Tiencken. Mr. Nelson.

STATEMENT OF GREGORY NELSON, VICE PRESIDENT AND TAX COUNSEL, AMEREN CORPORATION, ST. LOUIS, MISSOURI, ON BEHALF OF THE EDISON ELECTRIC INSTITUTE

Mr. NELSON. My name is Greg Nelson. I am vice president and tax counsel of Ameren Corp. in St. Louis, Missouri. Ameren is a public utility holding company that owns utilities that serve customers in Missouri and Illinois. I am speaking today on behalf of the Edison Electric Institute, the trade association of shareholder-owned utilities. We serve 90 percent of the customers served by shareholder-owned utilities in the United States and roughly 70 percent of all electric customers in the United States.

I am particularly pleased to testify in support of H.R. 1459, along with Mr. Tiencken from the public power trade organizations. The provisions of that bill are the product of a long negotiation between our respective groups to try to find a way to fairly balance the interests of our respective constituencies in light of the changing situation, both on the regulatory front and with the electric energy supply situation.

The context of the bill is the energy supply situation. We are all familiar with the developments in California. We also are familiar with the fact that the crisis in California threatens to spread to the rest of the country if something is not done. There is a wide range of opinion as to what went wrong in California and why. I think a consensus among people with different opinions is that energy supply is a big part of the problem. There are policy-makers now at the Federal level and the state level looking for ways to solve energy supply issues.

Energy supply has two components. First is the generation component, making sure that we have adequate generation facilities in the country to produce the electricity that we need. But second and very important to this bill is the need for adequate transmission; that is, delivery of the electricity from the plants to the population centers and industrial centers where electricity is needed.

Mr. Tiencken covered the private use rules, the part of the bill that affects tax-exempt bonds of public power. I would like to cover three items and basically all three items, deal with removing tax barriers to energy supply expansion and modern restructuring developments.

The first is to remove barriers to the formation of independent transmission companies. The Federal Energy Regulatory Commission (FERC), which has jurisdiction over interstate sales of electricity, is essentially requiring electric utilities to join regional transmission organizations. These are defined in roughly 1,000 pages of FERC orders and regulations and FERC Order 2000 as having several characteristics, including sufficient size and scope to have a regional-type presence or concentration of transmission and also independence from the present transmission owners themselves.

The ultimate business model that most utilities are moving toward is a transmission company; that is, a company formed for the purpose of owning transmission and being motivated to improve and upgrade and keep the transmission system where it needs to be, given our energy supply needs.

There are two hurdles right now in the Tax Code that limit the ability to form independent transmission companies. The first is just the normal rule. If we as the utility sell transmission to a transmission company, we have to pay a tax on the increment of the value over the tax basis. That is an impediment right now to selling assets to a transmission company.

The second transaction to get to a transmission company is a spinoff, and the problem is that if we were to spin off transmission assets we would need to subsequently combine with other spun-off companies to form a transmission company with sufficient scope to meet the FERC guidelines. Under tax law, section 355(e), the so-called anti-Morris trust provision, that would trigger a tax event, as well.

So what 1459 would do, number one, is to provide tax relief in both of those situations to promote the formation of transmission companies.

The second item is to restore in general the pre-1986 Act law on contributions in aid of construction in an effort to ensure that contributions to utilities by customers are not taxed and that we do not have a tax impediment to the expansion of our infrastructure.

Finally, 1459 would update the Nuclear Decommissioning Fund provisions by removing the tie to regulated rates that the Code section 468A has going back to 1984 and by facilitating the transfer of nuclear plants from one owner to another by providing for accelerated funding of decommissioning if a regulator approves it or if a transfer occurs.

I see my time is running out. I would be happy to take questions and I appreciate the opportunity to speak.

[The prepared statement of Mr. Nelson follows:]

Statement of Gregory Nelson, Vice President and Tax Counsel, Ameren Corporation, St. Louis, Missouri, on behalf of the Edison Electric Institute

Introduction

I am Gregory Nelson, Vice President and Tax Counsel of Ameren Corporation. Ameren is a shareholder-owned public utility holding company that owns utilities serving 1.5 million electric customers in east/central Missouri and south/central Illinois.

I am testifying today on behalf of the Edison Electric Institute (EEI) on the impact of Federal tax laws on the reliability and expansion of our electric generation and transmission infrastructure and in support of tax legislation to help assure generation and delivery of adequate electricity supplies throughout the nation. EEI is

the association of U.S. shareholder-owned electric companies, international affiliates and industry associates worldwide. Our U.S. members serve over 90 percent of all customers served by the shareholder-owned segment of the industry. They generate approximately three-quarters of all the electricity generated by electric companies in the country and service about 70 percent of all ultimate customers in the nation.

While many different tax provisions are needed to enhance electricity generation and delivery, I am specifically discussing in today's statement only the tax provisions in H.R. 1459, the Electric Power Industry Tax Modernization Act. EEI submitted comments for the Record to the Oversight Subcommittee on March 19, 2001 (for the hearing held on March 5) that comprehensively explain the number of tax initiatives that would promote energy supply, assure adequate generation and transmission, and increase energy efficiency.

H.R. 1459 reflects policies that were jointly agreed to by EEI, the American Public Power Association (APPA) and the Large Public Power Council (LPPC). These provisions are needed to implement effectively the Federal Energy Regulatory Commission's (FERC) policies to achieve non-discriminatory transmission access for large regional markets through independent regional transmission organizations and to facilitate needed electric generation and transmission infrastructure development. Specifically, the provisions of H.R.1459 would:

- Help ensure additional transmission capacity and further diminish tax barriers to wholesale and retail competition by providing tax relief for the sale or spin-off of transmission facilities to participants in independent FERC approved RTOs.
- Facilitate the development of new generation, transmission and distribution facilities by clarifying the tax free status of payments for connecting new generation to the grid and by removing the tax on payments (contributions in aid of construction, CIAC) for upgrades and additions by developers to transmission and distribution facilities.
- Updating the tax treatment of nuclear decommissioning costs by facilitating the transfer of nuclear facilities to new owners and allowing the owners of nuclear power plants that are no longer subject to cost-of-service ratemaking to continue to make tax-deductible contributions to decommissioning trust funds.
- Promote public power participation in regional transmission organizations, and enable public power to operate in competitive markets without distorting competition by amending current law "private use" restrictions.

We are extremely pleased to appear here today with a representative of APPA and LPPC because we have worked hard to iron out previous differences about tax and electricity policies to reach an agreement that we all support and that furthers important national energy policy goals. And we have done so in a way that is consistent with competition in our industry, particularly at the wholesale level, in conformance with energy policies being implemented by FERC.

I understand that Mr. John Tiencken, representing APPA and LPPC, will discuss in detail the provisions of H.R. 1459 that would modify the "private-use" restrictions that currently impede publicly-owned utilities from participating in FERC-approved RTOs by providing non-discriminatory transmission access to others in coherent regional markets. Therefore, my testimony will focus on the provisions of H.R. 1459 that:

(I) remove tax impediments to shareholder-owned utility transfer of assets to RTOs;

(II) remove tax impediments to non-utility investment in transmission facilities, and, in particular, clarify the law relating to those that connect new electric generating plants to the transmission grid; and

(III) remove tax impediments to the transfer of nuclear assets and provide that tax deductible contributions can continue to be made to nuclear decommissioning trust funds when cost-of-service rate regulation no longer applies in competitive markets.

I. PROMOTE FORMATION OF INDEPENDENT REGIONAL TRANSMISSION COMPANIES FOR COMPETITIVE ELECTRICITY MARKETS

Transmission Capacity Must Be Expanded and Enhanced

Rapid economic growth, combined with the increasing electrification of our homes, businesses and industries, has strained our energy infrastructure. Unfortunately, neither our generation supplies, nor our transmission network, have expanded to keep up with the growing demand.

Utilities built the bulk of today's transmission system before the advent of wholesale and retail electricity competition, essentially to move power limited distances from their generating facilities to their customers and to provide additional reliability by interconnecting to their neighboring utilities. Most transmission systems were not designed to be electrical "superhighways" for delivering large amounts of

power over long distances or for supporting the ever-expanding competitive trade of wholesale power (i.e., the sale of power from one utility or power provider to another for resale to an end-use customer).

Moreover, the growth in demand for transmission capacity has far outstripped investment in transmission. Today, many more suppliers are trying to put more power on transmission lines, challenging the limits of transmission capacity. For example, in 1995, there were 25,000 transactions where electricity was sold from one region to another. Last year, the number hit 2 million.

In comparison, annual investment in transmission has declined in real terms. According to the North American Electric Reliability Council (NERC), which oversees the reliability of our Nation's electricity grids, the level of transmission capacity rated 230 kv or higher has remained virtually unchanged since 1990 and will not likely change during the next ten years. Most new transmission investment today focuses on connecting new generation facilities to the grid, but not on expanding overall transfer capability.

The result is that transmission capacity is becoming an increasingly congested resource in certain parts of the country. Between 1999 and 2000, transmission congestion grew by more than 200 percent. In the first quarter of 2001, transmission congestion was already three times the level experienced during the same period in 2000. The effect of this congestion is that consumers may not have easy access to lower-priced power, and reliability may become threatened.

FERC Approved RTOs Acting through Independent Transmission Companies Will Facilitate Regional Transmission Investment

The Energy Policy Act of 1992 ("EPACT") changed the conditions under which utilities could request transmission service over the systems of others, and expanded the circumstances in which two remote utilities could economically move power from one to the other. Building on this in two major orders, FERC has promoted the separation of vertically integrated electric utilities into distinct entities and substantially changed the ways in which our transmission grid is used. In addition, almost half the states have initiated, or announced plans to begin, retail electric competition as well, further increasing the demands on transmission.

In 1996, in Orders No. 888 and 889, FERC required transmission owning utilities to "unbundle" their transmission functions from their wholesale electric sales and purchasing functions and to provide nondiscriminatory open transmission access for other utilities and independent generators.

In December, 1999, in Order No. 2000, FERC directed shareholder-owned utilities, which are subject to FERC jurisdiction, to transfer operational control of their transmission assets to independent regional transmission organizations as soon as December 15, 2001, or to explain why they could not do so. FERC expects that properly configured RTOs, through control over a larger, regional grid, will:

(1) help reduce transmission congestion on the grid,

(2) reduce "rate pancaking," *i.e.*, the imposition of multiple charges when a transaction takes place in the control areas of multiple utilities,

(3) improve efficiency and allow for more effective management of parallel path flows within the RTO-controlled system; and

(4) allow for more efficient planning for transmission or generation needed to increase transmission capacity.

Simply stated, the FERC issued Order No. 2000 to boost competition in wholesale power markets by combining utilities' respective transmission systems into large, regional systems that are operated independently of participants in electric power markets. The objective of Order No. 2000 is for all owners of transmission systems to join "strong, independent, properly-sized" RTOs by December 15, 2001.

While FERC lacks jurisdiction over publicly-owned utilities, it has strongly encouraged such entities to participate in RTOs. Indeed, such participation is essential since public power (including federal transmission entities) owns about 19 percent of the transmission in the nation, approximately a third in California and much more (including the federal Bonneville Power Administration) in the Northwest.

FERC is not dictating a particular form of organization or ownership of RTOs. Many RTOs are designed to result in a for-profit independent transmission company or "Transco" that may own, as well as control, the subject transmission facilities. One of the most desirable aspects of the Transco option is that this entity would have the business incentive to invest in building a robust transmission infrastructure.

A few of the RTO proposals to date have involved a not-for-profit Independent System Operator or "ISO" which controls transmission facilities that are passively-owned by others. ISOs would have far less economic incentive to make new invest-

ments, but may be a more appropriate vehicle for government-owned entities. FERC has already approved RTOs which combine ISOs and Transcos.

Current Tax Laws Impede Transco Formation

Electric utilities seeking to form a Transco under the federal tax code face an immediate impediment in the form of a substantial federal income tax liability. Under current tax laws, utilities that sell or spin-off their transmission assets to form RTOs would incur a substantial federal income tax liability because the value of transmission assets far exceeds their tax basis (due to depreciation).

Shareholder-owned utilities can avoid an immediate tax by transferring control but not ownership to an ISO and become essentially passive owners of transmission facilities. However, being forced to separate ownership from control is poor public policy because it:

(1) reduces the incentive for owners to invest in new facilities, and

(2) requires complex and inefficient corporate structures.

Tax policy should ensure that neither the utilities which comply with Order 2000, nor the customers who do business with new RTOs, suffer economically from the imposition of federal income taxes on transactions designed to comply with the restructuring of transmission ownership dictated by energy policy. This can be accomplished by amending two sections of the Internal Revenue Code (IRC).

Section 1033 should be amended to permit sales of transmission assets on a tax-deferred basis if these sales occur in conformance with Order 2000, providing that the proceeds of the sales are reinvested in certain utility assets.

Similarly, Section 355(e) should be amended to allow for a tax-free spin-off of transmission assets, even if they are to be combined with neighboring transmission assets in conformance with Order 2000.

Section 3 of H.R. 1459, the "Electric Power Industry Tax Modernization Act," incorporates these changes.

These provisions would defer taxes attributable to certain gains on sales, (IRC Sec. 1033) and would permit tax-free spin-offs (IRC Sec. 355(e)), by a utility of transmission facilities to an entity which FERC determines is not a market participant and which is either a FERC-approved RTO or is part of a FERC-approved RTO, (or in portions of Texas not subject to FERC jurisdiction is approved by the Texas Public Utility Commission). These provisions assure that tax relief is available only to independent entities which fully comply with FERC's policies regarding RTOs.

Amending IRC Section 1033 would permit the deferral of tax on the proceeds of the sale of transmission facilities to an independent Transco. Utilities could defer taxes on the proceeds of a sale of transmission facilities only if they reinvest such proceeds in other electric or gas utility assets, thereby fostering further investment in needed infrastructure.

The spin-off provision, amendments to Section 355(e), would allow individual transmission companies to consolidate into regional businesses without incurring a tax liability. This result achieves the FERC objective of promoting independent RTO's and provides an incentive to shareholder-owned utilities to help promote FERC objectives. Without this incentive, these companies would likely avoid tax liability by establishing limited liability companies (LLC) which reduces the incentive to improve and upgrade the transmission grid. Under existing FERC precedent, if a tax is incurred, it would be passed through to transmission customers in the form of higher rates. Hence, this proposal could have the effect of lowering charges to customers.

II. PROMOTE ELECTRIC RELIABILITY AND INCREASE ENERGY SUPPLY

There is a critical need to add new electric generation sources and expand our transmission and distribution infrastructure, particularly in the West. New generators, which constitute the fastest growing segment of the generation sector, usually pay the costs of the new transmission facilities needed to connect their generation plants with the grid. Similarly, developers of new industrial sites, office parks and residential communities often pay the costs of new transmission and distribution facilities they will use.

Unfortunately, these transactions incur a substantial tax penalty. Under Section 118 (b) of the Internal Revenue Code, the costs of building new transmission and distribution facilities paid by or on behalf of a customer to a utility are treated as contributions in aid of construction (CIACs) and are considered as taxable income to the utility. The Internal Revenue Service (IRS) has suspended its long-standing position of issuing rulings that payments made by independent generators to utilities to interconnect their plants to the utility are not taxable to the utility. Because of the current lack of clarity resulting from the IRS' suspension, utilities must

charge generators for the cost of potential taxes as well as the cost of the interconnecting, which increases the costs of interconnection by approximately 30–35%.

Section 4 of H.R. 1459 clarifies the tax law so that such reimbursements of costs needed to interconnect suppliers and customers do not result in an unnecessary tax burden. Eliminating the tax on CIACs would help expand transmission and distribution and improve reliability by expanding the sources of financing available for needed new facilities, reducing the costs of interconnections for new sources of electric generation and lowering the costs of enhancing distribution and transmission systems.

This tax law treatment would make it less costly to interconnect generation facilities and provide electric services. This would help increase the supply of power and improve electric reliability. This provision also would help the construction of new transmission and distribution facilities by third parties, especially if existing utilities (as in California) lack the capital to invest in needed new facilities.

III. AMEND THE NUCLEAR DECOMMISSIONING TAX LAW TO ADAPT IT TO A COMPETITIVE MARKET

Owners of nuclear power plants make contributions to external trust funds to ensure that monies are available to decommission plants when they are retired. Congress added Section 468A to the tax code in 1984 to permit owners of nuclear power plants to currently deduct contributions that are made to these external funds. Section 468A, when enacted, was designed to operate within the structure of regulated rates. It depends on public service commissions authorizing specifically identified costs (i.e., decommissioning costs) that an electric utility can charge its customers.

As a result of the Energy Policy Act of 1992, restructuring laws and regulations in almost half of the states, and FERC policies, the electric utility industry is in the process of rapid change. In the future, an electric utility may not be in a situation where decommissioning costs are included in its regulated and recoverable costs of service. Rather, such costs could be left to the plant owner to provide through revenues from market-based or competitive prices.

