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# THE EFFECTS OF RISING ENERGY COSTS ON AMERICAN FAMILIES AND EMPLOYERS

## HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY POLICY, HEALTH CARE AND ENTITLEMENTS

OF THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

FEBRUARY 14, 2013

**Serial No. 113–8**

Printed for the use of the Committee on Oversight and Government Reform

Available via the World Wide Web: http://www.fdsys.gov
http://www.house.gov/reform

U.S. GOVERNMENT PRINTING OFFICE

80–086 PDF WASHINGTON : 2013

For sale by the Superintendent of Documents, U.S. Government Printing Office
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# THE EFFECTS OF RISING ENERGY COSTS ON AMERICAN FAMILIES AND EMPLOYERS

**Thursday, February 14, 2013**

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY POLICY, HEALTH CARE AND ENTITLEMENTS,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
*Washington, D.C.*

The subcommittee met, pursuant to call, at 1:04 p.m., in Room 2154, Rayburn House Office Building, Hon. James Lankford [chairman of the subcommittee] presiding.

Present: Representatives Lankford, Jordan, Walberg, DesJarlais, Farenthold, Massie, Speier, Norton, Cartwright and Horsford.

Also present: Representative DeSantis.

Staff Present: Lawrence J. Brady, Staff Director; Joseph A. Brazauskas, Counsel; Caitlin Carroll, Deputy Press Secretary; Sharon Casey, Senior Assistant Clerk; Brian Daner, Counsel; Ryan M. Hambleton, Professional Staff Member; Christopher Hixon, Deputy Chief Counsel, Oversight; Mark D. Marin, Director of Oversight; Jaron Bourke, Minority Director of Administration; Nicholas Kamau, Minority Counsel; Adam Koshkin, Minority Research Assistant; Jason Powell, Senior Counsel; and Rory Sheehan, Minority New Media Press Secretary.

Mr. LANKFORD. I would like begin this hearing by stating the Oversight Committee mission statement. We exist to secure two fundamental principles. First, Americans have a right to know that the money Washington takes from them is well spent. And, second, Americans deserve an efficient, effective government that works for them.

Our duty on the Oversight and Government Reform Committee is to protect these rights. Our solemn responsibility is to hold government accountable to taxpayers, because taxpayers have a right to know what they get from their government. We will work tirelessly with—in partnership with citizen watchdogs to deliver the facts to the American people and bring genuine reform to the Federal bureaucracy. This is the mission of the Oversight and Government Reform Committee.

This is also the first meeting of this particular Subcommittee on Energy, Healthcare and Entitlements. It is my joy to get a chance to introduce as well the ranking member that will be serving with me, Jackie Speier from California. Looking forward.

This committee as well is focused on trying to identify ways that we can help the American consumer, the taxpayers to have their money protected and also have a government that is efficient.

When the government spends $3.7 trillion, there will be areas of waste and inefficiencies. We want to help identify some of those, and we can work in a bipartisan way to be able to accomplish that. But this is also a moment that we look at the policies and the ways that we do things specifically to work to protect the American consumer, which is what this particular hearing is focused on.

Our Nation and our economy runs on energy. Costs of energy rises and falls based on the cost of fuel and capital costs. But the American consumer has a sense that they are being squeezed. This hearing will work to address the changing costs of energy and the direction of energy production in America.

According to recent polling, energy costs are the most important financial issue facing American families today. The Gallup poll from last month shows that 79 percent of Americans said that the price of energy, including the price of gasoline, is hurting their finances. More specifically, the prices of electricity and gasoline are so high, they are impacting American families' finances more than food, taxes, or even health care, according to that poll. Gasoline prices account for the largest single increase in consumer energy costs over the past decade. Average U.S. Family will spend an estimated $3,730 a year on gasoline in 2013, compared to 1,680 a year just 10 years ago.

Since 2001, the energy cost impacts on American families have been steadily increasing and are now at their highest levels in over 10 years. On average, about 60 million households, or about half of the households in America, American families, now pay 20 percent of their income towards energy costs. The poorest Americans, those making less than 24,000 a year, are often forced to make choices between food, medicine, or Edison. In fact, those who earn less than 10,000 a year will pay an estimated average of 77 percent of their income towards energy.

Businesses, and especially small businesses, are also experiencing in the adverse impacts of higher energy costs. According to the U.S. Energy Information Administration, manufacturers spend on average $136 billion a year on energy, and commercial buildings spend a $108 billion a year. Small businesses are more susceptible to negative impacts on rising energy costs.

Energy-intensive industries are building-block industries because they produce the components that are used for the rest of the industrial manufacturing and construction sectors. These industries see energy as a percentage of costs sometimes as high as 85 percent.

With the rise in horizontal drilling technology, hydraulic fracking, and other advanced recovery methods, it has vastly increased the potential for recoverable domestic oil and natural gas in places like North Dakota and Pennsylvania and others. However, efficient use and production in North American petroleum are facing cumbersome obstacles from the Federal Government. These range from restrictive policies on oil production on Federal lands to the continued rejection of more pipeline infrastructures, such as the Keystone XL. State regulatory primacy is also being challenged in all aspects of energy production. These hindrances harm the ability of families and businesses to cheaply access vast resources of energy. The EPA-mandated framework for the sale of differently

blended versions of fuel across the United States, which means that gas supplies often can't be shipped between cities even in the same State.

The U.S. also has an opportunity to rejuvenate the once-vibrant nuclear industry, as well as a very advanced wind industry that continues to increase. For the first time in decades, new nuclear plants are under construction. Further new technologies, such as small modular reactors, offer tremendous opportunities in the global market. This opportunity will be lost if political and regulatory uncertainty impede domestic development and innovation in that industry.

America has vast domestic energy resources. In order to achieve affordable energy, Americans should have access to this energy through all sources, coal, oil, gas, nuclear, and all of our renewables. However, the costs of these energy resources to families and businesses must always be taken into account when providing subsidies to promote some and promulgating regulations which sometimes limit others. Today it is right for us to just take a closer look at the costs and the opportunities for America's energy.

I'd now like to recognize the distinguished ranking member, the gentlelady from California, Ms. Speier for opening statement.

Ms. SPEIER. Mr. Chairman, thank you. And let me say how—how much I'm looking forward to working with you on this subcommittee this year. And while we come from different parts of the country, the issues that we will address will affect every single American, as this hearing does today. So I truly look forward to our coordinated efforts on behalf of the American people.

You know, no matter who controls the White House, oversight of the executive branch is fundamentally a responsibility of Congress. Holding the bureaucracy, its contractors, and the corporations accountable isn't a partisan issue, it's a congressional duty.

The title of today's hearing is "The Effects of Rising Energy Costs on American Families and Employers." In this economy it's imperative that we in Congress do more to help families recover from the recession as they pay off these bills. What are we doing, for example, to raise the minimum wage in this country? What are we doing to create more jobs for the middle class and ensure that hard work leads to decent livings? To be sure, we must investigate the high price consumers and small businesses are paying on their energy bills. Are regulations the sole factor causing prices to rise, or are record-breaking profits of the oil companies part of the cause?

Here is a chart we were hoping to have up for you. But it shows that the five oil companies in 2011 made $41 billion, an increase of 31 percent; $31 billion, an increase of 54 percent; $26 billion, an increase of 114 percent; $27 billion, a 42 percent increase; and $12 billion, a 9 percent increase.

One thing is certain: The American people do not have to choose between economic growth and environmental protection. We can do both responsibly. The good news is that the United States is already making great strides towards energy independence. Under the Obama administration, domestic oil production has reached its highest level in 11 years. And, in fact, this chart shows how far we have come in a very short period of time in oil production.

U.S. total crude oil production averaged 6.4 million barrels per day in 2012, an increase of .8 million barrels per day from the previous year. The largest single increase in domestic annual production since 19—no, excuse me, since 1859. Furthermore, domestic natural gas production reached a record 28.6 trillion cubic feet in 2011, marking the highest level of natural gas production in this country in more than 30 years. At the same time, we've made investments in renewable energy by providing loan guarantees to build the Nation's first commercial-scale cellulosic ethanol plant in Kansas, the world's largest wind farm in Oregon, and the world's largest solar plant in California, among many other cutting-edge projects.

An energy company in my district said it best: Congress shouldn't pick winners and losers. We should support all of the above. All of these gains have been achieved while maintaining strong protections for public health and the environment. We have doubled the distance our cars can travel on a gallon of gas, reduced CO2 emissions from power plants, and weatherized homes to make them safer and more efficient.

The benefits of our environmental policies, meanwhile, have far exceeded the costs of regulatory compliance. But as the President made clear in his State of the Union Address, we must also confront the reality of climate change. In 2011, the United States endured more than 14 extreme weather disasters, each costing over a billion dollars. There were another 11 such disasters in 2012, and the GAO that just finished his presentation here earlier today talked about climate change and how we have got to factor it into our crop insurance and flood insurance, as many of the private insurers in this country already do.

According to NOAA, the combined 25 disasters from 2011 to 2012 are estimated to cost $188 billion in total. The record drought of 2012 is estimated to cost $12 billion, and Superstorm Sandy is estimated to cost $71 billion. Responding to these extreme weather events will produce a measurable drag on our economy, and the timing for American families could hardly be worse. Paying the bills is strain enough, let alone after the crops are wiped out by searing drought or houses left flooded after a superstorm.

In conclusion, Mr. Chairman, I don't believe in the false dichotomy that energy and environmental innovation precludes economic growth. In the face of climate change, seizing the opportunities before us in clean energy is critical not just to preserve a livable planet for our children and grandchildren, but to prevent Americans from bearing the real economic consequences of inaction.

With that, I'd like to thank our panel of witnesses for being here today, and I look forward to your testimony.

And, once again, thank you, Mr. Chairman.

Mr. LANKFORD. Thank you.

Members will have 7 days to submit their opening statements for the record.

We'll now recognize our panel today.

Mr. George Hand is the general manager of the Canadian Valley Electric Cooperative, a fellow Oklahoman with me, and we're glad that you're here.

Ms. Paula Carmody is the president of the National Association of State Utility Consumer Advocates. From Maryland; is that correct?

Ms. CARMODY. Yes.

Mr. LANKFORD. Okay. Glad that you're here.

Mr. Eugene Trisko is an attorney and energy economist.

Mr. Daniel Weiss is the Senior Fellow at the Center for American Progress Action Fund.

And Mr. Daniel Simmons is the director of regulatory and State affairs for the Institute for Energy Research.

Thank you all to be here. Pursuant to committee rules, all witnesses need to be sworn in before they testify. So if you'd please stand and raise your right hand, and be prepared to take the oath.

Do you solemnly swear or affirm that the testimony you're about to give will be the truth, the whole truth, and nothing but the truth so help you God?

[witnesses answer in the affirmative.]

Thank you. Let the record reflect the witnesses answered in the affirmative.

You may be seated.

In order to allow time for discussion, and we will have Members that will come in and out at different points to be able to ask questions, and so you'll see that movement as it goes through, we have included a very handy clock right in front of you. That clock is really a series of lights there, green, yellow, and red, which I think is pretty standard practice on it. The yellow will come on when you have 1 minute left, and then the red will come on when it's time to stop. You could wind up as soon as possible on that. There are bonus points for finishing before 5 minutes because we'd like to be able to have time for questions as well.

So to allow time for that, I'd like to go ahead and begin.

Mr. Hand, you are first up. And I'd be honored to be able to receive your testimony now.

## WITNESS STATEMENTS

### STATEMENT OF GEORGE E. HAND

Mr. HAND. Chairman Lankford, members of the subcommittee, I want to thank you for this opportunity to be heard and appear before you today. My name is George Hand. I consider myself fortunate and blessed. I was born in Oklahoma and lived there all my life. I'm the general manager of Canadian Valley Electric Cooperative, headquartered north of Seminole, Oklahoma, and I've served in that capacity for 28 years.

At Canadian Valley Electric Cooperative our purpose is simple and straightforward: To provide electric utility service to our customers at the lowest possible cost, consistent with sound business practice. This mission guides us daily, and we have not strayed. We believe that if we can be successful in our mission, it will give the customers we serve the best opportunity for a better life and the businesses that look to us for electric power energy the greatest opportunity to be successful, grow, prosper, and provide jobs.

Profit is not our purpose. Our purpose is to help others prosper and profit. Most of the territory we serve would not be considered

desirable or even feasible service territory to a for-profit electric utility. Our power supplier, Western Farmers, which we are a part owner, has a diversified electric-generation resource mix comprised of coal, natural gas, wind, hydro, and purchased power. About 30 percent of the energy last year was produced with coal, about 6 percent from wind, about 15 percent from our own natural gas plants, and then the balance, purchased power, which was a mixture of coal and natural gas and some additional wind.

Electric utilities understand the desirability of a diversified electric-generating fleet. This helps control price volatility and, to a degree, enhances reliability. Diversity is also a hedge against the current flavor of government regulation.

Today, in Oklahoma, we have several large coal-fired generating plants. All of these coal plants in Oklahoma were built in the 1970s because the Federal Government mandated that no more natural gas-fired electric generating plants be built, and, further, that the existing gas plants would have to shut down in the future.

In response to what was the law of the land, the Fuel Use Act, electric utilities in Oklahoma and elsewhere began building large coal-fired generators to replace these banned gas-fired generators.

The law was clear. By the early 1980s, expensive excess generating capacity was everywhere, and about that time we discovered that maybe the country was not running out of natural gas. Congress relaxed the pressure to shut down the existing natural gas-fired generating plants. Later Congress, in the face of reality, removed the prohibition on building new natural gas-fired plants.

But the damage to customers, business, and the economy had been done. Electric rates to consumers and businesses doubled as utilities had to service the debt on these new unneeded generating plants. The cost burden of this mistake on customers and business lasted for the better part of two decades, until the economy grew enough to be able to utilize this additional generation.

We must realize that regulation have a cumulative cost, and eventually the consumer will rebel or just give up. We should be especially concerned when we have a government bureaucracy that can generate new regulations faster than the electric utility industry can build new generating plants, and much faster than the consumer and the economy can absorb the cost.

The impact on people. What comes first, food, shelter, medicine, electricity, doing without? At Canadian Valley, we have people who call our office wanting to know how much their next electric bill is going to be so they will know how much they have to spend at the grocery store.

Growing pressures on the electric utility industry will continue to put upward costs—pressure on costs, additional environmental regulations governing air, water, and disposal of ash, as well as continued increases in fuel prices. More mandates from the Environmental Protection Agency on air emissions, water quality, coal ash storage, and handling threaten to significantly increase the cost of producing electricity.

The EPA has proposed carbon emission standards, which forces roughly 50 percent reduction in CO2 emissions from new coal plants. The rule could impact existing coal-fired plants if they undergo significant modification. Coal has historically been our low-

est-cost fuel to meet the growing electrical economy. Now the risk of present and future regulations have effectively taken our Nation's most abundant, least-cost energy resource off the table for future requirements. These potential threats create too great a capital risk for electric utilities to continue building new coal-fired plants.