As now structured, Section 468A requires that deductible contributions be determined by the amount of decommissioning costs included in a company's cost of service. If the law is not changed, taxpayers who sell power based on market rates may be unable to deduct amounts identified as future decommissioning costs. Therefore, funds collected for decommissioning may be depleted needlessly by income taxes that would be incurred under current tax law because of the failure to meet the connection required by Section 468A to traditional cost-of-service ratemaking. Section 468A should be adapted to the structure of competitive electricity markets by permitting taxpayers to continue to receive tax deductions for accumulating properly identified nuclear decommissioning costs in external trusts independent of cost-of-service ratemaking and for accelerated funding of nuclear decommissioning costs, where required, in connection with the transfer of a nuclear power plant.

Section 4 of H.R. 1459 resolves current law problems by: eliminating the requirement that deductible payments not exceed the amount permitted in regulated rates set by regulators; creating an exception to the level-funding requirement if regulators allow higher decommissioning charges or if accelerated funding is required in connection with an ownership change of the nuclear power plant; allowing taxpaying nuclear plant owners to utilize a qualified decommissioning fund irrespective of the age of the plant; and defining "nuclear decommissioning costs" and discontinuing the burdensome requirement that taxpayers must file for an IRS ruling before making qualified fund contributions.

CONCLUDING COMMENTS

The Edison Electric Institute appreciates the opportunity to express our strong support for the provisions of H.R. 1459.

These tax law changes are a critical part of any federal effort to lower the cost, increase the delivery capacity, reliability and supply of electric energy in the United States.

We look forward to working with the Members of the Committee on Ways and Means on additional tax measures that will increase the supply and reliability of the nation's electric system.

Mr. HAYWORTH. [Presiding.] And Mr. Nelson, we thank you for your testimony and being mindful of the time, as have the other two witnesses. Thank you very much.

Mr. Tiencken, let me turn to you first if I could. As I understand it, if a utility is in a state that has restructured its electricity industry, it may experience some loss of customers to competition. Is it true that if private use rules remain in place, that utility could find it difficult to sell the excess power created by these losses to new customers on a long-term basis, even though some parts of our country may urgently need that power?

Mr. TIENCKEN. That is correct, Mr. Hayworth. The current private use rules restrict our ability to sell into the open market. We can sell to retail customers currently to our existing customer base, but without the relief that is represented by your bill, we will have difficulty in competing in a competitive world and being able to remarket that power without impacting our existing tax-exempt debt.

Mr. HAYWORTH. Mr. Tiencken, we have all heard about the problems associated with inadequate supply but also in getting that supply to the customer through the nation's transmission grid. It appears that private use rules actually inhibit municipal utilities from allowing their own transmission lines to be utilized by others without jeopardizing the tax-exempt status of the bonds used to build the assets.

Will you explain how changes in the private use rules could enhance the use of the transmission and distribution systems to deliver more power?

Mr. TIENCKEN. Yes, sir, Mr. Hayworth. The reality is that we are impaired dramatically in our abilities to be able to join regional transmission organizations and, in fact, to be able to offer our transmission assets for use in open access regimes. We have problems with that.

What your bill does is provide us with substantial ability to have certainty in opening up to transmission access. In moving power from one region to another it allows us to place our assets in play in the transmission grid and have those assets utilized by all parties without fear of our tax-exempt bonds becoming taxable. And that is a big issue for us in the public power area, particularly those who own a substantial amount of transmission, as does my utility.

Mr. HAYWORTH. One final question for you, Mr. Tiencken. The Treasury Department has reissued temporary regulations related to tax-exempt bonds in private use. I have heard from some of my constituent utilities that while these temporary regulations help, they are by no means totally adequate. Could you explain why that is the case?

Mr. TIENCKEN. Yes, sir, I can explain. Congressman, the temporary regs are, in fact, just that—temporary. They expire within their 3-year timeframe. They also do not offer full relief. New transmission cannot be funded with tax-exempt bonds any longer. And in addition, transmission that was funded with tax-exempt bonds recently may not now be placed into an RTO or into open access without jeopardizing all of those bonds that have been issued for that particular entity's transmission assets.

So the rules that the IRS has proposed as temporary are not going to resolve our problem for the long term and that means we cannot do a substantial amount of planning based on a 3-year window that might close on us.

Mr. HAYWORTH. Mr. Nelson, in your statement you suggest that shareholder-owned utilities complying with FERC orders to transfer their transmission assets are likely to choose a limited liability corporation model. I really have a two-part question for you, sir.

Why would they choose such a corporate form? Are there advantages and disadvantages you could describe? And are you aware of any instances where this has occurred?

Mr. NELSON. Yes, Mr. Hayworth. The reason that a shareholder-owned utility right now would choose an LLC structure is that by choosing a more direct structure, an outright sale or a spinoff with the consolidation to follow, both of those other structures would involve the imposition of a tax and a very substantial tax.

The LLC model allows the assets to be contributed to an LLC to satisfy the FERC requirements that control the transfer to a separate entity but ownership stays with the utility to avoid imposition of a tax. So it is really a tax-driven structure where a utility can comply with the FERC rules but avoid taxation.

That really goes to the advantages and disadvantages, as well. The advantage is that you avoid a tax; the disadvantage is that you have a fairly cumbersome structure, as opposed to a more direct sale and movement toward a transco.

In terms of the prevalence of the use, my own company is a Member of the Alliance RTO, which stretches from our service territory in Missouri all the way east to West Virginia. It covers the States of Illinois, Indiana, Michigan, parts of Virginia. We are using an LLC structure in that RTO. In addition, I know there is an RTO in Wisconsin that is using an LLC structure; also, in Florida. Frankly, I do not know of any examples of RTOs that are not using the LLC structure.

Mr. HAYWORTH. Thank you, sir, very much. Let me turn to my good friend, the ranking member from New York.

Mr. MCNULTY. Thank you, Mr. Chairman. I have no questions of this panel and I thank you and the chairman for conducting all three of these hearings and I look forward to working with you in developing a consensus on reform legislation to serve our energy needs in the future. Thank you.

Mr. HAYWORTH. Thank you, sir. Does my friend from Texas have any questions?

Mr. BRADY. No, it was excellent testimony. I know the groups have worked hard to work out some solutions and it shows. So thank you.

Mr. HAYWORTH. I look down the dais and I see my good friend who has labored on this issue with me, the gentleman from Pennsylvania.

Mr. ENGLISH. I thank the chairman. First of all, I would like to salute the chair for all of his groundwork in moving toward a legislative compromise between a couple of parties interested in this issue and he really has been the leader on this and I want to thank him for his efforts, both on behalf of public power and investor-owned utilities.

I would like to ask Mr. Nelson a couple of questions. You described in your testimony the corporate form that your company has adopted in response to the issues you have outlined. How much

of the corporate structure you have adopted is a function of tax liability, potential Federal tax liability?

Mr. NELSON. I hate to use the word all but I would say most, mostly driven by the need to avoid a tax that is built into these assets under current law.

Mr. ENGLISH. Can you describe it advantages and disadvantages that drove your decision-making in that regard?

Mr. NELSON. Certainly. FERC Order 2000 is essentially forcing us to join an RTO, to put our assets into an RTO. We also have a merger order which requires us to do that. We have found that the only structure that accommodates the FERC requirement that there be independent control of the transmission assets, while we still retain ownership and avoid the triggering of a tax, is the LLC structure.

The disadvantage is that we separate ownership from control. We own assets but we do not control them. The RTO will control them. They will tell us what to do with those assets in terms of maintenance, improvements, and et cetera. They can call capital from us to do things to the assets. That is a cumbersome and awkward way to own an asset.

Mr. ENGLISH. Looking at the provisions of H.R. 1459, how do they compare with Congressman Weller's bill, H.R. 1702?

Mr. NELSON. This is dealing with the nuclear decommissioning components and they are virtually identical in substance. The only difference is that Mr. Weller's bill has an earlier effective date than does Mr. Hayworth's bill.

Mr. ENGLISH. With regard to interconnection as you have described it in your testimony, why do you propose that interconnection be nontaxable?

Mr. NELSON. There are really two contexts that we have the interconnection issue. The first is where the merchant generation plant is being built and the first thing they need to do is arrange for transmission.

The IRS for a very long period of time had a ruling posture that would have allowed that generation plant to make a tax-free interconnection payment. Recently the IRS has declined to rule and to give us the comfort that we need that these transactions are not taxable.

These transactions are happening and the problem is that we have a situation where the IRS is not interpreting the law the way that we believe it should be interpreted. This legislation will clarify that and make sure that a generation plant, when it makes an interconnection payment, does not get what turns out to be a 30 to 35-percent increase in the cost of that interconnection facility. The policy reason for that is not to saddle these transactions with an incremental cost that is not warranted.

The second context is the situation where developers are connecting housing developments and new electric customers to the system. The reason to change the law in that context is simply to reduce the cost of improving our electricity infrastructure given the situation we have right now with an energy supply problem in our country.

Mr. ENGLISH. And can I finally ask you to elaborate? You had mentioned tax policy considerations. I could understand why some

of these tax changes would benefit investor-owned utilities but can you elaborate on the tax policy justification for your position? You know, from a standpoint of tax policy principles, can you elaborate on why you think we should go in this direction?

Mr. NELSON. May I assume that the context of your question is in the 1033 and the 355 context?

Mr. ENGLISH. Yes.

Mr. NELSON. The analogy there really is to involuntary conversion. The tax code already provides for tax deferral in the context of involuntary conversion. Our proposal analogizes the situation where we are being obligated to turn over our assets to an RTO. It analogizes that situation to the involuntary conversion context and it is consistent with the tax policy in the involuntary conversion context.

Mr. ENGLISH. Thank you, Mr. Chairman.

Mr. HAYWORTH. I thank you. And the chair would note the outstanding work done by the gentleman from Pennsylvania as we took a look at some differences in this and reached across this vital industry to reach an accommodation and come up with some common-sense solutions. The chair also welcomes the very constructive comments of the ranking minority Member but I would be remiss if I did not state for the record the very genuine energy and policy challenges that were overcome by the work of my good friend from Pennsylvania. I am very appreciative of the fact that we were able to team up on this.

Mr. ENGLISH. I thank the chair and I am always very much obliged for the opportunity to follow in your path of leadership. Thank you, sir.

Mr. HAYWORTH. Well, I think we are walking side by side and that is quite a spectacle, as we know. From time to time we have been referred to as tag team partners and I am glad to have you on my side, Mr. English.

I would like to thank the witnesses. Again, Mr. Williams, the Chairman, as he was going out to vote, was very happy to have you here from his district. We appreciate you representing the co-ops.

And for all our witnesses today, thank you very much for your time and attention on these matters and this third hearing of the Select Revenues Subcommittee is hereby adjourned.

[Whereupon, at 12:25 p.m., the hearing was adjourned.]

[Submissions for the record follow:]

Statement of Larry Taylor, President, Air Conditioning Contractors of America, Arlington, Virginia

Mr. Chairman and members of the subcommittee, thank you for the opportunity for ACCA to contribute to the national dialogue on ways to conserve energy during these challenging times. In addition to serving as the national president of ACCA, I am also the owner and president of Air Rite Air Conditioning Co., in Fort Worth, Texas. ACCA is the nation's largest trade association of those who design, install and service residential and commercial heating, ventilation, refrigeration and air conditioning systems (HVACR).

If the need to use energy more wisely wasn't clear before, it will be unmistakable after a summer of higher gasoline prices and potential electricity shortfalls. The recently released Report of the National Energy Policy Development Group, chaired by Vice President Dick Cheney, makes the challenge clear: demand for natural gas will increase by more than 50 percent in the next 20 years; similarly, demand for electricity will increase by 45 percent in the next 20 years. The need for additional energy supplies—oil, gas and electricity—is obvious. Just as critical are improve-

ments to the nation's energy infrastructure, repairing and improving the means for transporting energy and energy resources throughout the country.

At the same time, Americans need to take advantage of every opportunity to conserve and use energy more wisely. With respect to products, appliances and services, the Vice President's Report makes it clear that while there have been dramatic technological advances in energy efficiencies that have resulted in significant energy savings, there is room for improvement. The Vice President's Report recommends that the President should direct the Secretary of Energy to improve the energy efficiency of appliances where such improvements are technologically feasible and economically justified. ACCA supports this recommendation and pledges to work with the Secretary of Energy to accomplish this objective.

PROPER AND TIMELY MAINTENANCE FOR ENERGY SAVINGS

A Simple Opportunity to Save Energy

ACCA wishes to make the point—not made in the Vice President's Report—that there is an even more immediate opportunity to save energy and that is by taking the simple and relatively easy steps to ensure that HVACR equipment in homes and businesses is maintained at peak efficiency.

In most homes, the HVACR equipment is the largest energy user. In businesses, HVACR equipment is typically among the top three consumers of energy.

A recent survey conducted by Proctor Engineering Group of San Rafael, CA, among 9,000 residents found that over 90% had HVACR systems that were underperforming due to one problem or another. In many cases, the problem was as simple as a dirty filter. In the commercial arena, the Consortium for Energy Efficiency reports that up to 50% more energy would be saved through proper installation, sizing and maintenance of commercial central air conditioners and heat pumps. Improving system efficiency by 10% to 20% is a conservative estimate of the impact of proper maintenance. For systems that are seldom or never serviced, the savings could reach 100%.

To achieve this efficiency, we recommend the following as the minimum requirement for system maintenance: check the system's mechanical functions, check the air flow, check and clean the inside coil, replace the filter, straighten the outside coil fins if necessary, check for refrigerant leaks and recharge the system if necessary, clean and oil the fan motors and service other hardware, and if needed, patch and repair leaky ductwork. Studies show that one of every four dollars spent on cooling is lost through leaky ducts.

The Solution

As a part of the overall strategy to achieve energy savings, ACCA urges Congress to address the issue of improved maintenance of HVACR equipment. Although we support legislation to provide tax deductions and credit for the purchase or lease of energy efficient products or equipment (S. 207, S. 595, and HR 778), nothing will have as broad or as immediate an impact as proper maintenance of HVACR equipment.

The Vice President's Report contains several recommendations that could be implemented in ways to encourage the efficiency of HVACR equipment. These include the following, with ACCA's proposed advice:

The White House National Energy Policy Report recommends that the President direct the Office of Science and Technology Policy and the President's Council of Advisors on Science and Technology to review and make recommendation on using the nation's energy resource more efficiently.

ACCA urges the Office of Science and Technology Policy and the President's Council on Science and Technology to take into account the energy savings benefits of the proper and timely maintenance of heating and air conditioning equipment.

The Report recommends that the President direct the Secretary of Energy to promote greater energy efficiency.

ACCA urges the Secretary of Energy to promote the energy savings benefits of the proper and timely maintenance of heating and air conditioning equipment.

The Advisory Group also recommends that the President direct heads of executive departments and agencies to take appropriate actions to conserve energy use at their facilities to the maximum extent consistent with the effective discharge of public responsibilities. Agencies located in regions where electricity shortages are possible should conserve, especially during periods of peak demand. Agencies should report to the President, through the Secretary of Energy, within 30 days on the conservation actions taken.

ACCA urges the President to direct heads of executive departments and agencies to take the appropriate actions to ensure that heating, ventilation and air conditioning equipment in Federal buildings is serviced regularly to ensure that it is good working order.

Conclusion

As energy legislation is shaped this year to address the immediate crisis and provide for long-term needs, we urge the Subcommittee not to overlook the opportunity for a significant and immediate energy savings that comes with the proper and timely maintenance of HVACR equipment. Congress can accomplish this goal by directing the appropriate Federal agencies to provide educational information to the public and by providing incentives for the regular maintenance and servicing of HVACR equipment.

The benefits are real and lasting, with long-term savings, rather than costs, to the American taxpayer.

Thank you.

Statement of the Alliance for Resource Efficient Appliances

The Alliance for Resource Efficient Appliances (AREA) fully supports H.R. 1316, the "Resource Efficient Appliance Incentives Act." This bi-partisan appliance tax credit bill was introduced March 29, 2001 by Representative Jim Nussle (R–IA) and Representative John Tanner (D–TN) along with many other Members from both sides of the aisle.

This proposed tax credit will provide a per unit tax credit for appliance manufacturers who produce clothes washers and refrigerators that exceed the current Department of Energy standards. The credit is subject to an aggregate per company limit of $60 million and an annual limit of two percent of corporate gross revenues as well as the following:

Washing Machines—Manufacturers of super energy-efficient washing machines would be eligible to claim a credit of either $50 or $100 for each super energy-efficient washing machine produced between 2002 and 2006. The $50 credit is available for units that use 35% less energy than the standard in place through 2003 and use 17% less energy than the standards announced by DOE. The $100 credit is available for units that use 42% less energy than the standard in place through 2004 and use 42.5% less energy through 2006 than the standards announced by DOE.

Refrigerators—Manufacturers of super energy-efficient refrigerators would be eligible to claim a credit of $50 for each super energy-efficient refrigerator produced between 2002 and 2004 that is at least 10% more energy efficient than the DOE required efficiency standard that went into effect on July 1, 2001. Manufacturers would be eligible to claim a credit of $100 for each unit produced between 2002 and 2006 that is at least 15% more energy efficient than the 2001 DOE required efficiency standard.