I thank you for this opportunity.

Mr. LANKFORD. Mr. Hand, thank you very much.

[Prepared statement of Mr. Hand follows:]

**Committee on Oversight and Government Reform**

**Subcommittee on Energy Policy, Health Care and Entitlements**

Testimony of George E. Hand, February 14, 2013

Chairman Lankford, members of the Subcommittee on Energy Policy, Health Care and entitlements, thank you for the opportunity to appear before you today. My name is George E. Hand. I consider myself fortunate and blessed. I was born in Oklahoma and have lived there all my life. I wasn't raised in a Log Cabin but grew up in a home that had a wood stove for the only heat in the winter and open windows for cooling in the summer. The wood for the stove was mostly cut by my brothers and me. Wood does heat you twice. In the summer time if the open windows didn't do the job we slept outside.

My Mother who turned 87 last week still lives in that house. She still thinks my brothers and I should cut the wood. When we don't, she thinks she embarrasses us by buying the wood. The only other heat in the house today, besides that wood stove, is a small electric wall heater I installed in the bathroom a few years ago. Until last summer there has been no air-conditioning in the house. That was when over her objections, I installed a small window unit in her bedroom. Her electric bill didn't go up much at all. She refused to use it unless someone was watching. She said electricity just costs too much, even if her son is the manager of the electric cooperative.

I am the General Manager and CEO of Canadian Valley Electric Cooperative headquartered North of Seminole, Oklahoma. I have served 28 years in this capacity. Prior to this I was the General Manager of People's Electric Cooperative located in Ada, Oklahoma, for a period of 6 years. Prior to that time, I held several management positions at Tri-County Electric Cooperative in the Oklahoma Panhandle. I am a Register Professional Engineer with a Bachelor of Science from Oklahoma State University. I have a great job and would not want to trade with anyone, especially anyone here.

Canadian Valley Electric Cooperative serves approximately 24,000 retail electric customers in the East Central part of Oklahoma with an investment in electric distribution plant of about 100 million dollars making up 5,000 miles of electric distribution lines. Of these 24,000 retail customers, 90% are residential consumers. Approximately 40% of these residential customers are retired. Our service territory extends from the Eastern edge of Oklahoma City to Lake Eufaula between the Deep Fork of the North Canadian River and the South Canadian River, an area of approximately 3500 square miles. The total electric capacity requirement of our member/owner/customers is about 160 megawatts on a hot summer day or during cold winter night. We do have both in Oklahoma regularly.

At Canadian Valley Electric Cooperative our purpose is simple and straight forward, "To provide electric utility service to our customers at the lowest possible cost consistent with

sound business practices." This mission guides us daily and we have not strayed. We believe that if we can be successful in our mission, it will give the customers we serve the best possible opportunity for a better lifestyle and the businesses that look to us for electric power and energy, the greatest opportunity to be successful, grow, prosper and provide jobs for our member/customers.

Profit is not our purpose. Our purpose is to help others prosper and profit. Most of the territory we serve would not be considered a desirable or even a feasible service territory to a for profit electric utility. But that is okay, together we make it work. Our employees realize that the rewards of their jobs go far beyond the paycheck. That is because our motive and our purpose is to serve our owners. Are all our customers happy with their electric bill? Absolutely not. They know that their electric bills are too high and they will tell you.

We are locally governed by a Board of Trustees chosen by and from our customer/owners. Our Board of Trustees knows a little about elections. They must stand for election at least every three years. But they must face the Cooperative's customers every day at work, in the coffee shop and at Church. I love my job, but facing a Board member who has just had a run-in with an unhappy member is not my favorite part of the job.

This electrical capacity and energy we deliver to our customers is provided by Western Farmers Electric Cooperative (WFEC), a Generation and Transmission Cooperative providing electricity to nineteen rural electric distribution cooperatives in the State covering about ¾ of rural Oklahoma. WFEC has a diversified electric generation resource mix comprised of coal, natural gas, wind, hydro and purchased power. The fuel cost per kWh for the generation mix of WFEC with purchased power during 2012 was approximately 5.35 cents per kWh. With fuel inputs of average natural gas cost of $2.75 per MMBtu and coal cost of about $2.34 per MMBtu, the 2012 fuel and purchased power cost per kWh were as follows:

| Resource | GWh | Cents | % |
|---|---|---|---|
| Hugo (Coal) | 2,541 | 2.6 | 30.2 |
| Combined Cycle (Natural Gas) | 1,019 | 2.5 | 12.1 |
| Mooreland (Natural Gas) | 330 | 3.2 | 3.9 |
| Combustion Turbine (Natural Gas) | 22 | 3.0 | .3 |
| Hydro | 497 | 1.0 | 5.9 |
| Wind | 1,067 | 3.9 | 12.7 |
| GRDA (Purchase Power) | 868 | 2.7 | 10.3 |
| Purchased Power | 2,074 | 2.4 | 24.6 |
| | 8,418 | | 100 |

Today, most if not all electric utilities understand the desirability of a diversified electric generating fleet. This helps control price volatility and to a degree enhances reliability. Diversity is also a hedge against the current "flavor" of government regulation. Today in Oklahoma we have several large coal-fired generating plants owned by the electric cooperatives, a quasi-state agency, the Grand River Dam Authority (GRDA)and the investor owned utilities Oklahoma Gas & Electric (OG&E) and Public Service of Oklahoma (PSO). All of these coal plants in Oklahoma were built in the 1970's because the Federal Government mandated that no more natural gas fired electric generating plants be built and further that the existing gas fired plants would have to be shut down in the future. In response to what was the "law of the land", the Fuel Use Act, electric utilities in Oklahoma and elsewhere began rebuilding their electric generating plants to meet their utility responsibilities in the future. In Oklahoma and elsewhere electric generating utilities built large coal fired plants to replace these "banned" gas fired generators. These replacement coal fired plants cost about four times as much to build as the gas fired generators had cost. But the law was clear. By the early 1980's expensive excess generating capacity was everywhere. And about that time we "discovered" that maybe the country was not running out of natural gas. Congress relaxed the pressure to shut down the existing natural gas fired generating plants. Later Congress in the face of reality removed the prohibition on building new natural gas fired generating plants. But the damage to the consumers, businesses and the economy had been done. Electric rates to consumers and businesses doubled as utilities had to service the debt on these new duplicative, excess and unneeded generating plants. The cost burden of this mistake on consumers and businesses lasted for the better part of two decades as the economy grew to need this prematurely built generating capacity.

Now while customers are still paying for those "government mandated" coal-fired plants built in the 1970's and early 1980's, it appears that through regulation the Federal Government will once again step in through "central planning" and change the rules after the fact, and dumping more costs on consumers and the economy. Surely we can learn from the recent history in our lifetimes of the results in other countries and types of governments the folly of central planning by an all controlling government regulatory bureaucracy.

We must realize that regulations have a cumulative cost and eventually the consumer will rebel or just give up. We should be especially concerned when we have a government bureaucracy that can generate new regulations faster than the electric utility industry can build new electric generating plants, and much faster than the consumer and the economy can absorb the cost.

**IMPACT ON PEOPLE AND THEIR LIFESTYLES**

What comes first, food, shelter, medicine, electricity, doing without?

At Canadian Valley Electric Cooperative we have people call us wanting to know how much their next electric bill will be so they will know how much they have to spend at the grocery store.

An interesting note: Some electric cooperatives in Oklahoma have started an optional prepaid billing system for their consumers who have trouble paying their electric bill or just want to take some control over their electric usage. A common result is a reduction in consumption for these consumers who choose to prepay. When they use the prepaid amount the electricity goes off. It doesn't come back on until an additional amount is paid. Others watch the balance and reduce usage when they don't have money to replenish the balance. Most who choose this method just don't want to be presented with an electric bill they won't be able to pay. Today's rates already cause some customers to make tough choices.

**Where are electric rates headed in the future? What could increase them further?**

Growing pressures on the electric utility industry will continue to put upward pressure on costs, including additional environmental regulations governing air, water and disposal of ash, as well as continued increases in fuel prices.

Even though our power supplier has a diversified generation mix, lower natural gas prices in 2012 had a significant impact on power costs during the year. All of this savings from lower natural gas prices during 2012 was passed on to consumers. This resulted in a $19 million reduction in electric rates. However, about half that reduction was offset by other cost increases keeping customers from seeing the full benefit of the reduced natural gas price in their monthly electric bills.

Our power supplier, Western Farmers is a member of the Southwest Power Pool (SPP), a Regional Transmission Organization. That organization has approved $7.1 billion in new regional, socialized cost transmission. Costs are now rapidly being included in the rate base. WFEC's portion of this cost increased $8 million dollars in 2012. Currently approved transmission construction in the SPP will likely increase Western's socialized transmission pool cost by about $3 million per year for the next 5 years. This is only for the currently approved transmission plan which will likely increase additionally from year to year as regulatory mandates to increase reliability and security, as well as to provide transmission paths for renewable energy continue to grow.

National Electric Reliability Corp (NERC) reliability and security costs added over $1 million in new costs to Western in 2012 in the form of training, materials and labor. 4 new full time employees were added to keep up with these regulatory requirements. WFEC has gone through 5 audits since NERC became a regulatory body.

Environmental Protection Agency (EPA) Particulate Matter (PM) and Cross State Air Pollution regulations (CSAPR) required WFEC to add low Nitrous Oxide (NOx) burners to natural gas plants in order to reduce NOx generation fleet emissions to regulatory levels. The cost of those additions added over $1 million in increased principal and interest costs. Mercury controls at the coal plant require an additional $5 million in capital, and add an annual $1-$2 million to the annual cost of operation by 2014.

U.S. Fish and Wildlife is moving towards an endangerment finding on the Lesser Prairie Chicken which would place additional costs on Wind generation, and transmission costs in part of Oklahoma and New Mexico.

In Oklahoma as well as elsewhere we are in an on-going drought which has lowered lake levels reducing Hydro generation which must be made up with increased, higher cost fossil fuel generation. This adds to the increasing electric rates to our customers.

Until the last half decade, electric rates were primarily made up of fuel, overhead and maintenance of transmission and distribution wires and substations, and capital costs of generation.

New NERC regulations, new SPP RTO Transmission and regional market, and recent Environmental regulation cost increases which only started in the last few years are expected to continue for the near future. Natural gas prices have increased from the 2012 levels and will likely continue to increase if the economy recovers. Low natural gas prices in 2012 ($2.75 per mmbtu) are expected to rise to $3.70 per mmbtu by the end of 2013. For our power supplier, Western, the cost of fuel to run natural gas fired generation exceeds our current cost of the coal to run the coal fired generation. With all of these increasing costs, electric rates are under growing pressure to rise significantly.

As various coal and rail transportation contracts expire, we see increasing delivered coal prices. In general, the United States has abundant coal reserves. One reason the cost is increasing is the worldwide demand for U.S. coal is increasing.

**Regulations continue to pile up -- along with costs**

More mandates from the Environmental Protection Agency on air emissions, water quality and coal ash storage and handling threaten to significantly increase the cost of producing electricity.

EPA also marches ahead on regulating carbon emissions under the Clean Air Act.

The EPA has proposed a carbon emissions standard which forces a roughly 50 percent reduction in $CO_2$ emissions on new coal plants. The rule could impact existing coal-fired plants if they undergo significant modification. There is no current technology to meet this standard on existing plants or on new pulverized coal units.

We like most electric cooperatives use a variety of fuels and technologies to produce electric power for our customers. Some cost more than others. Coal, has historically been our lowest-cost fuel to meet the growing electrical demands of a growing economy. When total customers' requirements increases above the capacity of those resources, then the next lowest-cost generator in the fleet is used. Now the risk of present and future regulations, have effectively taken our nation's most abundant, least cost energy resource off the table for future requirements of a growing economy. These potential threats create too great a capital risk for most electric utilities to consider building new coal fired plants.

As an electric cooperative we are keenly aware of the impact increasing costs for electric energy has on our customers. If we cannot provide electricity at a price they can afford to pay, we are unnecessary. For a residential consumer or a business man or a globally competing industry, increasing electric rates have the same impact on the bottom line as a tax on the bottom line. Most electric consumers don't have any credits to offset this higher electric bill. Their standard of living suffers. For many of our residential customers, an affordable electric bill is a prerequisite to their health and well being.

In Conclusion, as an electric utility service provider we realize our responsibilities are going to be even more challenging in the future. We ask your consideration of the impacts of future policy decisions on the people we both serve in keeping electric service a viable option. Let us all work together to meet these concerns.

I thank you for this opportunity.

Mr. LANKFORD. Ms. Carmody, we will receive your testimony.

**STATEMENT OF PAULA M. CARMODY**

Ms. CARMODY. Chairman Lankford, Ranking Member Speier, and members of the subcommittee,thank you for inviting me today to testify about the impact of rising energy costs on American families. I am Paula Carmody. I am in the People's Counsel for the State of Maryland. I head an independent State agency that represents the interests of residential utility customers.

I am testifying today in my capacity as president of the National Association of State Utility Consumer Advocates, or NASUCA. NASUCA is an organization of agencies designated by State law to represent consumer interests before State utility regulatory agencies. We advocate for policies and programs that provide safe, reliable, and affordable energy services for our consumers in our respective States.

Consumers have experienced changes and energy prices and therefore energy bills over the past decade, even as most incomes have remained stagnant or declined in real terms. One positive note recently has been the drop in wholesale and retail prices for natural gas. This has provided welcome relief to families relying on natural gas to heat their homes and water. We can reasonably expect that these natural gas prices will remain relatively stable over the next few years. This is good news for gas consumers, even as issues related to environmental impacts of hydraulic fracking and LNG exportation continue to be addressed by policymakers.

The decrease in natural gas prices also has had an impact on electricity prices in many States as natural gas-fired generating resources have become more competitively priced in comparison to other resources. The overall reduction in energy demand, a result of the economic slowdown and the impact of energy-efficiency programs, also has affected electricity prices. In Maryland, the decrease in wholesale electricity prices has been reflected in lower annual electricity bills for residential customers. For example, the average annual electricity bill for residential customers of Baltimore Gas and Electric Company, our largest combined gas and electric company in the State, was about $1,900 in 2009. In 2012, this bill was estimated to be about $1,600.

While the focus of hearing today is on the impact of rising energy prices, it may be useful to think in terms of the affordability of energy bills for our consumers. But what is the affordable energy bill? In general, we tend to consider for our households an affordable bill is one that can be regularly paid on a full and timely basis without substantial household hardship.

NASUCA has expressed particular concern for those low-income and vulnerable customers whose bills are not affordable. They pay far more of their household income towards energy bills than the average customer, and are at greater risk for falling behind in utility bill payments and losing service. This concern is reflected in our association's resolution supporting full Federal funding for the Low Income Home Energy Assistance Program, or LIHEAP, which has helped households with heating bill assistance since 1981.