The tax credit for the production of super energy-efficient washing machines and refrigerators creates the incentives necessary for both manufacturers and consumers to increase the production and sale of super energy-efficient appliances in the short-term and to expand marketing opportunities. The more rapidly those super energy-efficient appliances appear in the marketplace; the more rapidly energy savings will occur. For example, as a result of making the tax credit available between 2002 and 2006, the production and purchase of super energy-efficient washers is estimated to increase by almost 200% and the purchase of super energy-efficient refrigerators by over 285%. Moreover, this increase in the purchase of super energy-efficient appliances will create a market transformation. The long term cost savings of increased energy efficiency will lead to a dramatic change in consumer purchasing decisions that will last many years after the expiration of this tax credit.

The expanded use of super energy-efficient appliances has significant long-term environmental benefits. Over the life of the appliances, over 200 trillion Btus of energy will be saved.[1] This is the equivalent of taking 2.3 million cars off the road or closing down 6 coal-fired power plants for a year. Energy savings of this magnitude pay significant environmental dividends. For example, carbon emissions, the critical element in greenhouse gas emissions, will be reduced by over 3.1 million metric tons. In addition, the super energy-efficient clothes washers will reduce the

[1] Of the total, approximately 150 trillion Btus are attributable to the super energy-efficient clothes washers and approximately 40 trillion Btus are attributable to super energy-efficient refrigerators.

amount of water necessary to wash clothes by 870 billion gallons or approximately the amount of water necessary to meet the needs of every household in a city the size of Phoenix, Arizona for two years. The net benefits to consumers over the life of the super energy-efficient clothes washers and refrigerators from operational savings is almost $1 billion.

The appliance industry and the advocacy organizations acknowledge that substantial energy savings are being achieved today through the use of more energy efficient appliances. However, industry has the technological ability to achieve even greater energy savings if properly crafted incentives are enacted to encourage greater consumer receptivity to the super energy-efficient appliances. Currently, a major hurdle to the more widespread use of the super energy-efficient clothes washers and refrigerators is the reluctance of many consumers to make a higher initial investment in order to receive the long term savings of the super energy-efficient appliances.

A tax credit available to manufacturers for the production of super energy— efficient washing machines and refrigerators can overcome much of the consumer reluctance by creating incentives for both manufacturers and consumers that will increase sales of super energy-efficient appliances. A credit provided at the manufacturers' level is preferable to a credit at the consumer level because of—(1) the ease of administration; (2) the ability to limit the cost of the proposal by capping the benefits; (3) the higher leverage obtained by providing the tax credits upstream; and (4) the flexibility to select among many means of marketing for the best way to sell more energy-efficient appliances.

AREA Members Include:

Alliance to Save Energy	City of Austin, Texas
American Council for an Energy-Efficient Economy.	Friends of the Earth
Association of Home Appliance Manufacturers.	Natural Resources Defense Council
Appliance Standards Awareness Project.	Northwest Power Planning Council
The Business Council for Sustainable Energy.	Pacific Gas and Electric
California Energy Commission	The Sierra Club

Statement of the American Chemistry Council, Arlington, Virginia

INTRODUCTION

The American Chemistry Council (ACC) strongly supports Administration and Congressional efforts to develop a national energy strategy to ensure dependable, affordable and environmentally sound energy resources, now and for the future. Energy production, supply and conservation should be vital components of that national energy strategy, and we commend this Committee for its attention to policies that will encourage and promote these objectives. The ACC appreciates the opportunity to comment on these important issues.

IMPORTANCE OF ENERGY TO THE BUSINESS OF CHEMISTRY

A comprehensive national energy policy is vitally important to ACC members. We use energy products as fuel, electricity and steam for our operations. In addition, and this distinguishes us from most other sectors of the economy, we use energy as raw materials (feedstocks) for our production processes. From these energy inputs we make many of the products that allow others to conserve energy and reduce emissions. The chemistry industry uses 6.9 quads of energy, 7% of total U.S. energy consumption. Of the chemistry industry's consumption, 51% is used as feedstocks. Natural gas comprises 41% of the industry's energy consumption. Chemistry industry natural gas consumption represents 12% of total U.S. consumption of natural gas and 29% of total consumption by industry (excluding electric utilities).

Unstable markets and rising domestic energy prices are forcing key segments of the chemical industry out of world markets, resulting in layoffs and plant shutdowns.

COGENERATION/COMBINED HEAT AND POWER

Because many chemical plants are large users of both steam and electricity, they are ideally suited for cogeneration, which is the sequential production of electricity

and steam (useful thermal energy) from the same energy input. Cogeneration units producing steam and electricity attain double the fuel efficiencies of a typical electric utility power plant.

Cogeneration units producing steam and electricity readily attain fuel efficiencies of 65%–75%, as compared to 35% for a typical electric utility. Even advanced gas turbine combined cycle electric utility units can only achieve a 50% overall efficiency. These same advanced gas turbines will achieve 75%–80% overall efficiency in a cogeneration application.

The reason for the efficiency advantage is that a chemical plant uses most of the steam from the cogeneration unit in its chemical processes. Without cogeneration, this steam would have to be supplied in some other manner (boiler steam, direct heating with natural gas, etc.). In contrast to cogeneration technologies, a typical utility unit would simply condense the steam and release the waste heat into the atmosphere or cooling water.

Cogeneration offers significant environmental benefits. By combining the production of steam and power, cogeneration facilities burn far less fuel and release fewer emissions, including greenhouse gas (CO_2) emissions, than the combined emissions from separate utility power plants and industrial steam generation facilities.

Cogeneration units built close to the sites where their power is consumed reduce power losses during transmission, alleviate transmission congestion and reduce the need to build additional transmission lines in many regions of the country. Reliability of power supplies to all electricity consumers is therefore improved as more cogeneration units generate "on-site" power.

The chemistry industry's cogeneration units provide steam and electricity to their own chemical plants and are connected to utilities' transmission and distribution systems. Section 210 of the Public Utility Regulatory Policies Act (PURPA) ensures that any excess electricity from a qualifying cogeneration unit can be sold to a local electric utility. Equally important is that this section ensures that a qualifying cogeneration unit can receive backup and maintenance power from the utility at just and reasonable, nondiscriminatory rates.

Given the environmental benefits of cogeneration, its importance to the chemistry industry and the current need for every available kilowatt of power, now is not the time to repeal these provisions of PURPA. Properly structured energy policy legislation should spur the development of new cogeneration facilities that will help alleviate power shortages and transmission congestion that many high-growth states and regions are facing.

TWO RECENT EXAMPLES OF THE BENEFITS OF COGENERATION/COMBINED HEAT AND POWER

A company installed a new, highly efficient, state-of-the-art gas turbine generator with a large heat recovery steam boiler. This significantly reduced use of an aged cogeneration unit and boilers with significant NO_X emissions, displaced purchased electricity, and enabled intermittent sales of excess electricity back to the grid. Total plant NOx emissions are lower than before even with much higher output, and energy savings are about 19.2% per unit of production.

A company installed a second gas turbine cogeneration system to meet expanded steam needs. The new unit has duel fuel capability and uses byproduct gas from another on-site process as well as natural gas. Use of byproduct gas displaced purchased natural gas and ended flaring of the byproduct gas. Energy savings are about 30%, with associated emissions reductions including NO_X reductions from selective catalytic reduction.

THE GOVERNMENT'S ROLE

Government can support and facilitate energy production, supply and conservation throughout the economy in a number of ways.

One important way government can help is to devise and implement appropriate fiscal and monetary policies to ensure the continued health of the U.S. economy. A healthy economy facilitates company earnings that can be used for investment in new plant and equipment and the turnover of capital stock, and for private research and development.

Congress can also promote energy production, supply and conservation by providing financial incentives to industries that invest in highly efficient cogeneration units. Incentives might include faster capital cost recovery for cogeneration assets (e.g., shortened depreciation schedules), and amendment of technical rules that sometimes require a cogenerator to pay taxes on behalf of an electric utility to which the cogeneration facility is connected.

CONCLUSION

The American Chemistry Council appreciates the opportunity to present its views to the Subcommittee on Select Revenue Measures. As an industry leader in cogeneration, the business of chemistry will work with the Subcommittee, the Committee on Ways and Means and the Congress to develop targeted incentives that will effectively promote these highly efficient forms of power generation.

Statement of Stephen Johnson, Washington Public Utility District Association, Seattle, Washington, and American Public Power Association

On behalf of the American Public Power Association (APPA) and Washington Public Utility District Association (WPUDA), I appreciate the opportunity to provide testimony today regarding Congresswoman Dunn's bill on incremental hydropower, the *Hydropower Capacity Improvement Act*.

I am Stephen Johnson, Executive Director of the WPUDA, an association of 28 utilities (8 of whom are hydropower owners) in Washington State. WPUDA members have a long history of making conservation, efficiency and the development of renewable resources a top priority.

Today I am providing testimony on behalf of the American Public Power Association in support of H.R. 1677, the *Hydropower Capacity Improvement Act*. This bill helps to accomplish an important conservation and energy objective: reversing the decline in generation of electricity from clean, "zero emissions" hydropower. Specifically, the bill would provide a credit of $65 times the number of additional kilowatts of licensed generating capacity added during a tax year that can be used to offset tax liability, or traded with any taxpayer. I would briefly note that the "tradability" feature is key for APPA's member systems, who own almost 40% of the total hydropower capacity in the U.S. and yet would not receive any incentive from a conventional tax credit.

Before I comment on the details of the credit, I would like to explain why the hydropower industry, which enjoys a relatively abundant and inexpensive source of clean generation, needs an incentive to add hydropower capacity.

The U.S. Department of Energy has conducted studies that have uncovered up to 21,000 MW of undeveloped hydropower capacity at existing U.S. dams and hydropower facilities.[1] This is a significant amount of power—enough to displace 24 million metric tons of carbon emissions from coal.[2] Why has this capacity gone undeveloped when the demand for new energy supplies—particularly clean energy with a unique capacity to quickly meet peak demands—exists across the country and urgently in the West?

One reason is that incremental hydropower additions are capital intensive. The National Hydropower Association has estimated that the cost of new hydro generation upgrades run up to $2,000 per KW, or more, if regulatory costs are considered. By way of comparison, capital costs for a typical combined cycle gas plant can cost $550 per KW. Although costly, making upgrades to hydropower facilities is important both for power generation and the environment. Upgraded turbines and newer technologies provide increased protection for fish, and can greatly improve efficiency.

In addition to high capital costs, hydropower resources have gone untapped because hydropower owners face significant regulatory hurdles to license or relicense a facility, or even just to add capacity. Adding capacity requires an amendment to a hydropower license, and depending upon the environmental impacts, a simple amendment can trigger regulatory hurdles like Federal Energy Regulatory Commission (FERC) environmental reviews and agency studies equivalent to those required when licensing an entire facility.

The regulations connected with hydropower licenses are designed to ensure that the industry considers the welfare of the environment as well as our power needs when we operate our existing dams or add capacity. Though this goal is appropriate, the licensing process through which these regulations are enforced is broken. Our hydro owners face conflicting statues, a host of agency regulators at the local and

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[1] Hydropower Resource Assessment program draft report, US DOE Hydropower Program, Idaho National Engineering and Environmental Laboratory, www.inel.gov/national/hydropower/index.html, November 1998.

[2] According to "impacts of the Kyoto Protocol on U.S. Energy Markets and Economic Activity," prepared by the Energy Information Administration, October, 1998, Table 17, p. 75, coal fired technologies emit 571 pound of carbon per Megwatthour.

federal level, and federal agency licensing conditions that can be set without regard to the effects on project economics and power output. The process is costly and can take 10 years or more to complete.

To summarize, because of the costs of incremental hydropower upgrades, disincentives presented by the licensing process, hurdles that must be cleared in order to amend licenses and restrictions on power generation presented by new licenses, the industry is not adding hydropower. Instead, the Department of Energy has projected that we are *losing* hydroelectric generation.[3] Looking in my own backyard, 73 percent of the hydro capacity in the Northwest will face relicensing in the next 15 years, and in the process is likely to lose a significant amount of generation capacity.

The incentive described in Congresswoman Dunn's bill could help offset these losses and maintain this vital commodity for energy consumers, without the construction of a single new dam. In addition, if Congress and the FERC make the needed improvements to the relicensing process, we can make the most of our hydropower resources.

For this reason, the APPA, Washington PUD Association and National Hydropower Association (NHA) applaud Congresswoman Dunn for introducing H.R. 1677. We agree that our valuable hydropower resources must be protected for future generations, and encourage this Committee to strongly consider this bill as a means of addressing critical near-term and long-term energy needs.

We further commend Congresswoman Dunn for ensuring that the owners of 40% of the nations' hydropower capacity will not be excluded from receiving this incentive. Hydropower systems owned by municipalities or units of state and local government are not-for-profit and do not generate federally taxable income. Our federalist system precludes the taxation of one level of government, including local public power systems, by another. Thus, conventional energy incentives through the tax code, which are currently being advanced in a number of bills before Congress, do not provide incentives for us because we have no federal income tax liability to offset with a credit. To address this situation, Congresswoman Dunn's bill would enable us to sell the credit to any taxpayer. The taxpayer #8211; which could include our customers—would be able to purchase the credit at a discount from face value, and we would in turn be able to use the proceeds to offset the high capital costs of making capacity additions.

We greatly appreciate Congresswoman Dunn's recognition not only of our unique status, but of the fact that hydropower is a renewable resource that should be enhanced, along with solar, wind, biomass, landfill gas and other resources so that this nation's consumers can benefit from a diverse mix of fuels and greater energy security. *As Congress considers this and other bills to provide incentives for renewable and clean energy resources that fulfill important public and environmental purposes, we urge Congress to ensure that public power and rural electric cooperatives #8211; which serve 25% of the nation's power consumers #8211; also receive an incentive through a tradable credit program.*

Thank you again for the opportunity to provide this subcommittee with testimony and tell you why H.R. 1677 is so important to us. Do not hesitate to contact me if I can answer any questions or be of any assistance to you.

Statement of John A. McFarland, President and Chief Executive Officer, and Roland S. Boreham, Jr., Chairman, Baldor Electric Company, Fort Smith, Arkansas

After years of productivity growth that has helped industrial companies become more competitive in world markets, we now find competitiveness threatened by high energy prices. Industry in the United States faces a different challenge when attempting to control energy costs than do individuals. The makeup of our electricity bill in industry is much different than that of individuals. For industrial companies, 63% of our electric bill is consumed by industrial electric motors. In some industries, such as mining, as much as 90% of the electricity bill is consumed by the use of industrial electric motors. There is a solution to this problem that is available today that allows industry to save money while saving energy—**high efficiency electric motors.**

[3] Scenarios of US Carbon Reductions: Potential Impacts of Energy Technologies by 2010 and Beyond," Office of Energy Efficiency and Renewable Energy, US DOE, September 15, 1997, p. 7.21.

With industrial electric motors consuming 25% of all of the electricity generated in the United States, it is important that we address the conservation opportunities available to us today by using more efficient electric motors. High efficiency electric motors are available from a large number of domestic and foreign sources. These products are fully developed and available today and, according to the Department of Energy, could reduce industry's electricity consumption by up to 18%.

Incentives to use high efficiency motors similar to the incentives being discussed for high efficiency automobiles could produce immediate and substantial savings in electricity. Also, since electricity is a substantial cost for industry, incentives for the use of high efficiency motors can help our industrial companies continue to become more competitive in world markets. This can be one of the most effective ways to achieve your Committees' objectives.

The following table shows the annual operating cost, the cost of a new high efficiency motor, and the electricity savings in dollars of using a high efficiency motor instead of older motors installed in industry today. As you can see in the table below, there is substantial opportunity to save electricity and electricity cost by replacing existing motors with high efficiency motors.

With one quarter of all of the electricity generated in the United States consumed by industrial electric motors, it is important that industry conserve electricity by changing out older motors to new high efficiency models available today. Using high efficiency motors will help industry become more competitive throughout the world and provide an immediate increase in electricity availability "bridging-the-gap" until additional energy production is installed.

We do not believe a major incentive is required to encourage people take actions which is in their own best interests. Market forces will work successfully over time; the issue we believe is to accelerate the workings of those market forces. A tax credit of 10–15% for the purchase of high efficiency motors and the resulting rise in awareness would have a large impact on energy conservation in our country, benefit industrial competitiveness, and make more energy available for individuals. Perhaps the best thing is there is no tradeoff. Electric motor users can save money and energy at the same time.

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

Statement of the Letitia Chambers, Coalition of Publicly Traded Partnerships, and Chambers Associates Incorporated

The Coalition of Publicly Traded Partnerships is pleased that the Subcommittee has provided this opportunity to share its views on tax provisions that affect the production and supply of energy. The Coalition is a trade association representing publicly traded partnerships (PTPs) and those who work with them.

Summary

PTPs, also referred to as master limited partnerships or MLPs, are partnerships which are traded on public stock exchanges. They combine the benefits of a partnership investment with the affordability and liquidity of stocks and bonds, and are valued by investors for the income they provide through quarterly cash distributions and the potential for growth in both income and market value.

Publicly traded partnerships are highly relevant to the issues being examined by this Subcommittee because in addition to the benefits they provide investors, PTPs benefit energy consumers by providing an efficient and effective means of channeling needed capital to companies that build, maintain, and operate our nation's energy infrastructure. About half of all PTPs are in the energy sector, but their importance far exceeds their numbers, for these PTPs represent two-thirds of PTPs' market capital and close to three-quarters of assets owned by PTPs. However, they are prevented from fully realizing their capital formation potential by a provision—or more specifically, an omission—in the tax code.

Although PTPs, as a liquid security providing a steady income stream, should be an excellent investment for mutual funds, they are not able to access capital from this source because they are not on the tax code's list of qualifying income sources for mutual funds. The reason they are not on the list is that PTPs did not exist at the time that the mutual fund provisions, including the qualifying income list, were placed in the Code. This means that a mutual fund whose gross income from PTPs and other "nonqualifying" sources exceeds 10% of its total gross income will lose its regulated investment company status under the tax code. Faced with this Draconian possibility and the burden of tracking income percentage, mutual fund managers turn away from PTPs. With only the retail market available to them,

PTPs find that raising capital for building energy infrastructure is far more difficult and costly than it should be.

The Publicly Traded Partnership Equity Act (H.R. 1463), sponsored by Rep. Wally Herger and a bipartisan group of cosponsors[1] would rectify this omission by adding income derived from PTPs to the qualifying income list for mutual funds. This change in the tax law would:

- Increase the flow of capital into the energy industry and fund investments in energy infrastructure which supports the U.S. economy as a whole.
- Help lower energy prices for consumers by reducing the cost of capital to energy companies.
- Benefit current PTP unitholders through the increase in value of their units resulting from increased activity in PTP units and greater interest in PTPs by Wall Street analysts and bankers.
- Provide an opportunity for the millions of individuals who invest in mutual funds to participate in an investment that offers very attractive returns.
- Eliminate the artificial constraints of the tax code and place decisions on mutual fund investment in PTPs where they belong—with mutual fund managers

For these reasons, we believe that the provisions of H.R. 1463 should be part of any energy-related tax bill considered by this Subcommittee and by the Ways and Means Committee as a whole.

Background

It is appropriate to consider PTPs in the context of an energy bill, because they began as a way for the energy industry to raise additional capital. The energy industry, like the real estate industry, had always used partnerships as a means of raising equity capital, because partnerships allowed investors more direct participation than the corporate form, not only in the earnings of the business but also in the considerable benefits that the tax code confers on these industries.

The nature of partnership investment in the time before PTPs, however, meant that this form of equity could be raised only from investors in the upper-income tiers, often those seeking a tax shelter. To become a limited partner, it was necessary to invest a very large amount of money—$10,000 to $20,000 at a minimum. Once an investor was in a partnership, it was very hard to get out before the partnership was liquidated, which typically did not occur for a number of years. Many partnership deals did not receive the tough SEC scrutiny that protects investors in publicly traded securities. Thus, limited partnerships appealed only to investors with considerable disposable income and either a high tolerance for risk or a desire to minimize tax liability.

The PTP was the vehicle for addressing these disadvantages of partnerships. Partnership interests were divided into units which were sold at affordable prices and traded on public stock exchanges, providing liquidity for investors who were wary of the long-term required by nontraded partnerships. With public trading of units came the full panoply of regulation that the SEC requires for publicly traded entities—securities registration, proxy statements, 10–K reports, and the like. This allowed energy companies to market partnerships for the first time to middle class investors who were seeking not a tax shelter but an investment that would provide them with a steady cash flow and potential for growth.

The first PTP, an oil company formed in 1981, was Apache Oil Company. Apache was followed by a number of others, as both energy and real estate companies discovered the advantages of this new means of capital formation. PTPs were formed in a number of other industries as well.

In 1987, Congress enacted section 7704 of the tax code, which defined PTPs eligible for partnership tax treatment as those earning their income from natural resource activities, interest, dividends, real estate rents and capital gains, and commodities income. While the growth of new PTPs in other areas has diminished since 1987, PTPs continue to be an important feature of the energy industry, with each year bringing both new partnerships and new equity issues by existing partnerships.

Publicly Traded Partnerships Today

There are currently about fifty PTPs trading on the New York, American, and NASDAQ exchanges, with another in registration. Based on their year 2000 10–Ks, the total market capital of all PTPs is about $19 billion, total assets about $32 billion, and total annual revenue about $39 billion.

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[1] Reps. Crane, Houghton, Ramstad, Foley, English, Matsui, Neal, and McKeon are original cosponsors; Reps. Hayworth and Cooksey have also signed on.

About half of these PTPs are in the energy business. For the most part, these are not the old oil and gas partnerships of the eighties, but partnerships which are actively engaged in building and operating the infrastructure that gathers oil and natural gas from underground and offshore sites, processes it into liquified natural gas and petroleum products, stores crude oil, natural gas, and refined products in bulk terminals, and transports them via pipeline and truck to communities throughout the United States. A number of PTPs also deliver propane to industrial and rural customers throughout the United States. In addition, one PTP is involved in coal mining and marketing.

Operating through PTPs works well for these companies because of the good fit between the nature of their businesses and the nature of partnerships. In a partnership, it is particularly important that investors receive regular and substantial cash distributions because of the fact that it is the partners who pay income tax on the partnership earnings. An investment that requires an investor to pay tax on income he doesn't receive (his allocated share of partnership income) will not do well in the market unless it pays out cash to the investor that comfortably exceeds that tax; therefore, a partnership must own assets that generate a reliable income stream. The energy companies that operate through PTPs meet this test by using the capital raised by issuing equity units to acquire or build assets such as pipelines that will then generate income for several years without much additional investment.

While they constitute about half of the number of PTPs on the market, the energy PTPs overwhelmingly dominate the PTP universe by just about every other measure. They represent about two-thirds of PTP market capital, close to three-fourths of the assets held by PTPs, and nine-tenths of the total income earned by PTPs.

SUMMARY OF PTP FINANCIAL INFORMATION REPORTED ON FY 2000 10-Ks

[$millions, except numbers of PTPs]

	Number of PTPs	Total market value	Percsent of all PTPs	Total assets	Perscent of all PTPs	Total income	Percent of all PTPs
Natural resources:							
Energy production, refining, transport, etc.	23	$11,929.8	64.2	$22,579.8	71.0	$35,116.9	89.7
Minerals and timber	5	349.3	1.9	1,850.1	5.8	1,563.4	4.0
All natural resources	28	12,279.1	66.1	24,429.9	76.8	36,680.4	93.7
Real estate:							
Income properties and homebuilders	8	1,278.5	6.9	3,113.0	9.8	1,010.6	2.6
Mortgage securities	7	727.8	3.9	1,528.6	4.8	160.6	0.4
All real estate	15	2,006.2	10.8	4,641.6	14.6	1,171.1	3.0
June 18, 2001 miscellaneous	8	4,300.1	23.1	2,741.1	8.6	1,306.7	3.3
All PTPs	51	18,585.5	100.0	31,812.6	100.0	39,158.2	100.0

Numbers may not add to totals due to rounding.

The information in this table was drawn from the Coalition's compilation of 10–K filings for 2000. It does not capture a snapshot of PTP market capital at a fixed point in time, both because 10–Ks usually report market capitalization at the time the report is filed rather than as of the end of the fiscal year, and because some PTPs have fiscal years other than the calendar year and thus filed some months earlier than the others.

However, A.G. Edwards & Co., an active underwriter of energy PTP offerings and the source of several analyses of PTPs operating in the midstream and pipeline energy sectors, recently compiled such a snapshot. They found that **as of May 29, 2001, the total combined market capitalization of PTPs is $27.1 billion.** The increase relative to the figures in the table is largely due to several offerings that occurred early in 2001, two of which were IPOs and the rest equity offerings by existing PTPs, all in the energy field. Other A.G. Edwards findings include:

- The top 10 PTPs, all in the energy field, currently represent 68% of total market capitalization in PTPs.
- The 12 midstream energy/pipeline PTPs listed on the New York Stock Exchange:
  - Have enterprise values (market equity plus debt) ranging from $6 billion to $461 million and a combined enterprise value of $22.5 billion.

- Have combined revenue of over $20 billion.
- Have a current yield ranging from 5.5% to 10.3%, and an average yield of 7.2%.
- For the ten that were trading last year (two are 2001 IPOs), the annual growth in distributions ranged from 1.4% to 16.4%, with an average of 5.4%.

The Coalition compilation shows that the annual distributions for these PTPs during calendar year 2000 ranged from $1.84 to $3.50 per unit, with an average of $2.48 (the average for all energy PTPs was $2.00, and for all PTPs was $1.66). For more detail, see Exhibit 1 following this testimony.

These energy partnerships have a substantial presence in energy producing states. In Louisiana, for example, energy PTPs own $1.6 billion in assets or property, plant, and equipment located in the state; employ 1,474 residents; and have an annual in-state payroll of $88 million—and this does not count the three propane PTPs with operations in that state. Louisiana residents own 3.9 million units in these PTPs, valued at $160 million.

Similarly, in Texas energy PTPs own $3.6 billion in assets or property, plant, and equipment located in the state; employ 2,787 residents, and have an annual in-state payroll of $178 million—again not counting the three propane PTPs, as well as one natural gas producer and one crude oil gatherer. Texas residents own units in these PTPs valued at $6.9 billion.

A list of the PTPs operating in the state of each Subcommittee member can be found in Exhibit 2 accompanying this testimony.

The Issue: Lack of Mutual Fund Ownership

At this point you may be asking yourself where the catch is in this rosy picture. The catch is this: these PTPs could be raising substantially more capital, acquiring more assets, building more energy infrastructure, transporting more energy products to the places where they are so urgently needed, than they are at this time. The reason that they have not done so is that they are currently operating with one hand tied behind their backs: they are raising capital with virtually no access to institutional investors. The reasons for this can be found in the tax code. One reason is the unrelated business income tax (UBIT) rules applying to tax-exempt investors such as pension funds. The second, and the one we are asking you to address at this time, is the regulated investment company (RIC) rules, which govern mutual funds.

PTPs don't have access to mutual funds because they didn't exist when the mutual fund rules were written. Mutual funds were created to provide individuals with a convenient affordable means of owning a varied portfolio of securities that they would otherwise buy themselves on the market. Thus, the income that a mutual fund could earn and pass through to its investors was limited to that derived from the securities on the market at the time: interest, dividends, payments with respect to securities loans, gains from the sale of securities and foreign currency, etc.

The rule that was written into the Code was that this sort of income must constitute 90% of the mutual fund's gross income in order for the mutual fund to qualify as a RIC with passthrough tax status. Partnership income—be it the partnership income allocated to the investor on which the investor pays tax or the cash distribution paid to the partner—is nowhere on the list because, as discussed in the previous section, traditional nontraded partnerships were not the sort of safe, liquid, common securities investment for which mutual funds were created.

PTPs, however, are exactly that sort of investment. Liquid, affordable, and completely SEC regulated, providing a steady stream of income for distribution to mutual fund investors, they are as worthy of qualification under the RIC rules as any other public security.

In other words, PTPs are living under an archaic rule that was written before they existed with a completely different type of partnership in mind. It is long past time for this section of the tax code to be brought into the 21st century.

What is the effect of this rule on PTPs? Quite simply, mutual funds rarely buy their units. If gross income from the PTP, along with any other "nonqualifying" sources exceeds 10% of the fund's total, the mutual fund will lose its RIC status. This is not a risk that most mutual fund managers want to take. Moreover, they do not want to assume the burden of tracking income percentages to make sure they do not go over the line when they can avoid the whole problem by sticking to stocks and bonds.

As a result, only about 10% of PTP common units examined by A.G. Edwards were owned by institutional investors (exempt organizations and mutual funds), while 55% of the common shares of midstream energy corporations were held by institutions. And this is in a market where mutual funds now account for an estimated 80% share of all equity offerings, where 20% of all market equity is held by

mutual funds, and mutual funds have almost $7 trillion in assets under management.

In practical terms, this means that when existing PTPs want to issue equity, or energy businesses want to create new PTPs, in order to finance their plans for acquisition of new assets, broadening their infrastructure, and more efficiently meeting the country's energy needs, they can do so only to the extent that individual investors are willing and able to buy them. As a result, PTP managers wishing to raise a certain amount of capital must do it in several smaller offerings instead of one large one, increasing the cost of capital, or must assume more debt than they would prefer. They must even check to be sure that none of the other PTPs are planning an offering that is near in time to theirs, because the retail market can only absorb so many PTP units at a time. Needless to say, this hampers, delays, and increases the cost of every major project or acquisition that these companies wish to undertake.

Conclusion

There is no reason for PTP managers to be limited in this way when there is such a need for the energy infrastructure that they could be financing. The Publicly Traded Partnership Equity Act (H.R. 1463) would put an end to this restrictive situation and modernize this bit of the tax code by simply adding income derived from PTPs to the qualifying income list in the RIC rules. H.R. 1463, which has been sponsored in past years by Chairman Thomas, has been introduced this year by Rep. Wally Herger and a bipartisan group of cosponsors. It has been approved by Congress already, as part of the Taxpayer Refund and Relief Act of 1999, which was vetoed by President Clinton.

Enactment of the Publicly Traded Partnership Equity Act would:

- Increase the flow of capital into the energy industry and fund investments in energy infrastructure which supports the U.S. economy as a whole.
- Help lower energy prices for consumer by reducing the cost of capital to energy companies.
- Benefit current PTP unitholders through the increase in value of their units resulting from increased activity in PTP units and greater interest in PTPs by Wall Street analysts and bankers.
- Provide an opportunity for the millions of individuals who invest in mutual funds to participate in an investment that offers very attractive returns.
- Eliminate the artificial constraints of the tax code and place decisions on mutual fund investment in PTPs where they belong—with mutual fund managers.

If this Subcommittee and the Ways and Means Committee as a whole decide that this is an appropriate time to enact tax measures to help address the energy situation, we urge that this provision be included. It is simple, it is noncontroversial, it is low-cost (the Joint Tax Committee estimated its cost as only $170 million over ten years in the 1999 bill), and it does not require any government intervention in the energy industry or the capital markets. It simply gives PTPs the freedom to do more of what they have been doing so well all along—raising capital to build the infrastructure to process, store, and transport the energy products that are critically needed to meet our nation's energy requirements.

EXHIBIT 1

FEATURES OF 12 MIDSTREAM ENERGY/PIPELINE PUBLICLY TRADED PARTNERSHIPS AS OF MAY 29, 2001

	Enterprise value	2000 Revenue	Current yield (percent)	Annual distribution growth (percent)	2000 distributions
Buckeye Partners, L.P	$1,323.0	$299.0	6.4	5.8	$2.40
El Paso Energy Partners, L.P	1,631.0	112.2	6.6	1.7	2.15
Enterprise Products Partners, L.P	3,672.0	3,049.0	5.5	9.3	2.05
EOTT Energy Partners	754.0	8,340.0	10.3	1.7	1.90
Kaneb Pipe Line Partners	856.0	156.3	7.4	3.1	2.80
Kinder Morgan Energy Partners, L.P	6,036.0	816.6	5.9	16.4	3.43
Lakehead Pipeline Partners	2,095.0	305.6	7.7	4.6	3.50
Northern Border Partners, L.P	2,455.0	339.7	7.6	3.5	2.70
Plains All American Pipeline L.P	1,186.0	4,102.0	7.3	1.4	1.84
Shamrock Logistics, L.P	631.0	92.0	7.9	N/A	N/A
TEPPCO Partners, L.P	1,417.0	3,087.9	7.2	6.2	2.00

FEATURES OF 12 MIDSTREAM ENERGY/PIPELINE PUBLICLY TRADED PARTNERSHIPS AS OF MAY 29, 2001—Continued

	Enterprise value	2000 Revenue	Current yield (percent)	Annual distribution growth (percent)	2000 distributions
Williams Energy Partners, L.P	461.0	71.5	6.6	N/A	N/A
Total (value & Revenue)/Average (Others)	22,517.0	20,771.9	7.2	5.4	2.48

Sources: A.G. Edwards & Co., Coalition of Publicly Traded Partnerships.

EXHIBIT 2

PUBLICLY TRADED PARTNERSHIPS OPERATING IN SUBCOMMITTEE MEMBERS' STATES

LOUISIANA

Energy

Amerigas Partners, L.P.
El Paso Energy Partners
Enterprise Products Partners
EOTT Energy Partners
Ferrellgas Partners, L.P.
Genesis Energy, L.P.
Kaneb Pipe Line Partners
Kinder Morgan Energy Partners
Plains All American Pipeline
Suburban Propane Partners, L.P.
ITEPPCO Partners, L.P.

Other

Boston Celtics, L.P.
New England Realty Associates, L.P.

NEW YORK

Energy

Buckeye Partners, L.P.
Cornerstone Propane Partners, L.P.
Heritage Propane Partners, L.P.
Lakehead Pipe Line Partners
Star Gas Partners
TEPPCO, L.P.

Other

FFP Partners, L.P.