NASUCA also has a long tradition of support for the adoption of cost-effective energy-efficiency programs for all consumers as a way

of conserving valuable energy resources, reducing demand, and reducing customers' utility bills. Energy-efficiency programs can produce benefits by directly reducing energy usage for individual customers. They can positively impact energy bills by reducing market clearing prices in regions with restructured electric utilities. They could also help to avoid construction of more costly generating facilities for vertically integrated utilities, and thereby mitigate potential bill increases.

Low-income customers often live in housing in poor condition and with faulty heating equipment. To ensure that low-income families can benefit from reducing their energy usage and, therefore, their bills, NASUCA also supports federally funded weatherization programs for low-income consumers, such at the Weatherization Assistance Program, to reduce energy usage.

NASUCA members frequently address issues involving resource planning or generating facilities in their respective States and regions, whether their regulated utilities are vertically integrated or purchase electricity supply in wholesale markets. In either circumstance, the type and proportion of different resources used to generate supply have varying impacts on the retail prices paid by consumers in those States.

NASUCA has long noted the importance of long-term planning and resource diversity. In a 1990 resolution, NASUCA recognized that it was in the interests of consumers to factor potential future costs of reducing greenhouse gas emissions into generation resource planning. However, given the potential for cost impacts on consumers in the near term, NASUCA also urged policymakers to keep these cost impacts in mind when adopting policies or mechanisms to reduce greenhouse gas emissions or to address other environmental concerns.

NASUCA has not taken a position on the merits of any of the existing or proposed EPA regulations that are at issue these days; however, NASUCA recently adopted a resolution urging the EPA to establish compliance timelines that provide sufficient time to consider appropriate least-cost responses so as to avoid rate shock to our electricity customers.

NASUCA continues to advocate and support policies and programs designed to provide affordable energy to our consumers, while maintaining safety and reliability. As part of that advocacy, we have supported energy efficiency programs, low-income weatherization programs, adequate funding for direct energy assistance, and the implementation of policies to support the development of diverse energy resources. In supporting these type of policies and initiatives, NASUCA has also emphasized the need to address cost impacts on consumers in the decisionmaking in order to minimize the impacts on our consumers throughout the United States.

Again, thank you for the opportunity to testify here today.

Mr. LANKFORD. Thank you.

[Prepared statement of Ms. Carmody follows:]

# BEFORE THE
# UNITED STATES HOUSE OF REPRESENTATIVES
# COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
# SUBCOMMITTEE ON ENERGY POLICY, HEALTH CARE AND ENTITLEMENTS

**Testimony of**

**PAULA M. CARMODY**
**PRESIDENT**
**NATIONAL ASSOCIATION**
**OF**
**STATE UTILITY CONSUMER ADVOCATES (NASUCA)**

**Regarding**

**The Effects of Rising Energy Costs**
**On American Families and Employers**

**Washington, DC**
**February 14, 2013**

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**Chairman Lankford, Ranking Member Speier,**
**and Members of the Subcommittee on Energy Policy, Health Care and Entitlements**

Thank you for inviting me to testify today about the impacts of rising energy costs on American families and employers.

My name is Paula Carmody. I am the People's Counsel of the State of Maryland. I head an independent state agency called the Office of People's Counsel (OPC). By law, OPC represents the interests of all residential customers of regulated utility companies in Maryland, including gas, electricity, telecommunications and private water companies. We represent these customers primarily in proceedings before the Maryland Public Service Commission, but we also participate in FERC proceedings and PJM matters and appear in appellate courts.

I am here today in my capacity as President of the National Association of State Utility Consumer Advocates (NASUCA). NASUCA is a national organization of agencies and organizations that are designated by state law to represent consumer interests of their respective states before utility regulatory agencies. NASUCA also has associate and affiliate members that represent utility consumer interests, although they are not the state designated agencies. NASUCA was formed in 1978 to enhance the impact of our member agencies on public policy at the state and federal levels, and to otherwise assist our members in the representation of utility consumer interests. All of our state members represent residential consumers, while some also represent small business, commercial, industrial, and agricultural consumers. NASUCA has 44 member offices, representing consumers in 40 states and the District of Columbia. While the specific mandates or missions of NASUCA members may differ in detail, our members all share a commitment to advocating on behalf of consumers who rely on utility services for their basic needs. For all consumers, electric service is a basic necessity of modern life, and gas service is a necessity for those who rely on it for heating homes and water. Therefore, at the most basic

level, we advocate for policies and programs that provide safe, reliable and affordable energy service for consumers. But as is always the case, the "devil is in the details," as member agencies individually, and together as NASUCA, work to formulate policies and positions to support consumer interests in the face of changing circumstances.

I have been asked to address the impact of rising energy prices on American families. In the regulated arena in which NASUCA members participate, energy refers to electricity and natural gas. However, it is important to remember that in many states, unregulated oil, propane and other fuels are just as important when it comes to heating homes, and the total affordability of a family's energy bills.

We have seen changes in energy prices, and therefore, energy bills, over time and particularly the past few years. The sharp drop in natural gas wholesale and retail prices due to shale production was not expected five years ago, but it has provided welcome relief to families relying on natural gas to heat their homes and water. There is every expectation that those natural gas prices will remain stable, rising only slightly over the next few years. This provides positive news for gas consumers, even as issues related to environmental impacts of hydraulic fracking and LNG exportation are further explored.

Nationally, we have seen an increase in the average retail price of electricity over the past decade, from about 7.5 cents to 10 cents per kilowatt hours for residential customers.[1] However, the national average prices do not reflect the regional and state variations in electricity prices that are reflected in electricity bills paid by consumers. These variations are or may be impacted by a number of factors, including:

- The electric companies are either in a restructured state or are vertically integrated utilities

[1] Source: U.S. Energy Information Administration.

- RTO/ISO market rules
- The type of generation resources
- State public policy requirements: energy efficiency programs, renewable portfolio standards, environmental considerations, and more recently, job considerations
- Federal public policy requirements or goals (including EPA regulations).

One significant factor has been the decrease in wholesale natural gas prices also has had an impact on electricity prices in many states, as natural gas-fired resources have become more competitively priced in comparison to other resources. The other factor affecting prices in organized wholesale electricity markets has been the overall reduction in energy demand, a result of the economic decline and the impact of demand side management (energy efficiency and demand response) programs. In Maryland, for example, the recent decrease in wholesale electricity prices has been reflected in an accompanying decrease in annual electricity bills for residential customers.[2] However, in other states, concerns have focused on potential increases in electricity rates due to nuclear power plant construction or retrofits or retirements of coal plants to comply with EPA regulations, particularly in states with heavy reliance on coal generating facilities. It appears now that retrofit or retirement decisions are being affected not only by compliance timelines for the EPA regulations, but by economic decisions driven by the natural gas production and prices.

While the focus of the hearing is on the impact of *rising* energy prices, it may be useful to think in terms of the affordability of energy bills for consumers. But what is an "affordable" energy bill? There is no magic number, and it is a relative concept. In general, for households, we can think of an affordable bill as one that can regularly be paid on a full and timely basis

[2] In 2009, for example, the average annual electricity bill for the residential Standard Offer Service customers of BGE, the largest combined utility in Maryland, was about $1900. The annual bill was about $1600 in 2012.

without substantial household hardship. You can also think of the affordability of energy bills (electricity, gas or other heating fuels) in terms of a percentage of a household's gross (pretax) income.

It has been generally accepted that a reasonable amount for a household to spend on "shelter" costs (rent/mortgage, taxes and utilities) is thirty per cent (30%) of household income (although this concept seems to have been overthrown during the overheated housing market fiasco of this decade). Of that 30%, twenty percent (20%) would reasonably be spent on energy bills. Total energy bills then would equate to about 6% of a household's gross income to be in the range of affordability. This approach to defining affordability has been used and refined by experts and in regulatory programs to address the problems of low-income households in paying their energy bills.

Home energy bills impose significant energy burdens on low and moderate income households. For a family of four with an annual income of $23,550 (100% of federal poverty level in FY 2013), 6% of household income would equate to $1413 annually. However, it is not uncommon for electricity and home heating bills to impose energy burdens far in excess of that "affordable" amount. This can lead to difficulty paying bills on time or falling behind on utility bills; in the long run, it can lead to disconnection of service.

A federally funded program called the Low Income Home Energy Assistance Program (LIHEAP) has helped low-income households pay for heating bills (electric, gas and other fuels) since 1981. This program has helped families of all kinds – seniors on fixed incomes; adults with disabilities, including war veterans, adults and children with serious medical conditions; families struggling to pay bills on unemployment benefits, reduced pay or hours, and loss of other family income. Since low-income households are disproportionately impacted by energy

bills, NASUCA supported full federal funding for LIHEAP at $5.1 billion in FY 2009 and for years thereafter.[3] Unfortunately, while that federal funding level was provided in FY 2010, the funding was reduced in fiscal year 2011 and even further in fiscal years 2012 and 2013.

NASUCA also has a long tradition of support for the adoption of cost-effective energy efficiency programs for all consumers "as a way of conserving valuable energy resources, reducing demand, and reducing customers' utility bills."[4] Energy efficiency programs can produce numerous benefits by directly reducing energy usage (and energy bills) for individual consumers. In the aggregate, they can also positively impact energy bills of consumers. In wholesale market regions operated by RTOs/ISOs, these programs can help reduce market clearing prices and therefore reduce retail prices. For consumers served by vertically integrated utilities that own generating facilities, they can help to avoid construction of more costly transmission or generating facilities and reduce energy costs.

To ensure that low-come families can benefit from reducing their energy usage (and their energy bills), NASUCA also supports federally funded programs for low-income consumers, such as the Weatherization Assistance Program (WAP).[5] Unfortunately, in the past two fiscal years, we have seen reductions in federal funding for weatherization from $174 million in fiscal year 2011 to $68 million in FY 2012 and FY 2013 CR.[6]

There has been extensive discussion, and controversy, about proposals and programs that involve the intersection of energy and environmental policies. In many instances, there are distinct state and regional differences in views by federal legislators, governors and state

[3] NASUCA Resolutions 1997-06 and 2008-03 at www.nasuca.org.
[4] NASUCA Resolutions 2008-05 at www.nasuca.org. See also Resolution 2009-02.
[5] NASUCA Resolution 1997-06 at www.nasuca.org.
[6] Federal stimulus funds provided an additional $5 billion for the Weatherization Assistance Program beginning in fiscal year 2009, resulting in the weatherization of over 1 million homes. Remaining funds will be exhausted soon. $54 million for WAP is included in the House FY 2013 Energy and Water Development Appropriations bill, while the Senate bill provides for $145 million.

legislatures, and state public utility commissions – and state consumer advocate offices may not be that different in that regard. Our member agencies do not – and perhaps should not – always see eye to eye on matters affecting their state consumers, since their primary obligation is to represent the consumers in their states. That obligation requires us to look at the immediate and near-term impacts of policies and programs on energy costs, which our consumers must pay every month – or risk losing that essential service. However, NASUCA members will evaluate policies and programs in their respective states in terms of affordability, to reduce or avoid price volatility and excessive price increases, and the safety and reliability of the energy supply and distribution systems serving the consumers they represent.

Most of our members address these matters in their respective State proceedings. Regional, state and local differences– for example, restructured electric utilities versus vertically integrated utilities; differences in generation resources; differences in state public policies on environmental and emissions concerns –affect positions that individual agencies adopt on certain energy policies. However, despite these differences, NASUCA has taken positions on several issues that implicate both energy and environmental policies. As far back as 1990, NASUCA recognized that in the long-term, it was in the interests of utilities and consumers to factor the potential future costs of reducing carbon dioxide and other greenhouse gas emissions into their generation resource planning. In a 1990 resolution, we voiced our support for the enactment of federal legislation to reduce greenhouse gas emissions on an economy-wide basis, acknowledging "the need to reduce emissions of greenhouse gases" and recommending to the utility industry "that its resource planning must take into account the growth in those emissions." Seventeen years later, in 2007, NASUCA passed a resolution that explicitly called on Congress to implement a program to reduce greenhouse gas emissions. However, in recognition of our

consumer focus, NASUCA stated that any such program "should provide appropriate emission reductions *while minimizing the cost to consumers, and must not produce windfall gains for electric generators at the expense of electric consumers*."[7] The impetus for that resolution was the Congressional debate at the time over the development of a cap and trade program for carbon dioxide emissions. Our very real concern was that the wholesale adoption of an allowance trading program like the sulfur dioxide emission program would hurt consumers in states that had restructured their electric industries, because of the windfall gains to owners of unregulated nuclear power plants.

Most recently, NASUCA adopted a resolution in 2012 urging the EPA "to establish compliance timelines that provide sufficient time to consider appropriate least cost responses so as to avoid rate shock to electric utility customers."[8] We did not take a position on the merits of any of the existing, proposed or future EPA regulations or proposed legislation related to the regulations,[9] but instead emphasized the importance of taking into account the impact of compliance timelines on the ability of state utilities to comply with those regulations without imposing unreasonable or unnecessary costs on utility customers. We emphasized the importance of a reasonable time frame for utilities to address the practical issues associated with retirements or upgrades of existing generation plants and to maintain the integrity and reliability of the existing electric system; and for state regulators to evaluate utility compliance proposals. In particular, NASUCA urged the consideration of the impact of rate increases on consumers that result from varying compliance timelines.

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[7] NASUCA Resolution 2007-04 at www.nasuca.org.

[8] NASUCA Resolution 2012-05 at www.nasuca.org.

[9] The Resolution specifically references the Cross State Air Pollution Rule (CASPR), the Mercury and Air Toxics Standards Rule, the Impingement and Entrainment of Aquatic Species in Water Intakes (Clean Water Act §316(b), Coal Combustion Residuals Rule, National Ambient Air Quality Standards, Potential Standards, Potential Greenhouse Gas Reduction Requirements and Regional Haze State Implementation Plans.

NASUCA also has adopted resolutions that uniformly support the continued role and authority of state and local governments in decisions affecting transmission planning and development[10] and the addition of electric capacity resources to achieve legitimate state public policy objectives.[11] These resolutions reflect the concerns of NASUCA member agencies about the adoption of federal proposals or policies that could interfere with state authority or control over siting decisions for transmission or generating facilities and the incorporation of state specific consideration of costs and benefits of proposed projects in decisions to authorize or require construction of these projects. The latter resolution was in response to certain FERC orders issued in April 2011[12] that raise questions about the ability of state and local governments and vertically integrated utilities to make decisions about the construction of electric capacity resources to meet reliability needs or other state public policy purposes.