ARIZONA

Energy

Amerigas Partners, L.P.
Cornerstone Propane Partners, L.P.
Ferrellgas Partners, L.P.
Heritage Propane Partners, L.P.
Kaneb Pipe Line Partners
Kinder Morgan Energy Partners

Other

Alliance Capital Management Holding, L.P.
American Real Estate Partners, L.P.
W.P. Carey & Co., LLP

TEXAS

Energy

Amerigas Partners, L.P.
Buckeye Partners
Dorchester Hugoton, Ltd.
El Paso Energy Partners
Enterprise Products Partners
EOTT Energy Partners
Ferrellgas Partners, L.P.
Genesis Energy, L.P.
Heritage Propane Partners, L.P.
Kaneb Pipe Line Partners
Kinder Morgan Energy Partners
Plains All American Pipeline
Pride Companies, L.P.
Shamrock Logistics, L.P.
Suburban Propane Partners, L.P.
TEPPCO Partners, L.P.
Williams Energy Partners, L.P.

Other

Crown Pacific Partners, L.P.

ILLINOIS

Energy
Alliance Resource Partners, L.P.
Buckeye Partners, L.P.
Ferrellgas Partners, L.P.
Kinder Morgan Energy Partners
Lakehead Pipe Line Partners
Northern Border Partners, L.P.
Plains All American Pipeline
TC Partners, L.P.
TEPPCO Partners, L.P.

Other
FFP Partners, L.P.
Hallwood Realty Partners

TENNESSEE

Energy
Cornerstone Propane Partners, L.P.
Heritage Propane Partners, L.P.
Northern Border Partners, L.P.
Williams Energy Partners, L.P.

Other
FFP Partners, L.P.
Heartland Partners, L.P.

KENTUCKY

Energy
Alliance Resource Partners
Cornerstone Propane Partners
Heritage Propane Partners, L.P.
Kinder Morgan Energy Partners, L.P.
Star Gas Partners, L.P.
TEPPCO, L.P.

Other
FFP Partners, L.P.

WISCONSIN

Energy
Kaneb Pipe Line Partners
Lakehead Pipe Line Partners

Other
FFP Partners, L.P.

MASSACHUSETTS

Energy
Buckeye Partners, L.P.
Cornerstone Propane Partners, L.P.
Heritage Propane Partners, L.P.
Star Gas Partners

Statement of the Methanol Institute, Rosslyn, Virginia

This testimony is presented on behalf of the Methanol Institute ("MI"), the national trade association for the U.S. methanol industry. As the voice of the methanol industry, MI has been a leader in supporting essential research and promoting the use of methanol in zero-emission fuel cell vehicles.

The Methanol Institute is pleased to endorse H.R. 1864 and S. 760, the Clean Efficient Automobiles Resulting from Advanced Car Technologies Act of 2001 ("the CLEAR Act"), legislation introduced this year by Congressman Dave Camp (R–Michigan) and Senator Orrin Hatch (R–Utah). The CLEAR Act would help level the playing field between the cost of advanced technology vehicles and conventional vehicles by providing tax credits to consumers who purchase hybrid electric, fuel cell, battery electric, and dedicated alternative fuel vehicles. In addition, the bill would provide incentives for the development of an alternative fuels infrastructure. The bill places a limit on the duration of the tax credits, time enough to allow production numbers to increase to the point that the new technology vehicles become price competitive with conventional vehicles.

Among the primary benefits of this legislation are more energy independence and cleaner air. Transportation in the United States accounts for two-thirds of our oil consumption, and 97 percent of our transportation needs depend on foreign oil. If we are going to reduce our dependence on foreign oil and cut pollution, we must focus on conserving and diversifying our transportation fuels. By promoting the use of alternative fuels and the purchase of advanced car technologies, the CLEAR Act would play a key role in our nation's energy security. Every alternative fuel or advanced technology car, truck, or bus on the road will displace a conventional vehicle's lifetime of emissions and need for imported oil. The use of dedicated alternative fuel vehicles, methanol and other fuel cell electric vehicles, battery electric vehicles

and hybrids will have the added benefit of reducing greenhouse gases while providing consumers with increased choices.

The need to encourage the use of alternative technology vehicles has never been greater. Americans now drive more than 2.5 trillion miles annually and the collective odometer keeps rising. In 1998, 121 regions in our country failed to attain the Environmental Protection Agency's National Ambient Air Quality Standards. This status directly threatens the quality of life of more than 100 million of our citizens who must bear the health and economic burdens associated with non-attainment. With important programs such a California's Zero-Emission Vehicle mandate set for launch in 2003, consumers need to know that the government is interested in helping them reduce air pollution in their communities. The CLEAR Act will reduce the incremental costs to consumers to purchase cleaner vehicle technologies and help them become a part of the solution.

Historically, consumers have faced three basic obstacles to accepting the use of alternative fuels and advanced technologies. These are the cost of the vehicles, the cost of alternative fuels and the lack of infrastructure of alternative fueling stations. The CLEAR Act would lower all three of these barriers.

Specifically, the CLEAR Act would provide a tax credit of 50 cents per gasoline gallon equivalent for the purchase of alternative fuel, including methanol, at fuel stations. To ensure that consumers have better access to alternative fuel, the CLEAR Act extends until 2008 the existing $100,000 deduction for the capital costs of installing alternative fueling stations. The bill also provides a 50 percent credit for the installation costs of retail and residential fueling property, up to $30,000 and $1,000, respectively.

Furthermore, the CLEAR Act provides tax credits to consumers to purchase alternative fuel and advanced technology vehicles. The duration of the tax credits are limited to six years for qualified alternative fuel motor vehicles and ten years for fuel cell motor vehicles. To ensure that the tax benefit provided translates into a corresponding benefit to the environment, the fuel cell vehicle tax credit is split into two parts. First, a base tax credit of $4,000 is provided for the purchase of qualified fuel cell vehicles which may use any fuel, including methanol. A bonus credit of up to $4,000 is then provided based on the vehicle's fuel efficiency. In this way, the CLEAR Act provides the greatest impact in terms of providing a social benefit to our citizens.

The CLEAR Act is supported by a broad and diverse coalition including the alternative fuels industry, environmental groups, and automobile manufacturers. President Bush's National Energy Plan also endorses the concepts of the proposal.

The Methanol Institute believes that a comprehensive national energy strategy would not be complete without an incentive that promotes the use of alternative fuels and advanced car technologies. Accordingly, MI urges the Committee to give favorable consideration to the CLEAR Act as Congress continues to develop a comprehensive national energy strategy.

Statement of the Natural Gas Vehicle Coalition, Arlington, Virginia

This testimony is presented on behalf of the Natural Gas Vehicle Coalition the national trade association dedicated to promoting new markets for natural gas vehicles. As the voice of the natural gas vehicle industry we are pleased to endorse H.R. 1864 the Clean Efficient Automobiles Resulting from Advanced Car Technologies, CLEAR ACT, of 2001.

It is vitally important to increase the use of non-petroleum alternative motor fuels and advanced vehicle technologies, such as hybrid and fuel cell vehicles. Now is the time to take action. Today, there are more alternative fuel vehicle models in operation and available than ever before. Despite recent unique events, domestic natural gas and other alternative motor fuels are readily available. And state and local governments across the country are adopting legislative incentives.

However, despite all this, consumers continue to be hesitant to buy these vehicles because of the additional costs involved and in the case of alternative fuel vehicles, the lack of a fueling infrastructure. Congress can help by providing incentives that will reduce incremental costs and that spur alternative fuel infrastructure development. Fortunately both of these can be addressed by the prompt enactment of the CLEAR ACT that was introduced earlier this year by a number of distinguished members of this Committee, including Congressmen Dave Camp, Jim Ramstad, and Congresswoman Jennifer Dunn, and in the U.S. Senate by Senators Orrin Hatch, Jay Rockefeller, Jim Jeffords, John Kerry and Olympia Snowe. In addition, Presi-

dent Bush's National Energy Plan also endorses the concept of providing tax incentives to spur consumer acceptance of vehicles that reduce the use of foreign oil.

While we have made progress, much more has to be done at the national level if we are to significantly reduce this country's reliance on imported oil, improve our air quality and develop a sustainable transportation future. A sustainable transportation future is important to this country for two very important reasons. First, alternative fuel and other advanced technology vehicles help reduce our dependence on foreign oil. The US imports significantly more petroleum today than it did in 1992 when the Energy Policy Act was enacted. The recent oil curtailment by OPEC members demonstrates the serious consequences of even small disruptions in world oil supply. In 2000 alone, US consumers have spent almost $56 billion more on motor fuels than they did in 1999 because of OPEC's actions. Prices have remained high and the bill to American consumers and businesses for higher fuel prices will exceed the cost for last year. This is roughly 5 to 8 times as much revenue in one year as might be lost to the Treasury over the ten-year life of the CLEAR ACT. The only way to break free of our reliance on petroleum fuels is to increase the use of non-petroleum alternative fuels and improve the efficiency of gasoline and diesel vehicles.

The second way America benefits from increased use of alternative fuel, hybrid and fuel cell vehicles is the environment. Compared to comparable gasoline vehicles, alternative fuel, hybrid and fuel cell vehicles produce far less carbon monoxide, volatile organic compounds and nitrogen oxides. In addition, these vehicles produce significantly less greenhouse gases. For example, the Honda Civic GX, which is produced in Ohio, has the cleanest internal combustion engine in production today. A gasoline vehicle certified to just the minimum current federal standards emits nearly 194 times more pollution than the dedicated natural gas Honda Civic GX.

To ensure these energy security and environmental benefits, the CLEAR ACT breaks new ground in legislation that has the support of a major portion of the auto industry. The amount of the credit for hybrid and fuel cell vehicles is tied directly to their fuel efficiency. While there is a base level of credit for the technology, increases in the amount of the credit are based on how much improvement in fuel economy they provide.

For alternative fuel vehicles, there also is a base credit for vehicles that only can operate on alternative fuels. This credit can be increased if the vehicles meet the most stringent standards available for certification, standards that will not go into effect for many years to come. The performance-based approach of this legislation has earned it the support of many in the environmental community. We can think of no similar legislation that has the broad support the CLEAR ACT enjoys.

Today, automobile and engine manufacturers have available more makes and models of alternative fuel and hybrid vehicles than ever. Soon, we will see the fuel cell vehicles. But, we are not there yet. Demand for these vehicles must increase further if manufacturers are to benefit from the economies of scale that come from mass production. To give you just one example, Ford Motor Company manufactured over 100,000 Crown Victoria sedans last year. Of that total, only 1,000 were dedicated natural gas Crown Victorias. If production of natural gas or other alternative fuel models can reach critical mass, their cost will come down dramatically and that's why HR 1864 needs Congressional action this year.

The Natural Gas Vehicle Coalition is committed to working with the Committee and provides its most enthusiastic support. We urge the Committee to give favorable consideration to the CLEAR ACT and hope that there is an opportunity to move this legislation this year.

Statement of David B. Goldstein, Ph.D., Energy Program Co-Director, Natural Resources Defense Council, San Francisco, California

Mr. Chairman and Members of the Committee:

My name is David B. Goldstein and I am the Co-Director of the Energy Program for the Natural Resources Defense Council, a national environmental organization with over 500,000 members nationwide. I wish to thank you, Mr. Chairman, and members of the Committee, for convening this hearing on the role of energy efficiency and new technology in a national energy policy and for inviting me to speak.

Energy efficiency is a critical piece of any national energy strategy because of the impacts that energy use has on two things that everyone cares about: the environment and their pocketbooks. Energy use accounts for the overwhelming bulk of air pollution problems—problems that are linked to over 60,000 excess deaths per year

due to direct causes such as cardiopulmonary disease and is the main cause of global warming. Energy production also contributes to water pollution and loss of environmental values such as wildlife protection and recreation.

Energy also costs a lot of money, as virtually all consumers and businesses have become aware over the past year. Even before the recent jumps in energy price, our nation's energy bill exceeded half a trillion dollars a year [1]—or 6% of the gross domestic product (GDP). This is much higher than is the case in other industrialized countries, so energy is a competitive drag on the U.S. economy, in addition to harming household budgets and reducing the bottom line of energy-consuming businesses.

NRDC believes, and we hope members of the committee agree, that the primary purpose of a national energy policy should be to minimize the costs of energy services—both direct costs to consumers and costs to the environment—while providing reliably for the energy service needs of the growing economy.

Energy services deliver consumers warm buildings in the winter, good lighting in buildings, access to where people want to go in a comfortable manner, and production of consumer and industrial goods. The sole purpose of energy use is to provide energy services—no one enjoys energy use for its own sake.

Energy efficiency means providing the same or better energy services for less energy consumption and cost. Optimum levels of energy efficiency maximize the well being of consumers and businesses. In theory, the market encourages everyone to optimize energy efficiency. But in practice, an overwhelming array of market failures and market barriers has prevented the economically attractive level of energy efficiency from occurring naturally: after nearly 30 years of analysis of all sectors in the economy, there is overwhelming evidence that policy intervention is needed to optimize energy use.

How far can we go with energy efficiency? Prior to 1973, energy use was growing in parallel with economic output (GDP). Many analysts predicted that this trend would inevitably persist in the future, and numerous forecasts of future energy needs were made based on this premise. In fact, due to energy policy activities at the state, regional, and federal levels, and with some small boost from energy price spikes, energy use per unit of economic output began to decrease after 1973, and is now 42% lower than it was at the first energy crisis. About one half to three quarters of this decline is attributable to energy efficiency improvements.[2]

These large improvements in energy efficiency occurred in the face of inconsistent policy attention. During part of the last 30 years, federal policy did little to facilitate energy efficiency improvements. It therefore isn't surprising that additional improvements in energy efficiency beyond the national average occurred at the state level where strong policy efforts were expended. In California, electricity intensity, which was already 28% below the national average in 1975, had declined further to 46% below by 1998.[3] If this had not occurred, California's power shortages of the past two summers would have been far worse. But even in California, numerous opportunities to enhance energy efficiency were missed. Indeed, policy-driven funding for utility-sponsored efficiency programs caused some 1,000 megawatts (MW) of shortfall in the summer of 2000.

One of the best examples of how innovative policies have reduced demand for energy is refrigerators. In the mid-1970's, the refrigerator was the largest single user of electricity in the home, and aggregate use of electricity for home refrigerators was growing at an annual rate of 9.5%.

If this growth rate had continued up to the present, as DOE and most utilities and their state regulators predicted at the time, peak demand by refrigerators today would be about 150,000 MW. That's about one fourth of today's electric capacity for the nation.

Instead, as a result of state and federal energy policies, including research and development, economic incentives, and six iterations of efficiency standards, the actual level of peak demand will be about 15,000 MW when the refrigerator stock turns over. The difference between actual demand and forecast exceeds the capacity

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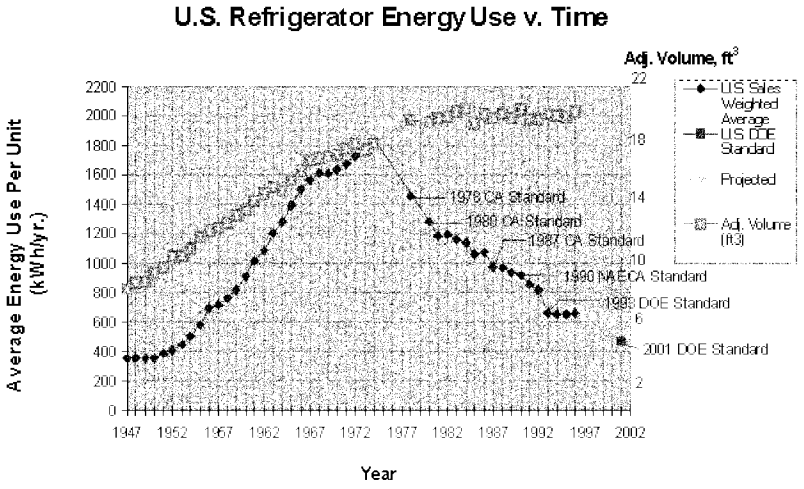
[1] Energy Information Administration's "Energy Overview" data for 1997 show $567 billion spent nationwide for energy, while GDP was about $8.5 billion.

[2] The American Council for an Energy Efficient Economy, Fact Sheet on Energy Efficiency Progress and Potential, 2001, estimates that three quarters of the improvement came from energy efficiency. The "National Energy Policy" report of Vice President Cheney claims that one half to two thirds of the improvement resulted from energy efficiency.

[3] Source: A.H. Rosenfeld. Testimony Before California State Committee on Environmental Quality.

of all U.S. nuclear power. Figure 1 shows the trend of growth and then decline in energy use per refrigerator after World War II.[4]

Figure 1



The most effective federal policies that have been implemented to improve energy efficiency are:

- Efficiency standards for major users of energy, such as buildings, appliances, equipment, and automobiles.
- Targeted incentives for more efficient technologies based on performance. These incentives have been administered primarily by utilities, although the state of Oregon has run a successful tax incentive program as well.
- Education and outreach on energy efficiency, although educational programs have worked best when performed in the context of financial incentive programs.

But these policies alone will not allow the nation to reach the goal of minimizing the cost of energy services. *Standards* provide a floor for energy efficiency—they require manufacturers to use efficiency technologies that are well known and well understood and therefore can be employed by everyone. *Incentive programs* can encourage more significant improvements in energy efficiency, but they typically have been limited by the range of technologies that are already available on the marketplace. New innovative ideas that are hard for consumers to find or that have yet to be introduced by manufacturers cannot easily be acquired by incentives established on a state-by-state or regional level.

Advanced levels of energy efficiency can only be achieved by making it worthwhile for manufacturers, vendors, retailers, and consumers all to benefit from the introduction of a new technology.

That's why incentives to transform markets so that they deliver advanced new energy efficiency technologies are so critical to a comprehensive national energy policy. These types of incentives, provided through the tax system, offer a key missing piece

[4] Exponential extrapolation of past trends was not an unrealistic assumption from either of two perspectives. First, in the mid-1970's, when the turnaround from growth to decline in energy consumption for refrigerators began, virtually every utility in the country, backed by their regulatory agencies and Department of Energy forecasters, was assuming that overall residential electricity use would continue to grow at about the same 9.5% rate as it had grown during the prior decades. The total growth in electricity consumption for refrigerators, considering increasing sales of the product, was also about 9.5%. Suggesting that this rate would come down in the future, as the author did, was highly controversial. Second, of the 6.1% annual growth in energy consumption per refrigerator, one-third of the increase was due to decreases in efficiency, apparently from cost-cutting, rather than from growth in size or features as shown in Figure 1 (both of which have tended to plateau since the 1970s).

of the solution to the problem of harnessing American ingenuity to improve energy efficiency.

Pending Energy Efficiency Legislation

What follows are several energy efficiency tax incentive bills that NRDC supports, and which would help promote a responsible energy strategy. This list is not exhaustive.

H.R. 778 provides tax incentives for energy efficiency in buildings and H.R. 1316 provides tax credits for energy efficiency appliances. Buildings are an often-overlooked source of energy waste. They consume over a third of U.S. energy use and account for about a third of total air pollution in the United States—almost twice as much as cars. Energy use in buildings can be cut in half or better using cost-effective technologies that are available to those consumers that are willing to look hard.

But in practice most of those technologies simply are not options for energy users, whether consumers or businesses, because they are too difficult to find. Economic incentives can cause the entire chain of production and consumption, from the manufacturer to the contractor or vendor to the consumer, to accept new technologies rapidly. In the few cases where utility programs have been consistent enough across the country and long-lasting enough, new products have been introduced that have become or will become the most common product in the marketplace, with reductions in energy use of 30%-60%.

Examples include:

• Refrigerators, where, as discussed previously, new products that are available this year consume less than a quarter of the energy of their smaller and less feature-laden counterparts 30 years ago. The last step forward, saving 30%, resulted from a coordinated incentive program, the Super Efficient Refrigerator Program (SERP), which was sponsored by utilities with the advice of the U.S. Environmental Protection Agency.

• Clothes washers, where some 10% of the market now provides cleaner clothes at a reduction in energy use of 60% or more. This gain in efficiency resulted from a program organized by the Consortium for Energy Efficiency (CEE) and supported by Energy Star. New standards adopted by the Department of Energy—and supported by the manufacturers—will bring all of the market to this level by 2007.

• Fluorescent lighting systems, where new technologies that also will be required by manufacturer-supported federal standards, will reduce lighting energy consumption by 30% compared to mid-70's practice while improving the performance of the lighting system.

The policies embodied in H.R. 778 and H.R. 1316 are built on success stories like these.

Manufacturers have pointed out that in order to introduce new technologies that cost more and that are perceived to be risky, they need the assurance that the same product can be sold throughout the country, and that the financial incentives will be available for enough time to make it worth investing in production. H.R. 778 does this by providing nationally uniform performance targets for buildings and equipment that will be eligible for tax incentives for six full years.

H.R. 778 focuses its incentives at the largest energy uses within both commercial and residential buildings, as well as public buildings. These incentives focus on reductions in heating, cooling, lighting, and water heating, by far the largest users of energy. If all new buildings met the thresholds for qualification for the tax incentives in H.R. 778, the nation could cut energy use and air pollution by 6% over the next 10 years, equivalent to taking 40% of the nation's cars off the road. The economic benefits of this pollution reduction would exceed $100 billion. This large benefit to both the environment and the economy is why the nation's largest public interest environmental organizations have made passage of H.R. 778 their top priority.

The benefits of H.R. 1316 extend only to refrigerators and water heaters, so they are proportionately much smaller. On the other hand, the impact on the Treasury is also smaller.

When the public interest community first began discussions on this issue over a year ago, we felt that the approach that has been embodied into these bills was simply good economic and environmental policy: a government action that could promote economic growth and protect the environment at the same time. Subsequently, we have seen how these bills could be the major part of a solution to some very real economic and environmental problems associated with energy that have emerged over the past two years.

Let's start with the problem of electric reliability. Not only in California and the West, but in New Hampshire as well, we are facing the risk of electrical blackouts

and/or excessively high electricity prices this summer and next. Regions that are confronting these problems are trying to move forward aggressively both on energy efficiency programs and on power plant construction. But the lead times for most actions on the supply side are far too long to provide a solution. And demand-side approaches attempted on a state-by-state level are much less effective than coordinated national activities.

Here, H.R. 778 could be a critical piece of a national solution. Air conditioners, for example, represent about 30% of summertime peak electric loads. Air conditioners that use a third less power can be purchased today, but they are not produced in large enough quantities to make a difference to peak load. If incentives are made available, manufacturers could begin to mass-produce these products in a matter of months, not years. Mass production and increased competition for tax incentives will drive prices sharply lower, so the incentives will be self-sustaining in the long-term. And with 5 million air conditioners being sold every year, a sudden increase in energy efficiency could have a significant effect in balancing electricity supply and demand even after less than a year.

Another peak power efficiency measure with a very short lead time is installing energy-efficient lighting systems—either new or retrofit—in commercial buildings. Some 15% of electrical peak power results from lighting in commercial buildings. Efficient installations, such as those NRDC designed and installed in our own four offices, can cut peak power demand by over two-thirds while improving lighting quality. Lighting systems are designed and installed with a lead time of months, so incentives for efficient lightings as provided in H.R. 778 could begin to mitigate electric reliability problems as soon as next summer.

The second major new problem is the skyrocketing cost of natural gas, which caused heating bills throughout the country to increase last winter. Improved energy efficiency can cut gas use for the major uses—heating and water heating—by 30%–50%. Much of this potential could be achieved in the short term, because water heaters need replacement about every ten years, and are the second largest user of natural gas in a typical household (and largest gas user in households living in efficient homes or in warm areas).

Clothes washers also turn over about every 15 years, and efficient clothes washers save natural gas by reducing the amount of hot water needed to get clothes clean and reducing the amount of time they must spend in the dryer.

These types of quick-acting incentives help consumers in two different ways: first, they provide new choices that are not now available in practice for families and businesses that want to cut their own energy costs while obtaining tax relief. But they also help the non-participants, because reduced demand cuts prices for everyone.

Finally, NRDC supports tax incentives for hybrid vehicles as embodied in H.R. 1864, the "Clean Efficient Automobiles Resulting from Advanced Technologies" bill. This bill would help save energy through improved vehicle fuel efficiency. Saving energy through fuel efficiency is cleaner, cheaper, and faster than increasing petroleum supply. The CLEAR bill promotes this goal by linking the amount of the tax credit it offers in part to the actual fuel economy of the qualifying vehicle. This is a major advance over previous vehicle tax proposals, and NRDC strongly supports this legislation.

A comprehensive energy policy aimed at minimizing the cost and environmental impacts of providing energy services for a growing economy should, we believe, be a consensus goal. While we do not yet know what the full set of measures that would be contained in a national energy plan based on least-cost are, and thus do not yet know the full range of policy measures that would be needed to achieve such a vision, it is evident that energy efficiency will play a more important role in the next 30 years, as it has in the past 30 when it was the nation's largest source of new energy.

We also know that today's energy efficiency policies, relying primarily on efficiency regulations at the state and federal levels and on regionally-based economic incentives, are not sufficient to achieve the least-cost goal. At least one missing piece of the policy mix is the provision of long-term, nationally-uniform incentives for quantum leaps forward in technology.

H.R. 778, H.R. 1316, and H.R. 1864 fill this gap for energy uses exceeding a third of the nation's entire energy consumption, and an even higher fraction of its energy bill.

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

Statement of Power Ahead

I. Power Ahead

Power Ahead is a coalition of electricity transmission owners and transmission equipment manufacturers from across the country. The coalition is dedicated to promoting the expansion, enhancement, and reliability of North America's electrical transmission system. *Power Ahead* is working to ensure that there is sufficient transmission capacity to deliver the electricity that America generates to the regions in which it is needed.

II. The Need for Additional Investments in Transmission Capacity

New investment in transmission capacity has not grown as quickly as use of the transmission system, and projections for the future indicate little planned growth in transmission investment. The lack of new transmission investment threatens to impair the reliability of our electric power networks and to impede progress toward competition in electric power markets.

Recent changes in electric markets in which more electric generators are independent from transmission and distribution companies require more electric transmission infrastructure to allow multiple generators access to each market and thereby to increase competition. While this problem is most apparent in California, transmission capacity lags behind consumption in all regions of the country, and many needed transmission facilities in each region have not been built.

Tax and regulatory disincentives are a major reason for under-investment in transmission. Private companies that build transmission facilities are subject to federal regulation, and these companies will only invest if they have reasonable expectations of adequate profits. An important component of these expectations is the tax treatment of investments in transmission. While there has been much discussion about the growth in profits for independent power producers, the situation is vastly different for transmission owners.

Allowing transmission owners the opportunity to earn higher returns on their investments can actually *reduce* consumers' total costs for power by encouraging investments to expand transmission capacity. Increased transmission capacity will allow more power generators to serve power markets, thus increasing competition among generators and leading to lower rates. Electric transmission costs are a small portion of the total delivered cost of electricity and are far outweighed by costs of generation. While creating regional transmission organizations ("RTOs") and making other regulatory changes are important for improving electric markets, only clear, legislatively mandated tax and regulatory incentives for transmission investment and improved use of existing capacity will ensure that we have the transmission infrastructure we need.

Power Ahead advocates measures designed to increase investment in transmission infrastructure and improve use of existing infrastructure by enhancing the expected returns from such investments.

III. A Growing Chorus of Voices Identifies Transmission Capacity as Key to Reliable and Cost-Effective Electric Power

A. In California . . .

• "[A]n **antiquated and inadequate transmission grid prevents us from routing electricity over long distances** and thereby avoiding regional blackouts, such as California's." *National Energy Policy: Report of the National Energy Policy Development Group,* May 2001.

• "[T]he **real solution to California's problems lies in increased investments in infrastructure** . . . the increased reliance of regions within California and the rest of the West on widely dispersed resources to provide peak needs over the past several years has revealed **significant needs for transmission expansion and investment.**" FERC, *Notice Of Opportunity For Comment On Staff Recommendation On Prospective Market Monitoring And Mitigation For The California Wholesale Electric Market,* Docket No. EL00–95–012, March 9, 2001.

• "We need to not only increase electricity generation by building new plants in under-served states like California, **we need to also build the transmission facilities that will create a reliable electrical grid.**" House Majority Whip Tom Delay (R–TX), Testimony before the House Energy and Commerce Committee, March 6, 2001.

• "As a complement to the vital initiative of increasing generation supply, **we focus today on where we believe this Commission can have the greatest im-**

pact—fostering the installation of critical transmission investment." FERC, *Order Removing Obstacles To Increased Electric Generation And Natural Gas Supply In The Western United States And Requesting Comments On Further Actions To Increase Energy Supply And Decrease Energy Consumption,* Docket No. EL01–47–000, March 14, 2001.

B. And Elsewhere . . .

• "[The] shortage [in transmission capacity] could lead to **serious transmission congestion and reliability problems**. . . . There is a **need to ensure that transmission rates create incentives for adequate investment in the transmission system**. . . ." *National Energy Policy: Report of the National Energy Policy Development Group,* May 2001.

• "While attention is focused today on California's blackouts and the harm that soaring natural gas and electric prices have had on the economies of neighboring states, Abraham said **New York State, too, needs to ratchet up its electric transmission capacity** to handle rising demand." Energy Secretary Spencer Abraham, quoted in *Energy Secretary Encourages Investment,* AP Online, March 21, 2001.

• "Since the start of electric power restructuring in earnest in the early **1990s the level of new investment in the transmission sector has lagged behind the growth in consumer electricity demand.**" PA Consulting Group, *The Future of Electric Transmission in the United States,* January 2001.

• "[E]lectric grid managers **[need] to step up efforts to add new transmission capacity in the state (Massachusetts) and region** to help curb soaring electric costs." Massachusetts Attorney General Thomas F. Reilly, quoted in Peter J. Howe and Rick Klein, *AG Urges Boost in Power Grid Capacity Says Regional Upgrades of Transmission Systems Would Curb Electric Rates,* The Boston Globe, January 10, 2001.

• "**Concern about transmission capacity has reached a fevered pitch in the electric industry** in recent months. And in truth, if the nation's electric transmission network continues as it has, failing to expand enough to keep pace with growth in demand for electricity, then within a few years today's problems could become a crisis." *Transmission Crisis Looming? Eric Hirst, Separating Hype From Fact; Hard Numbers and Hopeful Projections on the Adequacy of the Electric Grid,* Public Utilities Fortnightly, September 15, 2000.

In keeping with the focus of this hearing, our testimony focuses on eliminating tax disincentives to restructuring the electricity transmission industry and to certain new investments and providing limited incentives for new transmission investment.

IV. Key Tax Issues for Transmission Under Current Law

The Committee has heard testimony on a number of tax issues relevant to transmission. What follows are some details regarding two of the most important issues faced by transmission owners today.

A. FERC Wants to Separate Ownership of Transmission and Generation, But, Under Current Tax Law, Separation Can Create Huge Tax Liabilities

FERC's policy has been to encourage the formation of regional transmission organizations or separate transmission companies ("transcos") to separate operating control of transmission and generation assets. Under current tax law, however, it is very difficult for vertically integrated providers to separate transmission from generation without triggering large tax liabilities on the assets they sell. Thus, even when utilities would like to spin-off or sell their transmission assets, they are either constrained from doing so or forced to restructure their assets in ways that lead to other business problems.

One Power Ahead member, an independent transmission owner, had to be structured as a limited liability company ("LLC") to avoid current tax on the separation of generation from transmission that led to its formation. As a practical matter, the LLC structure discourages growth through the addition of transmission facilities from other utilities because it is difficult to acquire transmission assets in exchange for LLC membership interests. Moreover, the LLC structure makes access to the equity capital markets cumbersome.

B. The IRS Has Not Modernized Its Administration of Section 118 to Reflect New Realities in the Power Markets

Section 118(b) requires the inclusion in income of "contributions in aid of construction" ("CIAC") that are made to encourage utilities to **sell** power to a customer. Section 118, however, does not treat payments made to encourage utilities to **pur-**

chase power from co-generation facilities as taxable CIAC. The IRS recognized this crucial distinction in its Notice 88–129, stating as follows:

> "In a CIAC transaction the purpose of the contribution of property to the utility is to facilitate the sale of power by the utility to a customer. In contrast, the purpose of the contribution by a Qualifying Facility to a utility is to permit the sale of power by the Qualifying Facility to the utility. Accordingly, the fact that the 1986 amendments to Code section 118(b) render CIAC transactions taxable to the utility does not require a similar conclusion with respect to transfers from Qualifying Facilities to utilities."

Notice 88–129, 1988–2 C.B. 541 (Dec. 12, 1988).

The Notice sets forth six criteria that must be met to report the transaction as non-taxable under a "safe harbor" rule.[1] Unfortunately, the Notice excludes from its safe harbor provisions many current transactions that meet the intent of Section 118 merely because the generation facilities being connected to the grid are not "qualifying facilities" ("QFs") under the Public Utility Regulatory Policies Act of 1978. (Following the restructuring of the industry, most generators seeking interconnections to sell power across the grid are not QFs.) Moreover, although some of the other Notice 88–129 criteria—notably, the requirement that the contract last for at least ten years—are not practicable in restructured power markets, the IRS has not updated the Notice to account for the restructuring of the industry.

Compounding this problem, last year, the IRS stopped issuing private letter rulings confirming the non-taxable status of transactions that meet most—but not all—of the Notice 88–129 criteria,[2] and informal approaches to the IRS National Office have yielded no guidance regarding current market transactions. As a result, utilities have felt compelled to pay the CIAC tax on transactions that clearly meet the Congressional policy of facilitating sales by customers to the grid solely because the IRS no longer will rule on such transactions.

Finally, under current law, even if transactions are treated as nontaxable contributions to capital, that status might not extend to recipients, such as LLCs, that are not corporations. That nontaxable status derives from Section 118(a)'s nontaxable treatment of contributions to the capital of a **corporation.** Thus, if a non-corporate entity receives otherwise nontaxable CIAC, the CIAC might not be considered a contribution to the capital of a corporation and, accordingly, would be taxable to the non-corporate recipient. Correction of this disparity in treatment of CIAC by corporate and non-corporate entities is important for transmission companies as some are forced to adopt a non-corporate structure for other tax reasons.

V. Proposals

Power Ahead proposes that Congress should address the tax disincentives to transmission investment and provide limited tax incentives for new transmission investments. Among the items Congress should consider are the following:

A. Amend Section 1033 to defer tax on sales of transmission facilities made to facilitate FERC policies on separating generation and transmission

Because FERC's RTO policy makes dispositions of transmission facilities essentially involuntary, it is appropriate to treat such sales as involuntary conversions under Section 1033. This would allow utilities to defer tax on the separation of transmission and generation assets, provided that the proceeds of such sales are reinvested within the industry.