NASUCA has maintained its commitment to the core mission of its member agencies by advocating and supporting policies and programs that are designed to provide reasonably affordable energy to our consumers while maintaining safety and reliability in the delivery of these services. Over time, we have supported the development and implementation of policies to meet these goals in both the short term and long term. NASUCA has supported energy efficiency programs and low-income weatherization programs, adequate funding for direct energy assistance programs for low-income households, the recognition of state and local government authority to make decisions on transmission and generation facilities to meet the needs of consumers in those states, the implementation of policies to support the development of

[10] NASUCA Resolution 2010-01 at www.nasuca.org.
[11] NASUCA Resolution 2011-06 at www.nasuca.org.
[12] See PJM Interconnection LLC, et al., 135 FERC ¶ 61,022 (April 12, 2011) and ISO New England, et al., 135 FERC ¶ 61,029 (April 13, 2011).

diverse energy resources, including renewable resources, and the adoption of policies to reduce greenhouse gas emissions in a way that minimizes the cost to consumers.

Even if we can achieve some relative stability and cost constraint in the cost of generation resources and electricity supply, there are additional pressures on the distribution rates that are part of consumers' electricity bills. I expect that these rates will continue to rise due to increased transmission and distribution infrastructure costs related to reliability investments, investments to increase the resiliency of the transmission and distribution systems in the face of extreme weather, smart grid and advanced meter investments and new cyber security enhancements. These costs will exert upward pressure on the distribution rate component of energy bills paid by many of our consumers.

Increases in energy bills can be difficult to absorb for many households, and particularly for low and moderate income households. Therefore we continue to urge policymakers to consider the cost impacts on consumers as federal policies and programs are proposed and adopted, and to provide for the continuation and adequate funding of programs to ensure that households with limited and fixed incomes can maintain the essential electricity and gas services they need.

Thank you again for inviting me to participate in this hearing. I would be happy to answer any question you may have at this time.

Mr. LANKFORD. Mr. Trisko.

**STATEMENT OF EUGENE M. TRISKO**

Mr. TRISKO. Thank you, Chairman Lankford, Ranking Member Speier, members of the subcommittee.

My name is Eugene Trisko. I'm here to present the findings of a study of the impacts of rising energy costs on American families. I've conducted this study periodically since the year 2000 for the American Coalition for Clean Coal Electricity. The latest version is attached to my testimony.

The report analyzes consumer energy cost increases since 2001, and examines the pattern of energy expenditures among four income levels. Energy costs for gasoline and residential utilities are summarized in nominal dollars by household income category for U.S. households in 2001, 2005, and 2013, using data from EIA, CBO and the U.S. Bureau of the Census. Energy expenditures as a percentage of nominal after-tax income are estimated for the effects of Federal and State income taxes and Federal Social Security and Medicare insurance payments.

The report's findings in sum are: Lower-income families are more vulnerable to energy costs than higher-income families, because energy represents a larger portion of their household budgets.

Energy is consuming one-fifth or more of the household incomes of lower- and middle-income families, reducing the amount of income that can be spent on food, housing, health care, and other necessities.

Approximately one-half of U.S. households have average pretax annual incomes below $50,000. Measured in constant dollars, our median, median household income of about $50,000 is nearly 9 percent below the median household income peak of some $53,000 in 1999.

Family incomes are not keeping pace with the rising cost of energy. In 2001, U.S. households with gross annual incomes below $50,000 spent an average of 12 percent of their average after-tax income of $21,600 on residential and transportation energy. In 2013, these households are projected to spend an average of 20 percent of their average after-tax income of $22,600 on energy. These percentage findings would not change if the current dollar values I've cited for household income and energy expenditures were adjusted for the 30 percent rate of inflation since 2001.

Residential electricity has maintained relatively low price increases compared with residential natural gas and gasoline. Virtually all of the residential electricity price increases over the past two decades have occurred since 2000. Between 2001 and 2013, residential electric prices are projected to increase in nominal dollars by 40 percent to a national average of 12 cents per kilowatt hour, above the 30 percent change in the CPI from 2001 to 2012. These increases are due in part to additional costs associated with meeting U.S. EPA clean air and other environmental standards, as mentioned by witness Hand.

Higher gasoline prices account for three-fourths of the increased cost of energy since 2001. Consumers feel this pain every time they stop at the gas pump. Average U.S. household expenditures for gasoline will more than double in nominal dollars from 2001 to

2013. In comparison, residential energy costs for utilities will increase on average by 46 percent, compared with the CPI increase of about 30 percent.

Fixed-income seniors are a growing proportion of the U.S. Population and are among the most vulnerable to energy cost increases due to their relatively low average incomes. In 2011, the median gross income of 27 million households with a principal householder age 65 or older was $33,000, one-third below the national median household income of $50,000.

These findings are discussed in more detail in the report. I am happy to answer any questions from the subcommittee, and will graciously accept any bonus points the chairman wishes to confer.

Mr. LANKFORD. They are given.

[Prepared statement of Mr. Trisko follows:]

Statement of Eugene M. Trisko
Before the Committee on Oversight and Government Reform
Subcommittee on Energy Policy, Health Care and Entitlements
February 14, 2013

Good afternoon, Chairman Lankford, Ranking Member Speier, and members of the Subcommittee.

I am here today to summarize the findings of a study of the impacts of rising energy costs on American families. I have conducted this study periodically since 2000 for the American Coalition for Clean Coal Electricity and its predecessor organizations. The latest version, "Energy Cost Impacts on American Families, 2001-2013," is attached to my testimony.

The report analyzes consumer energy cost increases since 2001 for all U.S. households and examines the pattern of energy expenditures among four income levels and for senior and minority families. It relies on historical energy consumption survey data and current energy price forecasts from the U.S. Department of Energy's Energy Information Administration (EIA). Energy costs are summarized in nominal dollars by household income category for U.S. households in 2001, 2005, and 2013, using data from EIA surveys and the U.S. Bureau of the Census. Energy price projections for 2013 are based on the DOE/EIA Short-Term Energy Outlook released in December 2012. At that time, EIA projected an average gasoline price of $3.43 per gallon in 2013.

Energy expenditures as a percentage of nominal after-tax income are estimated after the effects of federal and state income taxes and federal social insurance payments. The 2013 projections in this report are based on U.S. Bureau of the Census household income data for 2011 (the most recent available) and projected energy prices for 2013.

Key findings of this report are:

- Approximately one-half of U.S. households have average pre-tax annual incomes below $50,000. Real median household income has declined by 8% since 2007, and is nearly 9% lower than the median household income peak ($53,252) in 1999. The declining median income of American households over the past decade marks the reversal of a 50-year trend of rising American family incomes.

- Family incomes are not keeping pace with the rising costs of energy. In 2001, U.S. households with gross annual incomes below $50,000 spent an average of 12% of their average after-tax income of $21,635 on residential and transportation energy. In 2013, these households are projected to spend an average of 20% of their average after-tax income of $22,591 on energy. These percentage findings would not change if the current dollar values for household incomes and energy expenditures were adjusted for inflation since 2001.

- Residential electricity has maintained relatively low and stable average annual price increases compared with residential natural gas and gasoline. Virtually all of the residential electricity price increases over the

past two decades have occurred since 2000. From 1990 to 2000, electricity prices increased by just 5% in nominal dollars, well below the 32% rate of inflation during this period. However, between 2001 and 2013, residential electric prices are projected to increase by 40% to a national average of 12.0 cents per kWh – above the 30% change in the Consumer Price Index from 2001 to 2012 (CPI data are not available for 2013.) These increases are due in part to additional capital, operating and maintenance costs associated with meeting U.S. EPA clean air and other environmental standards.

- Higher gasoline prices account for three-fourths of the increased cost of energy for consumers since 2001. Average U.S. household expenditures for gasoline will grow by 122% in nominal dollars from 2001 to 2013, based on EIA gasoline price projections for 2013. In comparison, residential energy costs for heating, cooling, and other household energy services will increase on average by 46%, from $1,493 in 2001 to a projected $2,177 per household in 2013.

- Lower-income families are more vulnerable to energy costs than higher-income families because energy represents a larger portion of their household budgets. Energy is consuming one-fifth or more of the household incomes of lower- and middle-income families, reducing the amount of income that can be spent on food, housing, health care, and other necessities.

- Fixed-income seniors are a growing proportion of the U.S. population, and are among the most vulnerable to energy cost increases due to their relatively low average incomes and high per capita energy use. In 2011, the median gross income of 26.8 million households with a principal

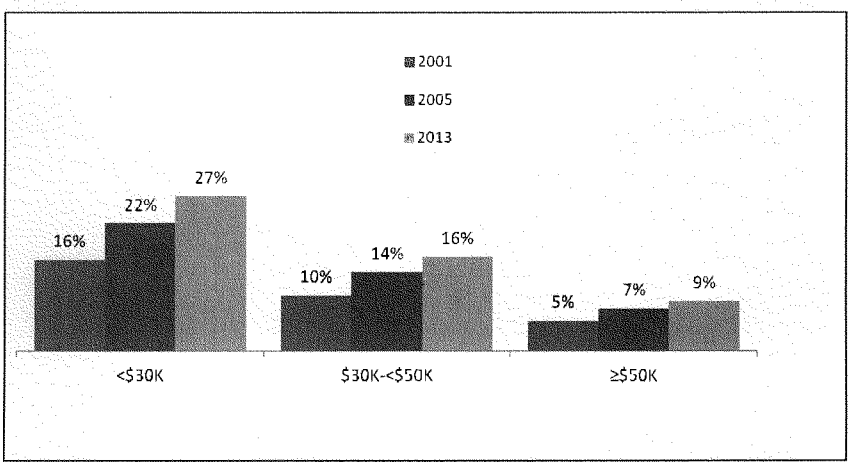
householder aged 65 or older was $33,118, one-third below the national median household income of $50,050.

These summary findings are discussed in more detail in the principal report. I am happy to answer any questions that the Subcommittee may have.

Thank you.

ACCCE
AMERICAN COALITION FOR CLEAN COAL ELECTRICITY

# Energy Cost Impacts on American Families, 2001-2013




Energy Costs as Percentage of Nominal After-Tax Household Income

January 2013
www.americaspower.org

## Summary of Findings

This report analyzes consumer energy cost increases since 2001 for all U.S. households and examines the pattern of energy expenditures among four income levels and for senior and minority families in 2013. It relies on historical energy consumption survey data and current energy price forecasts from the U.S. Department of Energy's Energy Information Administration (EIA).[1] Energy costs are summarized in nominal (then-current) dollars by household income category for U.S. households in 2001, 2005, and 2013, using data from EIA and the U.S. Bureau of the Census.[2] Energy price projections for 2013 are based on the DOE/EIA Short-Term Energy Outlook released in December 2012.

Energy expenditures as a percentage of nominal after-tax income are estimated after the effects of federal and state income taxes and federal social insurance payments. The 2013 projections in this report are based on U.S. Bureau of the Census household income and population data for 2011 (the most recent available) and projected energy prices for 2013.

Key findings of this report are:

- Approximately one-half of U.S. households have average pre-tax annual incomes below $50,000. Real median household income has declined by 8% since 2007, and is nearly 9% lower than the median household income peak ($53,252) in 1999. The declining median income of American households over the past decade marks the reversal of a 50-year trend of rising American family incomes.

- Family incomes are not keeping pace with the rising costs of energy. In 2001, households with gross annual incomes below $50,000 spent an average of 12% of their average after-tax income of $21,635 on residential and transportation energy. In 2013, these households are projected to spend an average of 20% of their average after-tax income of $22,591 on energy. For low- and middle-income families, energy costs are now consuming a portion of after-tax household income comparable to that traditionally spent on major categories such as housing, food, and health care.

- In FY2011, federal funding for the Low Income Home Energy Assistance Program (LIHEAP) was cut from $5.1 billion to $4.7 billion. In FY2012, Congress again reduced annual funding for LIHEAP to $3.5 billion. Based on the residential energy costs estimated in this study, a $3.5 billion funding level for LIHEAP would offset less than 6% of residential energy bills for households with incomes below $30,000.

- Higher gasoline prices account for three-fourths of the increased cost of energy for consumers since 2001. Average U.S. household expenditures for gasoline will grow by 122% in nominal dollars from 2001 to 2013, based on EIA gasoline price projections for 2013. In comparison, residential energy costs for heating, cooling, and other household energy services will increase on average by 46%, from $1,493 in 2001 to a projected $2,177 per household in 2013.

- Residential electricity has maintained relatively low and stable average annual price increases compared with residential natural gas and gasoline. Electricity prices have increased by 54% in nominal dollars since 1990, below the rate of inflation, while the nominal prices of residential natural gas and gasoline have nearly doubled and tripled, respectively, over this period.

- Virtually all of the residential electricity price increases over the past two decades have occurred since 2000. These increases are due in part to additional capital, operating and maintenance costs associated with meeting clean air and other environmental standards.

- Lower-income families are more vulnerable to energy costs than higher-income families because energy represents a larger portion of their household budgets, reducing the amount of income that can be spent on food, housing, health care, and other necessities. Nearly one-third of U.S. households had gross annual incomes less than $30,000 in 2011. Energy costs accounted for an average of 27% of their family budgets, before taking into account any energy assistance.

- The Census Bureau finds that real median household incomes for both white and minority households have not returned to their pre-2001 recession peaks. For non-Hispanic whites, median household income in 2011 was 7.0% below its peak of $59,604 in 1999. Real median household income for Blacks was 16.8% lower (from $38,747 in 2000). Household incomes for Asians were 10.6% lower (from $72,821 in 2000), and 10.8% lower for Hispanics (from $43,319 in 2000.)

- In 2011, 62% of Hispanic households and 66% of Black households had average annual incomes below $50,000, compared with 45% of white households and 39% of Asian households. These income inequalities magnify the burdens of energy price increases on Black and Hispanic households.

- Fixed-income seniors are a growing proportion of the U.S. population, and are among the most vulnerable to energy cost increases due to their relatively low average incomes. In 2011, the median gross income of 26.8 million households with a principal householder aged 65 or older was $33,118, one-third below the national median household income.

## Energy Costs for U.S. Families, 2001–2013

Energy costs for residential utilities and gasoline are straining low- and middle-income family budgets. As Table 1 illustrates, the average American family with an after-tax income of $53,092 will spend an estimated $5,907 on energy in 2013, or 11% of the family budget. The 60.5 million households earning less than $50,000—representing 49.9% of U.S. households—will devote an estimated 20% of their after-tax incomes to energy, compared with an average of 9% for households with annual incomes above $50,000. For the 27.7 million lower-income families with pre-tax incomes between $10,000 and $30,000, energy expenditures in 2013 will consume 23% of average after-tax incomes, compared with 14% in 2001.