There are precedents for extending such treatment to sales made to further Federal policy with respect to an industry. For example, Section 1033(c) provides that sales of acreage made to comply with limitations in Federal reclamation laws shall be treated as involuntary conversions. Similarly, Congress allowed the telecommunications industry a window in which to treat certain spectrum sales as involuntary conversions when those sales were made to comply with the FCC's microwave relo-

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[1] The six criteria include that (1) the generator making the transfer of property is a QF, (2) the transfer is made either exclusively for the sale of electricity by the QF to the utility grid or for a dual-use interconnection where 5% or less of the expected total power flows are sales to the QF; (3) the construction cost is not included in the utility's rate base; (4) the utility and the QF have entered into a power purchase contract of ten years or longer; (5) no disqualifying event (*e.g.*, a violation of the 5% limit in item #2, above) has occurred; and (6) the utility company does not depreciate or amortize any interconnection property unless or until it becomes a taxable CIAC transaction.

[2] Notably, the IRS used to issue private letter rulings confirming the non-taxable status of interconnections that were "analogous" to QFs. *See*, *e.g.*, PLR 9648030 (Aug. 29, 1996); PLR 9540016 (June 30, 1995); PLR 9443019 (July 22, 1994); PLR 9420012 (Feb. 15, 1994); PLR 9211030 (Dec. 16, 1991).

cation policy. *See* Section 1033(j). We believe that FERC's policies regarding restructuring the electric industry raise similar issues and should be accommodated through tax policy.

Similar provisions are included in H.R. 1459.[3]

B. Ensure that payments made by generators to utilities to make necessary interconnections and upgrades are not taxable CIAC to the utilities

At a minimum, Congress should clarify the policy behind Section 118 so that the IRS will not tax CIAC transactions that connect new sources of generation to the grid. This could be accomplished by updating and codifying the criteria set forth in Notice 88–129 or by directing the IRS to issue regulations. In addition, Congress should confirm that this nontaxable treatment extends to both corporate and noncorporate taxpayers.

Similar provisions are included in H.R. 1459 and S. 389.[4]

C. A 10% tax credit, modeled on the existing solar/geothermal credit, for new qualified investments

As part of a balanced energy policy and considering that current law offers credits as incentives for certain forms of generating capacity, we believe it is appropriate to offer credits as incentives for new investments in transmission capacity that will deliver generated energy where it is needed and enhance competition in the wholesale electricity market.

D. Seven-year depreciation with language clarifying that such treatment is not a "tax preference" subject to the AMT

Under current law, transmission assets are depreciated over relatively lengthy periods—20 years in most cases. In an era of rapid technological change, such lengthy depreciation periods may no longer be appropriate. Moreover, allowing faster depreciation would improve the after-tax returns on new investments in transmission capacity and make such investments more attractive.

Similar provisions are included in H.R. 2108,[5] S. 389, and S. 596.[6]

E. Clarifying that the R&D tax credit is available for long-term research and development to improve the efficiency of transmission

As part of an overall look at the research and development tax credit rules of Section 41, we urge Congress to clarify that the credit is available for research to improve the efficiency of transmission. Such research has great potential for expanding the capacity of the existing transmission grid and should be encouraged as part of a balanced energy policy.

F. "Savings clauses" so that intended tax incentives are not taken away by public utility commissions in the rate-setting process

Finally, we believe that any tax provision enacted by Congress should be structured to ensure that the benefits of those provisions are not taken into account by state public utility commissions in the rate-setting process. A similar approach was taken by Congress to ensure that utilities reaped the benefits of accelerated depreciation.

Congress can make a real difference to the Nation's energy situation by reducing roadblocks to transmission investment. The *Power Ahead* proposals can make a difference quickly and spur new investment in transmission capacity.

APPENDIX: POWER AHEAD MEMBERS

Alstom Corporation
American Transmission Company LLC
PacifiCorp
Pepco
Xcel Corporation

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[3] 3. H.R. 1459, the Electric Power Industry Modernization Tax Act, was introduced by Representative Hayworth on April 4, 2001.

[4] S. 389, the National Energy Security Act of 2001, was introduced by Senator Murkowski on February 26, 2001.

[5] H.R. 2108, the Energy Security and Tax Incentive Policy Act of 2001, was introduced by Representative Matsui on June 7, 2001.

[6] S. 596, the Energy Security and Tax Incentive Policy Act, was introduced by Senator Bingaman on March 22, 2001.

SOLID WASTE ASSOCIATION OF NORTH AMERICA
Silver Spring, Maryland 20910
June 19, 2001

The Honorable JIM MCCRERY
Chairman
Subcommittee on Select Revenue Measures
House Committee on Ways and Means
United States House of Representatives
Washington, DC 20515

Dear Congressman McCrery:

Statement of the Solid Waste Association of North America
to the Subcommittee on Select Revenue Measures
of the House Committee on Ways and Means

for the Record of the

June 13, 2001 Hearing on the Effect of Federal Tax Laws on the Production, Supply and Conservation of Energy

On behalf of the Solid Waste Association of North America (SWANA), I appreciate the opportunity to submit this written statement for the record of the Subcommittee's hearing on current tax incentives and their role in the nation's energy policy. SWANA would like to commend you, and the members of your Subcommittee, for holding this timely hearing in light of the critical efforts of the Bush Administration and this Congress to develop sound energy policies to allow our nation to maintain its economic vitality and self-sufficiency. The association urges the Subcommittee to support HR 1863, which would amend the I.R.C. Section 45 tax credit so it is available for landfill gas-to-energy projects. Like the expired I.R.C. Section 29 nonconventional fuel production credit did, an amended Section 45 can encourage the solid waste management industry to produce energy as an adjunct to its handling of the millions of tons of municipal solid waste (MSW) generated by the country's households and businesses.

SWANA and MSW as a Source of Energy

SWANA, an association of over 6700 solid waste management professionals, companies and government agencies in the United States and Canada, has as its mission the advancement of environmentally and economically sound solid waste management policies and practices. The association has long recognized that development of energy from municipal solid waste can be done reliably, while resulting in more efficient solid waste management, resource recovery, cleaner air quality, and reduced potential for global climate change. Accordingly, SWANA has advocated the two types of energy production that are identified with solid waste management: (i) projects which directly combust MSW to produce electricity, also known as waste-to-energy (WTE) projects, and (ii) projects that collect landfill gas, naturally generated at a landfill as the waste decomposes, and utilize the gas as a fuel either to produce electricity or to supplement local natural gas supplies, known as LFG-to-energy projects or simply "LFG projects."

Currently, WTE projects and LFG projects provide energy to over 2 million homes and businesses. Both are an energy resource that is sustainable, diverse, environmentally positive and local and provide a multitude of benefits that are unique among renewables. WTE and LFG projects together have the potential to generate a significant portion of the nation's electricity as further technological innovations are developed and public appreciation of their benefits grows. SWANA continues to believe that federal policies should be adopted to encourage our nation to diversify energy production against risks of an uncertain future and to continue to develop supplements to fossil fuel generation. Providing tax incentives for WTE and LFG project development are clear examples of such federal policies.

Landfill Gas to Energy Projects and the Section 29 Tax Credit

Benefits of LFG Projects

A medium sized landfill can generate more than 300 billion BTUs of methane gas a year, which, if converted to electricity, could annually provide 3.0 MWs of capacity, enough to serve the yearly electrical needs of 3000 households. Projects at larger landfills have generated as much as 50 MWs of electric power. Typically, LFG-to-electricity projects are located in urban areas allowing them to serve as distributed

power sources to help improve the reliability of the region's power grid. The methane gas could also be used *directly* as a supplement to natural gas supplies. Existing "direct gas-use" LFG projects are providing the gas for commercial heating, as boiler fuel at industrial installations, as an alternative fuel for various vehicle fleets, and, recently, as a hydrogen source for fuel cells. Many of the "direct gas-use" LFG projects are dispersed in the urban centers of our nation and provide a viable back up to local natural gas supplies.

LFG projects provide society with several "external benefits" in addition to the domestic energy supply. Specifically, if not controlled and flared, LFG can pose a fire hazard, is odorous, impairs local air quality, and would add, for each ton of methane emitted, an equivalent of 21 tons of CO_2 into the global atmosphere. Consequently, each of these impacts is eliminated when a LFG project is constructed and operated.

Section 29 Tax Credit

The tax credit for the production of nonconventional fuels provided under Section 29 has been the key impetus for the solid waste management industry constructing and operating more than 300 LFG projects around the country. Under Section 29, taxpayers that produce certain qualifying fuels from nonconventional sources, including "gas from biomass," are eligible for a tax credit until 2008 (or 2003 if the project was installed before 1993) equal to $3 per barrel or barrel-of-oil equivalent (adjusted for inflation) as long as the gas is sold as a fuel to an unrelated party. The tax credit provided the incentive to make LFG projects economically feasible. However, since June 30, 1998, the deadline under Section 29 by which LFG projects must be "placed in service" to qualify for the credit, no new LFG projects have been planned and constructed.

For reasons unrelated to LFG projects, Congress to date has not extended the Section 29 tax credit. Unfortunately, without the continued availability of the Section 29 tax credit, private investors have been reluctant to undertake development of new LFG projects at more than 700 additional landfills identified by the Environmental Protection Agency as producing sufficient volumes of LFG. Consequently, the nation faces the real loss of a valuable domestic and renewable energy resource, the recovery of which is simple, proven and has no negative impact on the environment.

President Bush's National Energy Policy (NEP) recognizes the contribution that LFG projects can make in addressing the nation's current energy shortfalls. The NEP specifically recommends that "the Secretary of the Treasury. . . work with Congress on legislation to expand the section 29 tax credit to make it available for new landfill methane projects."

The Section 45 Tax Credit

Section 45 currently provides a 1.5¢/kw-hr tax credit for electricity generated by wind, closed-loop biomass (organic material from a plant that is planted exclusively for purposes of being used to generate electricity) or poultry waste. The tax credit is provided for the first 10 years of production if such electricity is sold to an unrelated party. In response to Congress' past unwillingness to extend the Section 29 tax credit, SWANA and the landfill gas industry have targeted Section 45 as a possible substitute.

Ironically, several pieces of legislation were introduced during the 105th and 106th Sessions of Congress amending Section 45 to add additional renewable energy sources as qualified fuels that expressly excluded MSW and LFG. SWANA strongly believes that any recommendation to include tax credits for encouraging renewable energy development as part of our nation's energy policy should ensure that tax incentives are provided on a "renewable source neutral" basis. A free market government should not pick winners and losers among renewable energy sources. Accordingly, landfill gas and waste to energy projects should not be placed at a disadvantage in the energy policy.

Congressman Dave Camp has introduced HR 1863, legislation which would duplicate the incentive provided by Section 29 by making both LFG-to-electricity projects and LFG-"direct gas-use" projects "qualified facilities" under Section 45. In the case of these latter type of projects where the gas is sold for direct use, the 1.5¢/kw-hr tax credit is applied to the "kilowatt-hour equivalents" contained in the particular volume of gas calculated on a 10,000 BTU per kilowatt-hour basis. HR 1863 is intended to compliment bills introduced by other House Members each of who would add a specific renewable energy resource as a qualified fuel under Section 45. SWANA urges the Subcommittee to act on these bills and to do so in a "renewable source neutral" manner.

The "renewable source neutral" approach has been embraced by Senator Frank Murkowski in his recently introduced S. 389, the National Energy Security Act of 2001. That bill, among its many other provisions, contains a provision similar to

that contained in HR 1863 providing the Section 45 tax credit to both electricity generating and "direct gas-use" LFG projects. S. 389, however, also amends Section 45 by adding other renewables as qualified fuels, including MSW, and extends the placed-in-service windows for projects generating electricity from these renewable sources. The Energy Security Tax Incentive Act of 2001, S. 596, introduced by Senator Jeff Bingaman, also expands the list of qualified fuels in Section 45 to include landfill gas and MSW. S. 596, however, only provides the Section 45 tax credit to LFG-to-electricity projects and not "direct gas-use" projects. About one-third of the 300 existing LFG projects and about one-third of the 700 potentially new LFG projects are "direct gas-use" projects. Accordingly, unless the Section 45 tax credit is provided to both types of LFG projects, approximately 233 "direct gas-use" LFG projects would not be built for lack of a tax credit and the nation would lose a valuable fuel source.

Conclusion

The Subcommittee has an opportunity to significantly impact the development of a new energy policy for the nation. Use of the tax code to encourage energy-related private investment is justified by the compelling energy security, economic and environmental concerns facing our nation currently and in the foreseeable future. Specifically, a tax incentive for energy production through the combustion of MSW or the utilization of LFG would allow the nation to not only benefit from increased domestic energy supplies, but to also realize the many consequent environmental and resource conservation benefits. SWANA urges the Subcommittee to support the tax credit provision for LFG projects contained in HR 1863. An extension of the Section 29 tax credit for LFG projects is certainly another alternative. In any case, it is important that a tax credit be available to both LFG projects producing electricity *and* LFG projects providing the gas for direct use. In addition, SWANA urges the Subcommittee to support adding waste-to-energy projects that combust MSW to generate electricity as qualified facilities under Section 45. I appreciate very much this opportunity to present SWANA's views.

Sincerely,

JOHN H. SKINNER, PH.D.,
Executive Director and CEO.

cc: All Members of the House Subcommittee on Select Revenue Measures

Statement of the United Technologies Corporation

United Technologies Corporation (UTC) is based in Hartford, Connecticut and provides a broad range of high-technology products and support services to the building systems and aerospace industries. Our products include Carrier air conditioners, Otis elevators and escalators, Pratt & Whitney jet engines, Sikorsky helicopters, Hamilton Sundstrand aerospace systems and fuel cells by International Fuel Cells.

As the House Ways & Means Committee and its Subcommittee on Select Revenue Measures consider tax policy initiatives that would encourage energy efficiency and conservation, UTC would like to recommend several actions that would accelerate deployment of clean, energy-efficient technology. UTC supports tax credits for fuel cells in general and specifically endorses H.R. 1275, introduced by Rep. Nancy Johnson (R–CT) and Rep. Michael McNulty (D–NY), and its companion measure S. 828 sponsored by Senator Joseph Lieberman (D–CT) and Senator Olympia Snowe (R–ME). These bills propose adoption of a five-year, $1,000 per kilowatt stationary fuel cell tax credit that would accelerate the commercialization of fuel cell technology.

Tax credits for mobile fuel cell applications also have been the subject of various legislative proposals and recommended in President Bush's National Energy Policy. As fuel cell vehicles become commercially available, United Technologies supports the use of tax incentives to accelerate their deployment.

UTC also endorses a change in the depreciation schedule for large commercial chillers that would generate significant energy savings. In addition, we support tax incentives for residential air conditioners that reflect both the energy efficiency as well as non-ozone depleting characteristics of the equipment.

UTC spends an average of $1 billion per year on research and development. Our corporate environment, health and safety policy includes commitments to conserve natural resources in the design, manufacture, use and disposal of products and the delivery of services; and develop technologies and methods to assure safe workplaces and to protect the environment worldwide. UTC has invested heavily in bringing clean, energy-efficient technology to the global marketplace. Working together with

Congress and the Administration, we can maximize the benefits of these innovative technologies through a variety of measures, including the use of tax incentives and changes to the depreciation schedule.

FUEL CELL DESCRIPTION

Fuel cells are the cleanest, fossil-fuel generating technology available today. They use an electrochemical process to convert chemical energy directly from natural gas or other hydrogen-rich fuel sources into electricity and hot water at a very high level of efficiency.

REALITY OF FUEL CELLS

Fuel cells are not a futuristic dream. More than 250 U.S. astronauts have depended on UTC's fuel cell products to provide all the electrical power and drinking water used in every manned U. S. space mission since 1966. Each space shuttle mission carries three IFC 12 kW fuel cell units and we have accumulated more than 81,000 hours of fuel cell operating experience in the most demanding environment of all—outer space.

Closer to home, IFC has produced and sold more than 220 fuel cell systems in 16 countries on five continents. We're the only company in the world with a commercial fuel cell product available today. It's known as the PC25a fuel cell power plant and it produces 200 kWs of power and 900,000 BTUs of heat per hour. Each unit provides enough power for roughly 150 homes. The worldwide fleet of PC25s has accumulated more than four million hours of operating experience with proven reliability. The PC25 system requires only routine maintenance and has a life of 40,000 hours or five years before a major overhaul is required.

RATIONALE FOR FUEL CELL TAX CREDIT

Deployment of fuel cell technology will generate environmental benefits, provide a reliable source of power for homeowners and businesses, reduce dependence on foreign oil supplies, help commercialize clean technology, enhance U.S. technological leadership and create economic benefits for the nation. Enactment of a fuel cell tax credit will help accelerate the deployment of fuel cell technology and make its many benefits available more quickly and more broadly. By acting now, the U.S. can continue to maintain its technology leadership, generating high-skill jobs and creating opportunities for economic growth and exports in the process. It should be noted that 56% of the PC25s sold to date have gone to foreign customers.