The summary income and energy expenditure data in Table 1 are based on U.S. Bureau of the Census pre-tax household income data for 2011 (the most recent available) and energy prices for 2013 projected by DOE/EIA. The Congressional Budget Office has calculated effective total federal tax rates, including individual income taxes and payments for Social Security and other social welfare programs.[3] Federal tax rates for 2013 are based on CBO's estimates for 2009, the most recent year available, adjusted for payroll and other tax increases in the American Taxpayer Relief Act of 2012.[4] State income taxes are estimated from current state income tax rates

**Table 1. Estimated Household Energy Expenditures as a Percentage of Income, 2013**

| Pre-tax income | <$10K | $10K-<$30K | $30K<$50K | <$50K | ≥$50K | Average |
|---|---|---|---|---|---|---|
| Est. average after-tax income | $4,726 | $18,261 | $33,297 | $22,591 | $84,828 | $53,092 |
| Percentage of households | 7.6% | 22.9% | 19.4% | 49.9% | 50.1% | 100.0% |
| Residential energy | $1,622 | $1,719 | $1,937 | $1,789 | $2,568 | $2,177 |
| Transportation fuel | $1,991 | $2,473 | $3,497 | $2,798 | $4,688 | $3,730 |
| Total energy | $3,613 | $4,192 | $5,434 | $4,587 | $7,256 | $5,907 |
| Energy pct. of after-tax income | 76.5% | 23.0% | 16.3% | 20.3% | 8.6% | 11.1% |

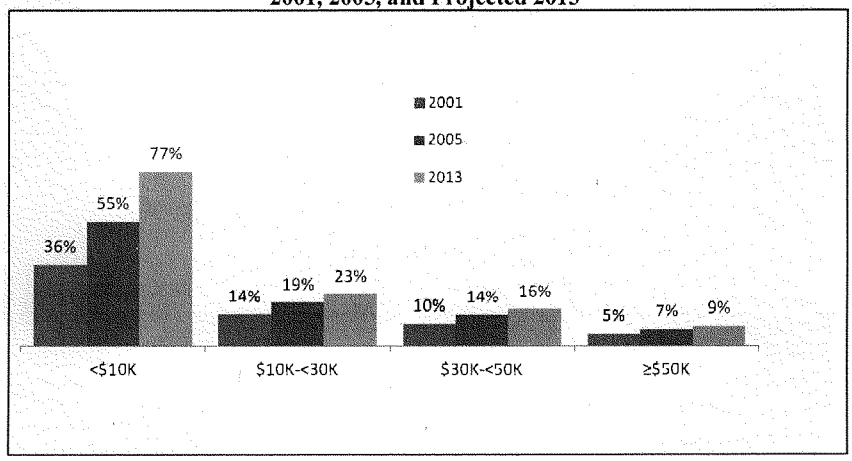
*Source*: Appendix Table 1.

Many lower-income families qualify for federal or state energy assistance. However, these programs are unable to keep up with the increase in household energy costs. In FY2011, federal funding for the Low Income Home Energy Assistance Program (LIHEAP) was cut from $5.1 billion to $4.7 billion.[5] In FY2012, Congress again

reduced annual funding for LIHEAP to $3.5 billion.[6] Based on DOE/EIA's 2009 Residential Energy Consumption Survey (2012), a $3.5 billion funding level for LIHEAP would offset less than 6% of residential energy bills for lower-income households with incomes below $30,000.

The portion of household incomes devoted to energy has increased substantially since 2001 (see Chart 1). In 2001, 62 million families with gross annual incomes less than $50,000 (2001$) spent an average of 12% of their after-tax income on residential and transportation energy. In 2013, energy will account for an average of 20% of the after-tax income of the 60 million American families in this income category. Energy cost burdens are greatest on the poorest families, those earning less than $10,000. Their average energy bills will more than double, from 36% of estimated after-tax income in 2001 to 77% in 2013. These estimates do not account for any government or private energy assistance that these families may receive, and thus do not reflect actual personal energy consumption expenditures.

**Chart 1**
**Energy Costs as Percentage of Nominal After-Tax Household Income, 2001, 2005, and Projected 2013**

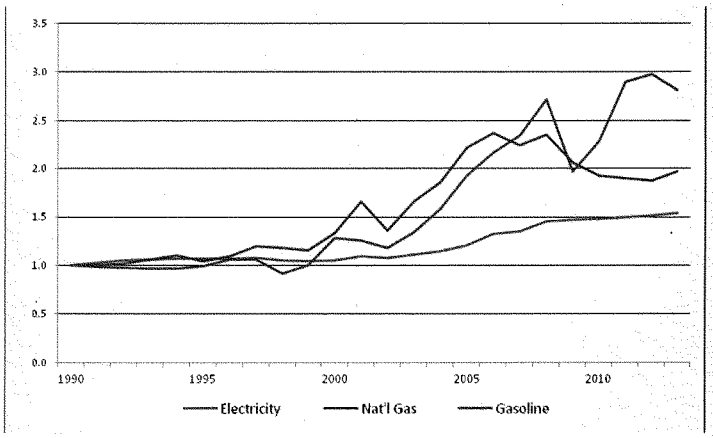



*Source*: Appendix Table 1.

## Relative Energy Price Increases

Among key consumer energy products, electricity has increased at the lowest rate measured in nominal dollars over the past two decades. Chart 2 provides an index of consumer energy prices in nominal dollars since 1990. Prices for residential natural gas and gasoline have nearly doubled and tripled, respectively, while residential electricity prices increased by 54%, well below the 76% rate of inflation based on the Consumer Price Index between 1990 and 2012.[7]

**Chart 2**
**Price Trends of Consumer Energy Products in Nominal Dollars, 1990-2013**
**(Index 1990 = 1.0)**




*Sources:* U.S. DOE/EIA, Annual Energy Review 2010 and Short-Term Energy Outlook (December 2012).

Unlike other consumer energy products, electricity has maintained relatively low rates of price increase below the overall rate of inflation. However, as Chart 2 indicates, virtually all of the residential electricity price increases over the past two decades have occurred since 2000. From 1990 to 2000, electricity prices increased by just 5% in nominal dollars. However, between 2001 and 2013, residential electric prices are projected to increase by 40% to a national average of 12.0 cents per kWh. These increases are due in part to additional capital, operating and maintenance costs associated with meeting U.S. EPA clean air and other environmental standards.[8]

Current and prospective EPA rules are expected to result in additional electricity price increases in many areas of the country. For example, EPA estimates the annual costs of compliance with one recent Clean Air Act regulation – the utility Mercury and Air Toxics Standards rule – at $9.6 billion ($2007) in 2016.[9] The projected annual cost of this rule is 45% greater than EPA's $6.6 billion ($2006) estimate of the costs of compliance with all utility Clean Air Act requirements in 2010.[10]

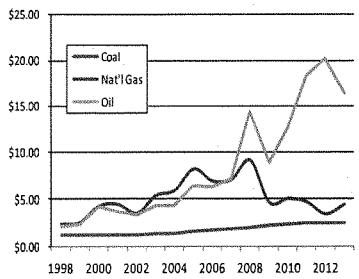
**Electric Utility Fuel Cost Trends**

The relatively modest long-term rate of price increase for residential electricity reflects, in part, the electric utility industry's reliance on domestic coal for a substantial portion of its energy supplies. As Chart 3 illustrates, coal prices at electric utilities have remained stable relative to competing fuels such as natural gas and petroleum.[11] Natural gas prices have declined sharply in the past five years due to increased supply, and have helped to restrain the rate of residential electricity price increases.

EIA forecasts that domestic coal will cost $2.44 per million British Thermal Units (MMBTU) delivered to power plants in 2013.[12] The cost of natural gas at utility plants in 2013 is projected at $4.47/MMBTU, a 29% increase over 2012 delivered gas prices.[13] These natural gas price increases will tend to increase the utilization of lower-cost coal.

EIA projects that natural gas wellhead prices will remain below $5 per MMBTU (in 2011$) through 2025.[14] Natural gas wellhead prices are forecasted to reach $6.32 (2011$) per MMBTU in 2035, and $7.83 per MMBTU in 2040.[15] Minemouth coal prices are projected to increase at a lower average annual rate, from $2.18 per MMBTU in 2012 to $2.94 per MMBTU in 2035 and $3.08 per MMBTU in 2040 (in 2011$).[16]

**Chart 3**
**Electric Utility Fuel Costs, 1998-2013**
**(Nominal $ per Million BTU)**




*Source:* DOE/EIA, Electric Power Annual (2010) and Short-Term Energy Outlook (December 2012).

## Consumer Energy Cost Estimates

The distribution of U.S. households by income categories provides the basis for estimating the effects of energy prices on consumer budgets in 2013. EIA's quadrennial Surveys of Residential Energy Consumption[17] are the principal sources for estimating energy expenditures for residential heating, cooling, electricity, and other household energy services. For this report, the most recent EIA 2009 survey (2012) is updated with Census Bureau 2011 population data and EIA's December 2012 forecast of 2013 residential energy prices.

EIA's 2001 Survey of Household Vehicles Energy Use[18] provides benchmark data on transportation energy costs by household income category based on gallons of gasoline used per household. These gasoline consumption data are updated using Census Bureau 2011 population data and EIA's December 2012 national average retail gasoline price forecast for 2013 of $3.43 per gallon.

It is assumed that household gasoline usage in 2013 will be 10.1% below the levels of the EIA 2001 survey, reflecting a population-adjusted decline of motor gasoline sales over this period. The more recent 2009 National Highway Transportation Survey (2011) confirms the aggregate gasoline expenditure estimates for 2013 in this report.[19]

### Residential and Transportation Energy Expenses

The principal residential energy expenses are for electricity and natural gas for heating, cooling, lighting, and appliances. Some homes also use propane fuel (LPG) and other heating sources, such as home heating oil, kerosene, and wood.

Gasoline accounts for the largest single increase in consumer energy costs over the past decade. In 2013, the average U.S. family will spend an estimated $3,730 on gasoline, compared with $1,680 in 2001 – an average increase of $2,049 per household.

The increase in gasoline prices follows a long-term trend of increased market shares of pickup trucks and sport utility vehicles (SUVs), and an increase in the average number of vehicles owned per household.[20] While average vehicle efficiency has been improving in recent model years,[21] many families continue to own low-efficiency vehicles with low trade-in values. Improved vehicle quality, coupled with the recession, is increasing the average age of vehicles on the road.[22]

The impacts of residential and transportation energy costs on low- and middle-income families are summarized in Table 2 and in Appendix Table 1. Residential energy costs have increased on average by 46% since 2001, from $1,493 to $2,177 per household. Consumer costs for gasoline grew by 122% during this period, accounting for 76% of

the overall $2,688 increase in total household energy costs since 2001.

**Table 2. Estimated After-Tax Income and Energy Costs by Income Category, 2001, 2005, and Projected 2013**
**(In nominal dollars)**

| Pre-tax annual income: | <$10K | $10K-<$30K | $30K-<$50K | <$50K | ≥$50K | Totals |
|---|---|---|---|---|---|---|
| **Est. avg. after-tax income** | | | | | | |
| 2001 | $5,532 | $17,520 | $32,380 | $21,635 | $76,861 | $45,127 |
| 2005 | $5,238 | $17,450 | $32,259 | $21,879 | $78,178 | $47,771 |
| 2013 | $4,726 | $18,261 | $33,297 | $22,591 | $84,828 | $53,092 |
| | | | | | | |
| **Residential energy $** | | | | | | |
| 2001 | $1,039 | $1,260 | $1,456 | $1,299 | $1,836 | $1,493 |
| 2005 | $1,351 | $1,498 | $1,733 | $1,565 | $2,173 | $1,850 |
| 2013 | $1,622 | $1,719 | $1,937 | $1,789 | $2,568 | $2,177 |
| | | | | | | |
| **Transport energy $** | | | | | | |
| 2001 | $934 | $1,160 | $1,638 | $1,306 | $2,195 | $1,680 |
| 2005 | $1,513 | $1,878 | $2,652 | $2,119 | $3,554 | $2,790 |
| 2013 | $1,991 | $2,473 | $3,497 | $2,798 | $4,688 | $3,730 |
| | | | | | | |
| **Total energy $** | | | | | | |
| 2001 | $1,973 | $2,420 | $3,094 | $2,605 | $4,031 | $3,218 |
| 2005 | $2,863 | $3,375 | $4,385 | $3,684 | $5,725 | $4,640 |
| 2013 | $3,613 | $4,192 | $5,434 | $4,587 | $7,256 | $5,907 |

*Source:* Appendix Table 1.

## Household Energy Cost Impacts

As energy costs have risen over the past decade, the real, inflation-adjusted incomes of American families have declined. The U.S. Census Bureau reports in its latest assessment of income and poverty that real median household income declined by 1.5% between 2010 and 2011, a second consecutive year of declining family incomes. Real median household income has declined by 8% since 2007, and is nearly 9% lower than the median household income peak ($53,252) in 1999.[23]

The official poverty rate in 2011 remained virtually unchanged from its all-time historic high of 15% recorded in 2010.[24] The Census Bureau finds that 46.2 million Americans lived in poverty in 2011. For children under the age of 18, the poverty rate was 22%.[25] Poverty is more pervasive among some minority groups: more than 27% of Blacks and 25% of Hispanics lived in poverty in 2011.[26]

Therefore, increasing energy costs are straining low- and middle-income family budgets. Heating, cooling, and transportation are necessities of life, and increased energy costs are impacting low- and middle-income family budget choices among energy and other necessities such as health care, housing, and nutrition.

**The Shrinking Middle Class**

The decline of American household incomes over the past decade marks the reversal of a long-term trend of increasing incomes across all segments of society. A recent Pew Research study of middle-class income trends since 1950 found that:

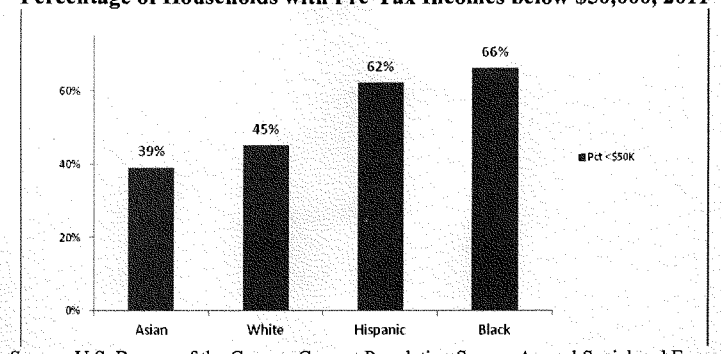
> For the half century following World War II, American families enjoyed rising prosperity in every decade—a streak that ended in the decade from 2000 to 2010, when inflation-adjusted family income fell for the middle income as well as for all other income groups, according to U.S. Census Bureau data. ...
>
> (T)hose in the upper-income tier now take in a much larger share of U.S. aggregate household income than they did four decades ago, while those in the middle tier take in a much lower share. ... (U)pper-income households accounted for 46% of U.S. aggregate household income in 2010, compared with 29% in 1970. Middle-income households claimed 45% of aggregate income in 2010, compared with 62% in 1970. Lower-income households had 9% of aggregate income in 2010 and 10% in 1970.[27]

The steady decline of household incomes since the 1999 peak of real median household income has contributed to the rising share of energy costs for typical family budgets. These impacts are most pronounced among households earning less than the national median income of approximately $50,000.

**Energy Cost Impacts on Minorities**

EIA's residential energy consumption surveys do not provide energy consumption expenditures by income group combined with minority status. However, as illustrated in Chart 4, the unequal distribution of household incomes is a principal factor leading to disproportionate energy cost impacts on many minority families. More than 60% of Hispanic households and two-thirds of Black households had pre-tax household incomes below $50,000 in 2011, compared with 39% for Asian families and 45% for white households.

**Chart 4**
**Percentage of Households with Pre-Tax Incomes below $50,000, 2011**




*Source*: U.S. Bureau of the Census, Current Population Survey Annual Social and Economic Supplement (2012).

The Census Bureau finds that real median household incomes for both white and minority households have not returned to their pre-2001 recession peaks.[28] For non-Hispanic whites, median household income in 2011 was 7.0% below its peak of $59,604 in 1999. Real median household income for Blacks was 16.8% lower (from $38,747 in 2000). Household incomes for Asians were 10.6% lower (from $72,821 in 2000), and 10.8% lower for Hispanics (from $43,319 in 2000.)

**Table 3. Distribution of U.S. Households by Pre-tax Annual Income, 2011**

| Pre-tax annual income<br>**Percentage of households** | <$10K | $10-<$30K | $30-<$50K | <$50K | ≥$50K | Totals |
|---|---|---|---|---|---|---|
| Asian | 7% | 16% | 16% | 39% | 61% | 100% |
| Black | 16% | 31% | 20% | 66% | 34% | 100% |
| Hispanic | 10% | 28% | 24% | 62% | 38% | 100% |
| White | 5% | 21% | 19% | 45% | 55% | 100% |
| U.S. average | 8% | 23% | 19% | 50% | 50% | 100% |
| **Avg. pre-tax income** | | | | | | Average |
| Asian | $3,215 | $19,758 | $38,878 | $24,533 | $124,783 | $85,644 |
| Black | $4,968 | $19,014 | $38,862 | $21,646 | $93,539 | $44,802 |
| Hispanic | $4,830 | $19,721 | $38,712 | $24,653 | $97,567 | $52,352 |
| White | $5,005 | $19,763 | $39,315 | $25,778 | $113,991 | $73,439 |
| U.S. average | $4,862 | $19,657 | $38,989 | $24,924 | $114,323 | $69,677 |

*Source:* U.S. Bureau of the Census, Current Population Reports – 2011 Annual (2012).

Table 3 (above) summarizes 2011 household incomes for Asian, Black, Hispanic, and white families by gross annual income bracket. The average incomes of Hispanic and Black households were 29% and 39% lower, respectively, than the average income of white households. Asian households, on the other hand, had average annual incomes 23% higher than the U.S. average income of $69,677. Based on these income inequality data, disproportionate numbers of Black and Hispanic families are more vulnerable to energy price increases than Asian or white families.

**Impacts on Senior Citizens**

In 2011, 29% of U.S. households received Social Security benefits. The average basic Social Security income of these 33 million households was $16,645.[29] Some 61% of households receiving Social Security benefits also received other retirement income in 2011 averaging $22,969.[30]

The U.S. Census Bureau reports that the median income of 27 million households with a principal householder aged 65 or older was $33,118 in 2011, or 34% below the national household median income of $50,054.[31]

Lower-income senior households that depend mainly on fixed incomes are among those most vulnerable to energy price increases. Food, health care, and other necessities compete with energy costs for a share of the household budget. The $33,118 median income of senior U.S. households means that half of these households depend on incomes below this level.

## Conclusion

Energy costs have increased substantially as a fraction of annual family budgets since 2001, with the largest impacts occurring among low- and middle-income households. The rapid escalation of consumer energy prices, along with stagnant income growth, magnifies the importance of energy costs to all American families. The unequal distribution of incomes in the United States imposes disproportionate energy cost burdens on tens of millions of minority and senior households.

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Acknowledgment – This report was prepared for ACCCE by Eugene M. Trisko, who has conducted these analyses annually since 2000. Mr. Trisko is an attorney and energy economist who represents labor and industry clients. He previously served as an attorney in the Bureau of Consumer Protection of the U.S. Federal Trade Commission and as an expert witness on utility cost of capital.

**Notes**

[1] Data on residential energy consumption patterns by income are derived from U.S. Department of Energy, Energy Information Administration, "Survey of Residential Energy Consumption," (2001, 2005 and 2009 surveys), available at http://www.eia.doe.gov/emeu/recs/contents.html. Data for 2009 energy consumption by household income are updated to estimated 2013 values based on changes in household income and population, and changes in consumer residential energy prices between 2009 and 2013 from EIA's "Short-Term Energy Outlook" (December 2012).

[2] Household incomes by gross income category are calculated from the 2011 distribution of household income in U.S. Bureau of the Census, Current Population Survey, "Annual Social and Economic Supplement" (2012).

[3] Congressional Budget Office (CBO), "Effective Federal Tax Rates Under Current Law, 2001 to 2014" (August 2004); "Effective Federal Tax Rates 1979-2006" (April 2009). Effective federal tax rates for the income categories in this paper were interpolated from CBO's tax rates by income quintile based on the distribution of 2001, 2005 and 2011 household incomes. State income tax rates were estimated from tax rates summarized in Federation of Tax Administrators, http://www.taxadmin.org/fta/rate/ind_inc.html.

[4] Effective federal tax rates for 2013 are estimated from CBO's estimates for 2009 adjusted for payroll and other tax increases in the American Taxpayer Relief Act of 2012 (January 1, 2013), as analyzed by the Urban-Brookings Tax Policy Center (January 1, 2013, ATRA versus patched 2012 base.) See, http://www.taxpolicycenter.org/numbers/displayatab.cfm?Docid=3755&DocTypeID=1.

[5] See, http://www.neada.org/appropriations/index.html.
http://www.acf.hhs.gov/programs/ocs/resource/low-income-home-energy-assistance-program-provides-help-for-struggling

[6] See, http://www.acf.hhs.gov/programs/ocs/resource/low-income-home-energy-assistance-program-provides-help-for-struggling

[7] U.S. Bureau of Labor Statistics, CPI Inflation Calculator, available at http://data.bls.gov/cgi-bin/cpicalc.pl

[8] See, U.S. EPA, "The Benefits and Costs of the Clean Air Act from 1990 to 2020" (2011) at Table 3-2 (electric utility direct annual compliance costs increased from an estimated $1.4 billion ($2006) in 2000 to $6.6 billion ($2006) in 2010.) Since 2000, the utility sector has complied with the federal acid rain program enacted in the 1990 Clean Air Act Amendments, EPA's 1998 Ozone Transport Rule reducing nitrogen oxide emissions in 19 eastern states, Phase I of EPA's 2005 Clean Air Interstate Rule requiring further reductions of sulfur dioxide and nitrogen oxide emissions in the eastern U.S., and a variety of other federal and state air and water quality standards.

[9] U.S. EPA, "Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards," (December 2011) at ES-14.

[10] U.S. EPA, "The Benefits and Costs of the Clean Air Act," *supra.*

[11] U.S. DOE/EIA, "Electric Power Annual 2010," (historical tables, 2011) and "Short-Term Energy Outlook," (December 2012).

[12] U.S. DOE/EIA, "Short-Term Energy Outlook" (December 2012), Table 2.

[13] *Id.*

[14] U.S. DOE/EIA, "Annual Energy Outlook 2013 Early Release," (December 2012).

[15] *Id.*

[16] *Id.*

[17] U.S. DOE/EIA, "Residential Energy Consumption Survey, 2009," (2012). Data in this report for households with incomes below $60,000 were provided to the author by EIA.

[18] U.S. DOE/EIA, "Household Vehicles Energy Use: Latest Data & Trends" (November 2005), available at http://www.eia.doe/gov/emeu/rtecs/nhts_survey/2001/.

[19] U.S. Department of Transportation, National Household Travel Survey, Summary of Travel Trends (June 2011) at Table 34 (average household gasoline expenditures increased from $1,275 in 2001 (2001$) to $3,308 (2009$) in 2009.) The average price of gasoline in the NHTS 2009 survey was $2.96/gallon, 16% less than the $3.43/gallon price that EIA projects for 2013. Adjusted by the change in average gasoline prices, the 2009 NHTS data imply average 2013 household gasoline expenditures of $3,837, compared with the $3,730 estimate in this report. The 2009 NHTS does not provide gasoline expenditure or consumption data by household income category.
[20] *Id.*, at Fig. 1, Tables 1, 20.
[21] *See*, U.S. EPA, Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends:1975 Through 2011 (March 2012) at iv, available at http://www.epa.gov/otaq/cert/mpg/fetrends/2012/420s12001a.pdf.
[22] R.L. Polk & Co. reports that the average age of automobiles on the road was 10.8 years as of the second quarter of 2012, reflecting a rising trend for the past 10 years. *See*, http://blog.polk.com/blog/blog-posts-by-lonnie-miller/americans-are-holding-their-vehicles-longeris-it-good-for-loyalty.
[23] U.S. Census Bureau, "Income, Poverty, and Health Insurance Coverage in the United States: 2011" (2012), at 5.
[24] *Id.*, Table 3.
[25] *Id.*
[26] *Id.*
[27] Pew Research Center, "The Lost Decade of the Middle Class" (August 22, 2012) at 9-10 (footnotes omitted.) Pew defines middle income households as those with incomes 67% to 200% of the median household income.
[28] U.S. Census Bureau, "Income, Poverty, and Health Insurance Coverage in the United States: 2011" (2012), at 8.
[29] U.S. Census Bureau, "American Community Survey – 2011 American Community Survey 1-Year Estimates," (2012).
[30] *Id.*
[31] U.S. Census Bureau, "Income, Poverty, and Health Insurance Coverage in the United States: 2011" (2012), Table 1.

**APPENDIX TABLE 1 - 2001, 2005 AND PROJECTED 2013 HOUSEHOLD INCOME AND ENERGY EXPENSES**

**2001 HOUSEHOLD ENERGY EXPENSES BY INCOME CATEGORY - ALL U.S. HOUSEHOLDS**

| | | | | | | SUBTOTALS | | |
|---|---|---|---|---|---|---|---|---|
| | <$10K | $10K-<$30K | $30K-</=$50K | >/=$50K | TOTALS | <$30K | <$50K | >/=$50K |
| Households (Mil.) | 9.8 | 28.9 | 23.6 | 47.0 | 109.3 | 38.7 | 62.3 | 47.0 |
| Pct of total households | 9.0% | 26.4% | 21.6% | 43.0% | 100.0% | 35.4% | 57.0% | 43.0% |
| Avg pre-tax income | $5,733 | $19,707 | $39,201 | $107,649 | $60,488 | $16,168 | $24,893 | $107,649 |
| Effec. fed tax rate % | 2.0% | 9.0% | 14.9% | 22.3% | 21.0% | 7.2% | 10.1% | 22.3% |
| Est. state tax rate% | 1.5% | 2.6% | 4.0% | 6.3% | 4.4% | 2.3% | 3.0% | 6.3% |
| Est. after-tax income | $5,532 | $17,520 | $32,380 | $76,861 | $45,127 | $14,624 | $21,635 | $76,861 |
| Residential energy $ | $1,039 | $1,260 | $1,456 | $1,836 | $1,493 | $1,204 | $1,299 | $1,836 |
| Residential electric $ | $628 | $772 | $922 | $1,172 | $938 | $736 | $806 | $1,172 |
| Other resid. energy $ | $411 | $488 | $534 | $664 | $555 | $489 | $493 | $664 |
| Transport energy $ | $934 | $1,160 | $1,638 | $2,195 | $1,680 | $1,103 | $1,306 | $2,195 |
| Total energy $ | $1,973 | $2,420 | $3,094 | $4,031 | $3,218 | $2,307 | $2,605 | $4,031 |
| Energy % of after-tax inc. | 35.7% | 13.8% | 9.6% | 5.2% | 7.1% | 15.8% | 12.0% | 5.2% |
| Resid. % of after-tax inc. | 18.8% | 7.2% | 4.5% | 2.4% | 3.3% | 8.2% | 6.0% | 2.4% |
| Trans. % of after-tax inc. | 16.9% | 6.6% | 5.1% | 2.9% | 3.7% | 7.5% | 6.0% | 2.9% |

**2005 HOUSEHOLD ENERGY EXPENSES BY INCOME CATEGORY - ALL U.S. HOUSEHOLDS**

| | <$10K | $10K-<$30K | $30K-</=$50K | >/=$50K | TOTALS | <$30K | <$50K | >/=$50K |
|---|---|---|---|---|---|---|---|---|
| Households (Mil.) | 9.4 | 28.1 | 23.4 | 53.5 | 114.4 | 37.5 | 60.9 | 53.5 |
| Pct of total households | 8.2% | 24.6% | 20.5% | 46.8% | 100.0% | 32.8% | 53.2% | 46.8% |
| Avg pre-tax income | $5,400 | $19,695 | $39,388 | $106,947 | $63,344 | $16,112 | $25,055 | $106,947 |
| Effec. fed tax rate % | 2.0% | 8.8% | 14.1% | 20.6% | 20.1% | 7.1% | 9.8% | 20.6% |
| Est. state tax rate% | 1.0% | 2.6% | 4.0% | 6.3% | 4.5% | 2.2% | 2.9% | 6.3% |
| Est. after-tax income | $5,238 | $17,450 | $32,259 | $78,178 | $47,771 | $14,614 | $21,879 | $78,178 |
| Residential energy $ | $1,351 | $1,498 | $1,733 | $2,173 | $1,850 | $1,461 | $1,565 | $2,173 |
| Residential electric $ | $785 | $914 | $1,098 | $1,361 | $1,150 | $882 | $965 | $1,361 |
| Other resid. energy $ | $566 | $583 | $635 | $812 | $699 | $579 | $600 | $812 |
| Transport energy $ | $1,513 | $1,878 | $2,652 | $3,554 | $2,790 | $1,786 | $2,119 | $3,554 |
| Total energy $ | $2,863 | $3,375 | $4,385 | $5,728 | $4,640 | $3,247 | $3,684 | $5,728 |
| Energy % of after-tax inc. | 54.7% | 19.3% | 13.6% | 7.3% | 9.7% | 22.2% | 16.8% | 7.3% |
| Resid. % of after-tax inc. | 25.8% | 8.6% | 5.4% | 2.8% | 3.9% | 10.0% | 7.2% | 2.8% |
| Trans. % of after-tax inc. | 28.9% | 10.8% | 8.2% | 4.5% | 5.8% | 12.2% | 9.7% | 4.5% |