ENVIRONMENTAL BENEFITS

Since fuel cells operate without combustion, they are virtually pollution-free. In addition, they produce significantly lower levels of carbon dioxide emissions, the primary man-made greenhouse gas that contributes to climate change. For example, while the average fossil fuel generating station produces as much as 25 pounds of pollutants to generate 1,000 kilowatt-hours of electricity, the PC25 power plant produces less than an ounce.

The existing fleet of PC25s has already prevented nearly 800 million pounds of CO_2 emissions and more than 14.5 million pounds of NO_x and SO_x compared with typical U.S. combustion-based power plants. The U.S. Environmental Protection Agency recognized IFC last year with a Climate Protection Award in recognition of these accomplishments.

EFFICIENT SOURCE OF POWER

Fuel cells are inherently more efficient than combustion-based systems. In the "electricity-only" mode of operation, IFC's PC25 unit achieves approximately 40% efficiency. When the waste heat from the fuel cell is utilized, an efficiency of 87% can be achieved. In addition, fuel cells can be installed at the point of use, thus eliminating transmission line losses that can run as high as 15%.

MINIMAL IMPACT ON GRID

Fuel cells can provide power at the point of use, thereby alleviating the load on the existing transmission and distribution infrastructure, and eliminating or minimizing the need for additional investment in the current transmission and distribution network.

ENERGY SECURITY

The use of fuel cells helps to diversify the energy market and reduce reliance on imported oil. Fuel cells can operate with a variety of fuel sources, but most commonly use natural gas.

CONTINUOUS SOURCE OF BASE POWER

Unlike other environmentally favorable solutions, fuel cells can be used as continuous sources of base power – independent of time-of-day or weather—for critical facilities and power requirements.

IDEAL NEIGHBOR

Its compact size, quiet operation and near-zero emissions allow a fuel cell system such as the PC25 to be sited easily in communities and neighborhoods. Unlike many other forms of power generation, fuel cell power plants are good neighbors. For example, two PC25s are located *inside* the Conde Nast skyscraper at Four Times Square in New York City.

DISTRIBUTED GENERATION

Fuel cell power plants offer a solution when power is needed on-site, or when distribution line upgrades become cost-prohibitive and/or environmentally unattractive. For example, a PC25 installed at the Central Park Police Station in New York City provides all the power for the facility in an onsite installation. In this case, it would have been too expensive to dig up Central Park and install an additional power line, so the fuel cell became the ideal solution for an operation that required a dedicated, reliable power supply and flexible sitting.

EMERGENCY POWER

Several hospitals in the U.S., including Department of Defense facilities, rely on PC25 systems to provide on-line emergency power. In Rhode Island, for example, a PC25 system provides power for the South County Hospital. The installation supplies base load electrical and thermal energy to the hospital and helps ensure clean, reliable power for sensitive medical equipment and systems such as CAT scanners, monitors, analyzers and laboratory test equipment. If there is a grid outage, the PC25 automatically operates as an independent system, continuing to power critical loads at the hospital. Heat from the installation provides energy for space heating, increasing the fuel cell's overall efficiency.

GRID SUPPORT

The largest commercial fuel cell system in the world is currently operating at a U.S. Postal Service facility in Anchorage, Alaska. The system provides one megawatt of clean, reliable fuel cell power by joining five PC25 units. In this installation, the units operate in parallel to the grid and are owned and operated by the local utility. The system is seen as a single, one-megawatt generation asset and is dispatched by the utility through its standard dispatch system. The system is designed so the fuel cells can provide power either to the U.S. Postal Service mail-processing center or to the grid. In case the grid fails, a nearly instantaneous switching system automatically disconnects the grid and allows the fuel cells to provide uninterrupted power.

ASSURED, RELIABLE POWER

As our society increases its reliance on sophisticated computer systems, very short power interruptions can have profound economic consequences. In 1996, the Electric Power Research Institute reported that U.S. businesses lose $29 billion annually from computer failures due to power outages and lost productivity.

PC25 power plants are currently delivering assured power at critical power sites such as military installations, hospitals, data processing centers, and sites where sensitive manufacturing processes take place. One of IFC's installations at the First National Bank of Omaha where four fuel cells are the major component of an integrated assured power system, is meeting customer requirements for 99.9999% reliability. This translates into a power interruption of one minute every six years.

PARTIAL LOAD/CO–GENERATION

The Conde Nast Building at Four Times Square in New York City is a "green building" with two PC25 power plants installed inside that provide five percent of the building's electrical needs. If there is a blackout, the systems are capable of operating independently of the utility grid to maintain power to critical mechanical components and external landmark signage on the facade of the building. The waste heat from the unit is used to run the air conditioning and the power plants provide critical backup power in case the grid fails.

RENEWABLE ENERGY

When fueled by anaerobic digester gases or biogas from wastewater treatment facilities, fuel cells are a source of renewable power. IFC and the U.S. Environmental Protection Agency (EPA) collaborated in the early 1990s on a greenhouse gas miti-

gation program that continues to bear fruit today. Initial efforts targeted landfills and the development of gas cleanup systems that enable fuel cells to use waste methane to generate electricity and resulted in the issuance of several patents jointly held by EPA and IFC. These systems prevent methane—a potent greenhouse gas—from being released into the environment and obviate the use of fossil fuels as the fuel source.

Follow-on work has focused on anaerobic digester off-gases (ADGs) from wastewater treatment facilities. This technology has been implemented successfully at PC25 installations in Yonkers, New York; Calabasas, California; Boston, Massachusetts and Portland, Oregon as well as Cologne, Germany and Tokyo, Japan.

FLEXIBLE AND BROAD APPLICATION OF FUEL CELLS

The examples noted above demonstrate the flexibility of fuel cell technology and its appeal to many different customers with a wide range of requirements. But it gets better. Fuel cell technology and its associated benefits, which have broad application in the commercial/industrial sector, is also being developed for homes, small businesses, cars, trucks and buses.

RESIDENTIAL AND LIGHT COMMERCIAL FUEL CELL APPLICATION

IFC is currently pursuing residential and light commercial fuel cell applications for homes and businesses. These units will use next-generation proton exchange membrane (PEM) fuel cell technology. We are drawing on our experience in both commercial and mobile fuel cell programs to develop a five-kilowatt PEM fuel cell system suitable for homes and small commercial buildings. IFC is teaming up with its sister UTC unit, Carrier Corporation, the world's largest maker of air conditioners, as well as Toshiba Corporation and Buderus Heiztechnik on this effort. We are currently testing our residential power plants and plan to have residential fuel cells units commercially available in 2003.

CONSTRAINTS

The cost of fuel cells has been reduced dramatically in the past decade. The space shuttle application had a price tag of $600,000 per kW. Commercial stationary units being installed today cost $4,500 per kW, but fuel cells are still not competitive with existing technology, which costs about $1,500 per kW. Fuel cell production volumes are low, which increases their cost. Increased volume is needed to bring the purchase cost down and accelerate commercialization of this clean, reliable, efficient source of power so its benefits can be more widely realized.

PRECEDENTS

Adoption of a fuel cell tax credit is consistent with financial incentives currently enjoyed by other energy sources including wind and solar technology. In addition, it builds upon the Department of Defense/Department of Energy fuel cell "buydown" grant program that was initiated in FY'95. The fuel cell tax credit provisions contained in H.R. 1275 and S. 828 are consistent with the $1,000 per kW, up to one third of the cost of the equipment benefit currently made available to federal facilities and municipalities through the DOD/DOE grant program. We support continuation of the federal grant program for public sector and non-profit purchases of fuel cells and enactment of a fuel cell tax credit to aid private sector customers.

SUPPORT FOR FUEL CELL TAX CREDIT

UTC/IFC is leading the industry effort to secure a tax credit for homeowners and business property owners who purchase stationary fuel cells. This initiative has gained support from major fuel cell manufacturers, suppliers and related organizations as indicated in Attachment A.

There have been a variety of legislative proposals in the 107th and previous Congresses that would provide tax incentives for fuel cell technology. While these bills differ in the scope of applications covered, the amount of credit and other details, a bipartisan and diverse group of Members of Congress and Administration officials support the concept of a tax credit for fuel cells. The recent National Energy Policy (NEP) recommendations released by the White House also reflect the Bush Administration's endorsement of the technology and its support for fuel cell tax credits. The NEP refers to fuel cells as a promising distributed generation technology and recommends additional effort in the integration of fuel cells, hydrogen and distributed generation initiatives.

CARRIER OVERVIEW

UTC'S Carrier division is the world's largest manufacturer of air conditioning, heating and refrigeration systems. The company believes that with market leadership comes the responsibility for environmental leadership. Carrier continues to lead

the global air conditioning and refrigeration industry in the phaseout of ozone-depleting refrigerants well ahead of international and domestic mandates. And while pioneering the technologies to enable this transition to non-ozone depleting products, Carrier has also increased energy efficiency, minimized materials and product weight, introduced new air quality management features and developed the tools to evaluate a holistic building systems approach to indoor comfort cooling.

The heating, air conditioning and refrigeration industry has made significant improvements over the past two decades in technologies that benefit the environment. And while these technologies are readily available for consumers today, barriers to full deployment do exist, preventing the realization of maximum environmental benefit.

ENVIRONMENTAL TECHNOLOGIES FOR COMMERCIAL AIR CONDITIONING

In the commercial air conditioning market, major advancements have been achieved in large-building chiller technology. Not only does Carrier manufacture non-ozone-depleting chillers throughout the world; these same products are, on average, 20% more efficient than their counterparts of 20 years ago, with 10–15% less weight for the same capacity. This has reduced raw materials like steel and saved the intensive energy required to produce it. In fact, we believe the industry is saving 16 million pounds of steel each year, or enough to build 7,000 cars.

Despite these breakthroughs, more than 44,000 old, inefficient, CFC-based ozone-depleting chillers remain in operation in the United States. If these chillers were replaced with today's products, roughly seven billion kilowatt hours per year would be saved, enough to power 740,000 homes on an annual basis, saving four million tons of carbon emissions at power plants. We believe these old CFC chillers would be replaced more rapidly if it weren't for the U.S. tax code, which allows building owners to depreciate chillers over a staggering 39-year period! If this term were reduced to 15 or 20 years, the advanced chiller technologies would become more prevalent in the marketplace sooner, to the benefit of the environment.

ENVIRONMENTAL TECHNOLOGIES FOR RESIDENTIAL AIR CONDITIONING

Equal advancements have been made in residential systems within the last decade. Carrier introduced the world's first non-ozone-depleting residential central air conditioning system, called Puron, in 1996—a full 14 years prior to the deadline mandated by the Clean Air Act. And while we're proud to have been the first, we also congratulate the three other major manufacturers that have followed suit so far.

Carrier also leads the residential market with the highest rated efficiencies and supports a full 20% increase in the federal minimum energy efficiency standard. But Carrier also believes that federal and state governments can do more to deploy high efficiency products more rapidly through tax incentives. We congratulate Rep. Duke Cunningham (R–CA) and Senator Bob Smith (R–NH) for introducing H.R. 778 and S. 207, respectively, which we view as a good framework for tax incentives, especially if the levels start at 13 SEER (Seasonal Energy Efficiency Rating—the miles-per-gallon equivalent for air conditioning equipment).

But as federal and state governments examine tax credits, we would like to point out that opportunities exist to maximize these incentives for additional environmental benefit, like ozone protection, along with energy efficiency. Not too long ago, there was a trade-off between efficiency and ozone protection. Most residential systems sold today operate with an ozone-depleting refrigerant scheduled for phaseout in new products in 2010. The amount of this refrigerant required for higher efficiency systems, like 13 SEER, is 40% greater than standard 10 SEER systems. Fortunately, Carrier pioneered the technology that other manufacturers have followed to avoid this "Hobson's choice" of efficiency or ozone protection. Clearly and happily we can have both, and we urge any tax incentive plan to maximize the environmental benefits of efficiency combined with ozone protection.

UTC COMMITMENT

UTC products have useful lives that can be measured in decades. That's one of the reasons our corporate environment, health and safety policy statement requires conservation of natural resources in the design, manufacture, use and disposal of products and delivery of services. It also mandates that we make safety and environmental considerations priorities in new product development and investment decisions.

UTC products offer the potential for significant energy savings as well as improved environmental quality. Working with government to adopt appropriate financial incentives as outlined above, we can ensure that these benefits are optimized

and accelerated. We look forward to working with Congress, the Administration and other stakeholders to achieve these goals.

WHY SHOULD CONGRESS AND THE ADMINISTRATION SUPPORT A STATIONARY FUEL CELL TAX CREDIT?

Overview

A fuel cell is a device that uses any hydrogen-rich fuel to generate electricity and thermal energy through an electrochemical process at high efficiency and near zero emissions. Fuel cell developers, component suppliers, utilities and other parties with an interest in clean distributed generation technology are working together to enact tax credit legislation that will accelerate commercialization of a wide range of fuel cell technologies.

Credit Description

The $1000 per kilowatt credit will be applicable for purchasers of all types and sizes of stationary fuel cell systems. It will be available for five years, January 1, 2002–December 31, 2006, at which point fuel cell manufacturers should be able to produce a product at market entry cost. 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.

Why is a fuel cell tax credit necessary?

- A credit will allow access to fuel cells by more customers NOW when there is a grave need for reliable power in many parts of the country.
- A credit will speed market introduction of fuel cell systems.
- A credit will create an incentive for prospective customers, thus increasing volume and reducing manufacturing costs. As with any new technology, price per unit decreases as volume of production increases.
- A credit will speed the development of a manufacturing base of component and sub-system suppliers.

Benefits of Speeding Market Introduction through Tax Legislation

- Because fuel cell systems operate without combustion, they are one of the cleanest means of generating electricity.
- While energy efficiency varies among the different fuel cell technologies, fuel cells are one of the most energy efficient means of converting fossil and renewable fuels into electricity developed to date.
- Fuel cell systems can provide very reliable, uninterruptible power. For example, fuel cells in an integrated power supply system can deliver "six nines" or 99.9999% reliability. Thus fuel cells are very attractive for applications that are highly sensitive to power grid transmission problems such as distortions or power interruptions.
- As a distributed generation technology, fuel cells address the immediate need for secure and adequate energy supplies, while reducing grid demand and increasing grid flexibility.
- Installation of fuel cell systems provides consumer choice in fuel selection and permits siting in remote locations that are "off grid."
- Fuel cell systems can be used by electric utilities to fill load pockets when and where new large-scale power plants are impractical or cannot be sited.
- Fuel cell systems, as a distributed generation resource, avoid costly and environmentally problematic installation of transmission and distribution systems.

Cost

The five-year budgetary impact of the credit is less than $500 million.

Contact Judith Bayer at 202–336–7436 or **Bayerj@corpdc.utc.com** if you have questions.

KEY ELEMENTS OF A FUEL CELL TAX CREDIT FOR STATIONARY APPLICATIONS

Overview

The goal of the stationary fuel cell tax credit is to create an incentive for the purchase of fuel cells for residential and commercial use. The prompt deployment of such equipment will generate environmental benefits, provide a reliable source of power for homeowners and businesses, reduce our nation's dependence on foreign oil supplies, help commercialize clean technology, enhance US technology leadership and create economic benefits for the nation.

Fuel cell tax credit proposals should be designed to benefit a wide range of potential fuel cell customers and manufacturers. They should therefore be all-inclusive without discriminating between different kilowatt sized units, type of technology, application, fuel source or other criteria. Efforts should be made to keep the proposals as simple as possible to aid in effective implementation. In addition, the proposals should strike a balance between ensuring the level of tax credit provided represents a meaningful incentive that will stimulate purchase and deployment of the technology while minimizing the budgetary impact.

The following are specific elements suggested for consideration and inclusion:

Coverage—US business and residential taxpayers that purchase fuel cell systems for stationary commercial and residential applications should be eligible for the credit.

Basis for credit—The credit should be based on a "per kilowatt" approach with no distinction made for the size of unit.

Access to credit—No allocation of credit should be made to specific categories of fuel cells on an annual or total basis.

Fuel Source—No premium or penalty should be imposed based on the fuel source.

Definition of stationary fuel cell power plant—The term "fuel cell power plant" should be defined as "an integrated system comprised of a fuel cell stack assembly, and associated balance of plant components that converts a fuel into electricity using electrochemical means."

Co-generation—No co-generation requirement should be imposed since not all fuel cell technologies offer an effective option for co-generation.

Efficiency—No efficiency criteria should be imposed. Fuel cell systems in the early stages of development, such as residential sized units, cannot predict the efficiency level at this time. Establishing arbitrary efficiency criteria could exclude early models for this important application, which are exactly the units that require incentives. Efficiency levels will vary based on whether proton exchange membrane, phosphoric acid, solid oxide or molten carbonate fuel cell technology is used. Designing fuel cell systems to maximize efficiency may require tradeoffs resulting in more complicated, higher cost, less fuel flexible and less durable units.

Floor/ceiling—No minimum or maximum kilowatt size criteria should be imposed.

Amount of Credit—$1,000 per kW for all qualifying fuel cell power plants. A five-year program with a $500 million budgetary impact is proposed.

Duration—1/1/02—12/31/06.

Contact Judith Bayer at 202–336–7436 or **Bayerj@corpdc.utc.com** if you have questions.

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