**PROJECTED 2013 HOUSEHOLD ENERGY EXPENSES BY INCOME CATEGORY - ALL U.S. HOUSEHOLDS**

| | <$10K | $10K-<$30K | $30K-</=$50K | >/=$50K | TOTALS | <$30K | <$50K | >/=$50K |
|---|---|---|---|---|---|---|---|---|
| Households (Mil.) | 9.2 | 27.7 | 23.5 | 60.6 | 121.1 | 36.9 | 60.5 | 60.6 |
| Pct of total households | 7.6% | 22.9% | 19.4% | 50.1% | 100.0% | 30.5% | 49.9% | 50.1% |
| Avg pre-tax income | $4,862 | $19,657 | $38,989 | $114,323 | $69,677 | $15,958 | $24,925 | $114,323 |
| Effec. fed tax rate % | 1.8% | 4.5% | 10.6% | 19.5% | 19.2% | 3.8% | 6.5% | 19.5% |
| Est. state tax rate% | 1.0% | 2.6% | 4.0% | 6.3% | 4.6% | 2.2% | 2.9% | 6.3% |
| Est. after-tax income | $4,726 | $18,261 | $33,297 | $84,828 | $53,092 | $14,997 | $22,591 | $84,828 |
| Residential energy $ | $1,622 | $1,719 | $1,937 | $2,568 | $2,177 | $1,687 | $1,789 | $2,568 |
| Residential electric $ | $1,093 | $1,130 | $1,311 | $1,682 | $1,437 | $1,116 | $1,195 | $1,682 |
| Other resid. energy $ | $529 | $589 | $626 | $886 | $740 | $571 | $594 | $886 |
| Transport energy $ | $1,991 | $2,473 | $3,497 | $4,688 | $3,730 | $2,342 | $2,798 | $4,688 |
| Total energy $ | $3,613 | $4,192 | $5,434 | $7,256 | $5,907 | $4,029 | $4,587 | $7,256 |
| Energy % of after-tax inc. | 76.5% | 23.0% | 16.3% | 6.6% | 11.1% | 26.9% | 20.3% | 8.6% |
| Resid. % of after-tax inc. | 34.3% | 9.4% | 5.8% | 3.0% | 4.1% | 11.2% | 7.9% | 3.0% |
| Trans. % of after-tax inc. | 42.1% | 13.5% | 10.5% | 5.5% | 7.0% | 15.6% | 12.4% | 5.5% |

Sources: Population and income data from U.S. Bureau of the Census, Current Population Survey Supp. (2001, 2005, 2012 eds.) Residential energy costs are based on U.S. DOE Residential Energy Consumption Survey (2001, 2005, 2009 eds.) 2013 projections based on changes in 2009-2013 residential energy prices from U.S. DOE/EIA Annual Energy Review 2011 and Short-Term Energy Outlook (December 2012). Transportation energy expenditures are estimated from U.S. DOE/EIA, Household Vehicle Energy Use: Latest and Trends (Nov 2005) and DOE/EIA Short-Term Energy Outlook (December 2012). Gasoline use per household in 2013 is reduced by 10.1% from 2001 levels based on DOE/EIA data on total gasoline consumption adjusted by households. Average effective federal tax rates are estimated from Congressional Budget Office, Effective Federal Tax Rates Under Current Law, 2001-2014 (August 2004), and Effective Federal Tax Rates, 1979-2006 (April 2009). Tax rates for 2013 are based on CBO 2009 effective rates compiled by the Tax Policy Foundation for 1979-2009 (October 24, 2012), adjusted for changes in the American Taxpayer Relief Act of 2012.
State tax rates are estimated from www.taxadmin.org/fta/rate/ind_inc.html (various years).

Mr. LANKFORD. Mr. Weiss.

**STATEMENT OF DANIEL J. WEISS**

Mr. WEISS. Thank you very much, Chairman Lankford, Ranking Member Speier, and members of the subcommittee. I am honored to be at the subcommittee's first hearing. It's like going to the first Oklahoma Thunder's basketball game.

When considering the energy prices, there are three important considerations. First, fossil fuel prices do not include the costs of their side effects, such as air pollution and the associated costs for premature deaths or asthma attacks. Second, the Obama administration has adopted important policies to reduce energy costs for middle- and low-income families. And, third, expanding domestic oil production in protected lands and waters owned by all taxpayers will not lower gasoline prices.

First, fossil-fuel-generated energy has real external costs. When assessing the effects on rising energy costs, it's essential that this evaluation also include the external costs of fossil fuel use and who pays them. For instance, mercury and toxic air pollution from power plants threaten children, senior citizens, and the infirm with brain impairment, respiratory illnesses, and even early death. Reducing these pollutants will return $3 to $9 in health benefits for every $1 in cleanup costs.

Coal-fired power plants produce one-third of all the climate pollution in the U.S., and Climate change has real costs to our economy. For instance, the National Journal just reported that the drought will reduce the Mississippi River barge traffic, resulting in, quote, "losses of about $7 billion through the end of January," unquote.

As Ranking Member Speier mentioned, the National Oceanic and Atmospheric Administration reported that in 2011 and 2012, there were 25 floods, droughts, storms, heat waves and wildfires that each caused at least $1 billion in damages. Together these severe events caused 1,100 fatalities and up to $188 billion in total damages. Pollution reduction requirements internalize some of the costs from pollution so that the costs are paid for by the fuel users rather than by everyone else.

Second, the Obama administration has adopted important policies to reduce energy costs. As Ranking Member Speier mentioned, doubling the fuel economy of passenger vehicles by 2025 will reduce gasoline purchases by $8,000 over the life of a 2025 car. It's been estimated that this will be like getting $1 off the price of a gallon of gasoline.

The Department of Energy set efficiency standards for nearly 40 different appliances, including washing machines and refrigerators, that together will, quote, "save consumers nearly $350 billion on their energy bills through 2030," unquote.

As mentioned by the previous witnesses, the Weatherization Assistance Program weatherized its 1 millionth low-income home in 2012. The Department of Energy estimates that this saves each family up to $400 a year on heating and cooling costs.

I agree with Mr. Trisko and Ms. Carmody that those concerned about the impact of energy prices on lower-income households should restore the recent funding cuts in the Weatherization and Low Income Home Energy Assistance Programs. Eliminating spe-

cial tax breaks for the Big Five oil companies can provide $2.4 billion annually in offsets.

Last, expanding domestic oil production into protected Federal lands and waters will not lower gasoline prices. Oil prices are set on a world market that's not really affected by domestic production, and the price is set by a cartel. Two-thirds of the gasoline price is based on the oil price; therefore, higher U.S. oil production has little impact on gasoline prices here.

As Ranking Member Speier noted, the U.S. is already producing the most oil it has in 15 years. The Energy Information Administration reports that Federal lands and waters produced 13 percent more oil in the first 3 years of the Obama administration compared to the last 3 years of the Bush administration. That's 2 billion barrels under Obama versus 1.8 billion barrels Under Bush.

The Associated Press tested whether more U.S. Drilling would lower gasoline prices. After analyzing 36 years of monthly U.S. oil production and gasoline price data, AP found, quote, "no statistical correlation between how much oil comes out of U.S. wells and the price at the pump," unquote.

High oil and gasoline prices do benefit the Big Five oil companies: BP, Chevron, ConocoPhillips, Exxon Mobil, and Shell. They made a combined profit of $255 billion over the last 2 years.

To protect American families and business from high energy prices, we must do a few things: First, reduce the costly pollution costs by fossil fuel use, which has a real cost to our economy. Continue to improve the energy efficiency of vehicles, appliances, and buildings. Fully fund the Weatherization and LIHEAP programs. And last, eliminate unnecessary tax breaks for the Big Five oil companies that are already swimming in profits.

Thanks again for the opportunity to be at your inaugural hearing.

Mr. LANKFORD. Thank you.

[Prepared statement of Mr. Weiss follows:]

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Testimony on "The Effects of Rising Energy Costs on American Families and Employers"

Energy Policy, Healthcare, and Entitlements Subcommittee
of the Committee on Oversight and Government Reform

2157 Rayburn House Office Building
February 14, 2013

Chairman Lankford, Ranking Member Speier, and members of the Subcommittee: Thank you very much for the opportunity to testify on "The Effects of Rising Energy Costs on American Families and Employers."

The premise of this hearing – that there are "rising energy costs" – is not borne out by the data. As a whole, energy costs are *not* higher than 2008 – families are actually spending a slightly smaller share of their income on them. Oil and gasoline prices *are* higher, but that is due to factors beyond our control. The oil price is set on the world market, while the gasoline price largely depends on the oil price. The latter is higher due to concerns about supply disruptions from instability in the Middle East.

Fortunately, the Obama administration has adopted essential programs to help families and businesses reduce their energy expenditures. This includes investments in energy efficiency, vehicle fuel economy, and clean, renewable electricity – none of which are subject to price volatility experienced by fossil fuels.

These investments will also reduce the expensive external costs of fossil fuel production and combustion, such as air and carbon pollution, that are not factored in to the price of these fuels. Climate change is exacting real costs on our economy, including damages from climate related extreme weather events, more smog, and the spread of tropical disease.

The price of fossil fuels do not include the cost of these impacts is a market failure. This means that fossil fuels – particularly coal and oil – are *underpriced* compared to their real costs to the economy. Adoption of measures to reduce the mercury, carcinogenic, and carbon pollution from fossil fuel use will level the price playing field with new, clean fuels that have not yet maximized their economies of scale or received 100 years of government assistance. This should make clean fuels that do not add carbon or other climate pollutants to the atmosphere and worsen the frequency and/or severity of droughts, floods, heat waves, wildfires, and storms.

Americans spent less on energy in 2011 than 2008

The premise of this hearing – that there are "rising energy costs" – is not borne out by the data. The latest information from the Bureau of Labor Statistics for 2011 found that the average share of household income spent on utilities and gasoline was 7.3 percent of pre-tax income, which was lower than the 7.5 percent spent in 2008.[1]

It is helpful to the economy that middle and lower income Americans spend a small share of their income on vital electricity, heating and cooling, and gasoline. An effective way to achieve this goal is to ensure that consumers use these power sources as efficiently as possible. This will reduce the size of their utility and gasoline bills.

In addition, diversifying the fuels available for these power sources can help cushion families from fuel price shocks. For instance, one way to avoid pain at the pump from rising gasoline prices is to have non-gasoline transportation options such as access to affordable, reliable public transit. More abundant wind and solar generated electricity will help ease the threat of fossil fuel price volatility once the infrastructure is built because the operating costs are small and the fuel is free.

Electricity prices lower since 2009

The premise of this hearing – that there are "rising energy costs" – is not borne out by the data. Data from the Energy Information Administration show that electricity costs are *lower* in real (inflation adjusted) terms now compared to 2009.[2] Residential consumers paid 12.09 cents per kilowatt hour in 2009 (2012$), but paid 11.9 cents per kWh in 2012 – a reduction of 2 percent.

Other electricity users also paid less for electricity in 2012 than in 2009 in real terms. Industrial users paid an average of 7.29 cents per kWh (2012$) in 2009, but only spent 6.7 cents per kWh in 2012 – a drop of 9 percent. Commercial users were charged 10.88 cents per kWh in 2009, but only 10.1 cents per kWh in 2012 -- 8 per cent less. **Contrary to the title of this hearing, electricity prices paid by families and employers have declined over the past four years.**

| User | Electricity price in cents per kwh in 2009 (2012 $) | Electricity price in cents per kwh in 2012 (2012 $) | Change in electricity price 2009-12 |
|---|---|---|---|
| Residential | 12.32 | 11.9 | -3.5% |
| Industrial | 7.29 | 6.7 | -9% |
| Commercial | 10.88 | 10.1 | -8% |

Sources: Energy Information Administration data; Bureau of Labor Statistics CPI Inflation Calculator

Higher gasoline prices due to Middle East unrest and speculation

Gasoline is another major component of our energy use. In real dollars, the regular gasoline retail price averaged $3.51 per gallon in 2008, one penny less than the all-time high in 1981.[3] In 2009 and 2010, gasoline prices were $2.54 and $2.96 per gallon respectively. However, as oil prices rose in 2011, gasoline prices did too. The Energy Information Administration recently reported "High crude oil prices were reflected in motor fuel prices paid by consumers at the pump during 2012, with crude oil accounting for 66% of the retail cost of gasoline."[4] EIA predicts that gasoline prices will be lower in 2013 than in either of the past two years.[5]

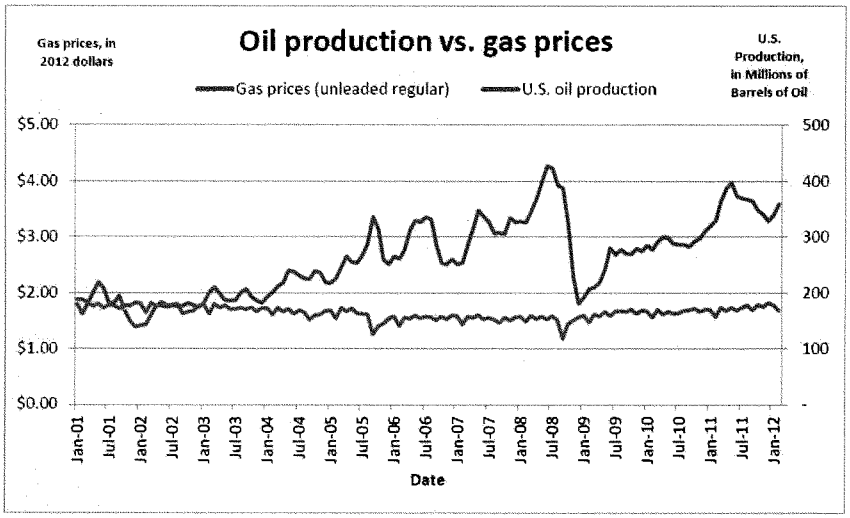
The rise in oil prices over the past several years was attributed to Middle East unrest, including the "Arab Spring" and the revolution in Libya. For instance, last November Bloomberg reported that "oil rises to one-month high on middle east conflict." [6]

Fear about possible supply disruptions made it possible for oil speculators to bid up oil prices. An investigation by the *McClatchy* news organization determined that "once again, speculators [are] behind sharply rising oil and gasoline prices."[7]

Domestic oil production up, though little impact on oil and gasoline prices

Over the past four years, oil prices rose even as U.S. domestic oil production grew by 2 million barrels per day (bbl/d). This is due to the fact that oil prices are set on a world market that is not really affected by domestic production. Therefore, U.S. oil production also has little effect on gasoline prices here.

The Associated Press (AP) tested the theory whether more U.S. drilling would lower gasoline prices. It conducted an exhaustive analysis of 36 years of monthly U.S. oil production and gasoline price data. AP found "No statistical correlation between how much oil comes out of U.S. wells and the price at the pump."[8]



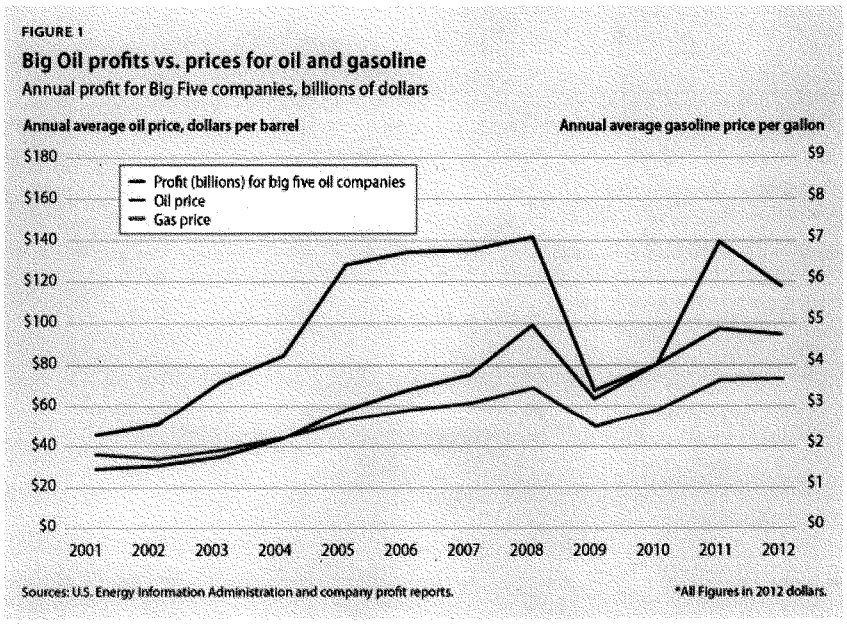

*The Washington Post* just reported that oil prices remain high even with more production due to worldwide demand, particularly from China.

> *Last year, the world pumped more oil out of the ground than ever before in history. In the first nine months of 2012, the world produced an average of 88.8 million barrels per day, about 2 million more barrels per day than in 2010. Nearly half of that increase came from new drilling in the United States.*
>
> *As James Hamilton of UC San Diego explains, China alone has consumed about half of the extra oil that's been drilled since 2010:*
>
> > *"China likely consumed nearly half of the global 2 mb/d increase. The EIA reports that China increased its petroleum consumption by almost 500,000 b/d in 2011, and preliminary estimates are that China added another 420,000 barrels to its daily consumption in 2012."* [9]

Higher gasoline prices bad for families, great for big oil companies
High gasoline prices exact a real toll on middle and lower income families. The Energy Information Administration recently reported that

> *Gasoline expenditures in 2012 for the average U.S. household reached $2,912, or just under 4% of income before taxes. ... This was the highest estimated percentage of household income spent on gasoline in the last decade, with the exception of 2008, when the average household spent a similar amount. Although overall gasoline consumption has decreased in recent years, a rise in average gasoline prices has led to higher overall household gasoline expenditures.*[10]

High gasoline prices *do* benefit the largest oil companies. Over the last two years, the big five oil companies – BP, Chevron, ConocoPhillips, ExxonMobil, and Shell – made a combined profit of $255 billion.[11] These companies earned a combined average of $1,000 in profit for each of the 250 million passenger vehicles on the road.




Yet with all this wealth flowing into the coffers of the Big Five oil companies at the expense of American households, the amount of oil these companies produce continues to drop. The big five companies produced 3 percent less oil in 2012 compared to 2011. These five companies

each have several hundred idle offshore leases that could produce oil if they were developed, according to an analysis for Rep. Ed Markey (D-MA).[12] This report found that

> *ExxonMobil, BP, Shell, Chevron, and ConocoPhillips, hold full or partial shares in more than 1,500 of these idle federal drilling leases spanning almost 8 million acres ... according to previously undisclosed data obtained from the U.S. Department of Interior.*[13]

While not investing in producing oil from their idle leases, four of the companies—all but BP—spent $42 billion, one-third of their profits, repurchasing their stock.[14] This practice enriches shareholders but it doesn't add to oil supplies, or boost investments in alternative fuels or other new technologies.

The big five oil companies invested nearly $50 million of their abundant bounty to lobby Congress in 2012. They spent nearly $8 million on federal campaign contributions, with Republican candidates receiving $4 for every $1 donated to Democrats. A major goal of these political efforts was to retain their special tax breaks, which annually are worth $2.4 billion, according to the Congressional Joint Committee on Taxation.[15] Last March Big Oil successfully lobbied against a Senate bill to eliminate the special tax breaks.[16] The House of Representatives should eliminate these special tax breaks for the five largest integrated oil companies.

Obama administration fuel economy standards save families money

While big oil is profiting from high gasoline prices, the Obama administration took action to ease pain at the pump. The administration's modern fuel economy standards will raise the average from 23.5 miles per gallon in 2010 to 54.5 mpg in 2025.[17] The Department of Transportation noted that the standards

> *Will save American families more than $1.7 trillion dollars in fuel costs, resulting in an average fuel savings of more than $8,000 by 2025 over the lifetime of the vehicle. For families purchasing a model Year 2025 vehicle,* ***the net savings will be comparable to lowering the price of gasoline by approximately $1 per gallon****.*
>
> *Additionally, these programs will dramatically reduce our reliance on foreign oil, saving a total of 12 billion barrels of oil and reducing oil consumption by more than 2 million barrels a day by 2025 – as much as half of the oil we import from OPEC each day.*[18]

The improvement in fuel economy is already is evident. The Energy Information Administration's "Annual Energy Outlook 2013 Early Release" determined that "Motor gasoline consumption is lower in AEO2013 relative to the level in AEO2012, reflecting the introduction of more stringent corporate average fuel economy standards."[19]

Domestic oil production growing, including from federal lands and waters

In addition to fuel economy improvements, President Obama presided over an enormous boom in overall oil and gas production, including from federal lands and waters. Although such production does not lower oil or gasoline prices, it does help our economy by reducing our trade deficit, recycling the money spent on oil in the United States, and enhancing our energy security.

The Energy Information Administration 'expects crude oil production to continue to grow rapidly over the next two years, increasing from an average 6.4 million bbl/d in 2012 to average 7.3 million bbl/d in 2013," – a 14 percent increase.[20] This is 46 percent more domestic oil production compared to 2008.[21]

Oil imports have dropped by 22 percent since 2008 – from 9.8 million bbl/d to 7.6 million bbl/d in 2013. This will be the lowest amount of oil imports since 1996.[22]

The increase in oil production comes from private, state, and federal lands and waters. Data from the Energy Information Administration determined that in 2011 the United States produced 646 million barrels of crude oil from federal lands and waters compared to 575 million barrels in 2008—a 12 percent increase in production.[23] Oil production from federal areas was higher in every year from 2008 to 2011 than in 2006 to 2008. Since 2003, the most oil produced from federal lands was in 2011, and the most from federal waters was in 2010.

The Congressional Research Service reiterated Energy Information Administration's finding that oil production from public lands is higher under the current administration compared to the last years of the previous one. CRS concluded that "oil production on federal lands is up slightly in 2011 when compared to 2007."[24]

Production of oil from the waters in the Gulf of Mexico is rebounding after the BP Deepwater Horizon oil disaster in 2010. The number of oil rigs in the Gulf of Mexico has returned to the number before the tragedy. In July, Barclays Equity Research noted that

> *The offshore rig count in the Gulf of Mexico is nearing its pre-Macondo [pre-Deepwater Horizon disaster] level and is expect to grow another 50 percent by 2014, one of the most visible indicators of the Gulf drilling revival.*[25]

This growth in offshore oil production has occurred along with the implementation of a number of new worker and rig safety requirements developed in response to the BP tragedy. Since the new standards were put into place, the Obama administration has approved nearly 700 permits for activities at hundreds of wells in the Gulf of Mexico alone.[26]

On February 7, 2013, the Department of Interior announced that it would lease an additional 39 million acres for oil and gas production in the central Gulf of Mexico.[27] This is additional to the 59 million acres put up for auction in 2012.

This data about oil production and leases sales proves that any claims that the Obama administration is limiting the production of oil and gas from federal lands and waters are simply untrue.

Obama administration programs to reduce electricity bills

The Energy Independence and Security Act, signed by President George W. Bush, provides the Department of Energy the authority to establish efficiency standards for a number of home appliances and products.[28] The Department of Energy, working with manufacturers, set

efficiency standards for nearly 40 different appliances and products. These standards "will together save consumers nearly $350 billion on their energy bills through 2030."[29]

For instance, in May 2012 the Department of Energy set new electricity and water efficiency standards for clothes washers and dishwashers that will "save consumers $20 billion in energy and water costs." The Department of Energy said:

> *The clothes washers' standard announced today will save households approximately $350 over the lifetime of the appliance, while offering consumers a variety of more efficient machine choices, and as a result of the standards for dishwashers, home dishwashers will use approximately 15 percent less energy and more than 20 percent less water, directly providing consumers with savings on monthly bills.*[30]

In September 2011, the Department of Energy issued new efficiency standards for residential refrigerators and freezers. When implemented in 2014, they "will save approximately 5.6 quads of energy and result in approximately $97 billion in energy bill savings for products shipped from 2014-2043."[31]

The American Recovery and Reinvestment Act also helped lower income households save money on their electricity bills through its Weatherization Assistance Program for low income households. It allocated $5 billion to weatherize 600,000 homes by the end of the three-year Recovery Act period.[32] The one-millionth home was weatherized in September 2012.[33] The Department of Energy estimates that "every home weatherized saves a family up to $400 a year on heating and cooling costs."[34] This means that the weatherization program is reducing energy bills for lower income households by up $400 million every year.

There are 38 million homes eligible for weatherization assistance, and these families spend 14 percent of their income on energy bills compared to 3 percent for other households.[35] If they were all weatherized, it would reduce these families' heating and cooling bills by a total of $15 billion annually. Yet Congress appropriated only $68 million for weatherization for Fiscal Year 2013.[36] Congress should significantly increase funding for this vital program help low income families save energy and reduce their energy bills.

The Recovery Act also invested in "smart grid" technology to help homeowners and businesses reduce their electricity bills and make the grid more reliable. *Bloomberg New Energy Finance* described smart grid technologies and benefits.

> *By the end of 2012, over 46m [million] smart meters were deployed in the US.*
>
> *For consumers, benefits include more accurate energy bills, better knowledge of their actual consumption habits, and the ability to benefit from demand response and energy management programs that help them manage and reduce bills. For utilities, operational savings such as reduced meter reading, outage management, and customer service are the most immediate value driver. Smart grid technologies introduce sensory, control and management capabilities that allow an increase in reliability and better resiliency when the grid is harmed.*[37]

Obama administration working with industry to lower the cost of wind, solar electricity
The U.S. has a long history of providing financial assistance to new energy technologies. A DBL Investors analysis, "What Would Jefferson Do?" determined that oil and gas received $442 billion in tax breaks and subsidies over the past 90 years, while renewable energy received only $5.6 billion over the past 15 years. This is $80 invested in oil and gas production for every $1 invested in renewable electricity. Some of the fossil fuel tax breaks, such as the deduction for intangible drilling costs for oil companies, are nearly 100 years old.[38]

The Recovery Act included $23 billion for wind, solar and geothermal power to help these industries become more cost competitive.[39] These investments helped the U.S. double renewable electricity generation in four years. In addition, the Production Tax Credit for wind power and the Investment Tax Credit for solar power also create incentives to invest in these emerging technologies.

These efforts are working. *Bloomberg New Energy Finance* reports that "the levelized costs of electricity for renewable technologies have plummeted" in the U.S.[40] Wind power is a major electricity generator in the U.S. Iowa produces nearly 20 percent of its electricity from wind.[41] Texas leads the nation in overall wind electricity generation, and was the first state to reach 10,000 megawatts of wind energy installation.[42]

The Energy Information Administration reports that new wind energy is cheaper than a new conventional coal plant, new advanced nuclear plant, or new natural gas fired combustion turbine.[43]

Solar power, too, is becoming much more affordable and prevalent. The Solar Energy Industry Association reported in January 2013 that:

> *More solar capacity was installed in the first three quarters of 2012 than in all of 2011. The industry expects to have installed more than one gigawatt of solar in the fourth quarter of 2012 alone, while in 2010 we installed 852 megawatts for the entire year. And we expect 2013 will be another year of record growth for our industry.*
>
> *Some of this growth is attributed to the fact that the cost of a solar system has dropped by nearly 40 percent over the past two years...Solar has become more affordable than ever for the end consumer.*[44]

Other countries also found that renewable electricity is cheaper than fossil fuel power, even while excluding the external costs of the pollution caused by the latter. (more on this below). *Bloomberg New Energy Finance* just reported that in Australia "wind energy is 14% cheaper than new coal and 18% cheaper than new gas."[45]

Germany reported that "all renewable energies combined accounted for about 26 percent of electricity production over the first nine months" of 2012.[46] In 2012 "solar power's share in the country's [Germany] electricity production rose to 6.1 percent from 4.1 percent."[47] This occurred even though Germany receives less sunlight than anywhere in the U.S. except for Alaska.[48]

Fossil fuel generated energy has real external costs

The price Americans pay for fossil fuel energy generally reflects the costs of producing, transporting, delivering, and marketing the power source. However, there are other costs of energy use that are *not* typically included in the price. These are side effects or "externalities." *The Economist's* "Essential Economics A-Z" defines them as

> *Costs or benefits arising from an economic activity that affect somebody other than the people engaged in the economic activity and are not reflected fully in prices.*
>
> *For instance, smoke pumped out by a factory may impose clean-up costs on nearby residents...Because these costs and benefits do not form part of the calculations of the people deciding whether to go ahead with the economic activity they are a form of market failure, since the amount of the activity carried out if left to the free market will be an inefficient use of resources. If the externality is beneficial, the market will provide too little; if it is a cost, the market will supply too much.*[49]

Products that do not incorporate the external costs of their use are therefore underpriced; they do not reflect their true cost to the economy. So when assessing "the effects on rising energy costs on American families" it is essential that this evaluation also include the external costs from the production, transportation, and combustion of fossil fuels, and not just the market price. These are real costs borne by society even though they are not reflected in the cost of the energy paid by consumers.

Coal fired power plants emit mercury, other toxic pollutants

Burning coal to generate electricity, for instance, has significant external costs. The American Lung Association estimated that coal-fired power plants shoot 772 million pounds of airborne toxic chemicals into the sky every year – the most of any industry.[50] This is more than 2.5 pounds for every American man, woman, and child. Power plants are the largest domestic source of mercury pollution, which is a potent neurotoxin for babies and children. Mercury exposure causes severe developmental disabilities, deafness, and blindness in cases of prenatal and infant exposure.[51]

Mercury Air Toxics Standard for power plants eliminates $37 billion to $90 billion in external costs

The Mercury Air Toxics Standard, which was finalized in 2012, would require a 90 percent reduction in mercury pollution from power plants, as well as limit other hazardous emissions. This health standard will prevent 11,000 premature deaths and 130,000 asthma incidents every year.[52] EPA estimates that "the value of the air quality improvements for human health alone totals $37 billion to $90 billion each year." In other words, the external cost of coal fired electricity was $37 billion to $90 billion annually. Meanwhile, the EPA estimates that the mercury safeguard

> *Can be implemented for $9.6 billion...That means that for every dollar spent to reduce pollution, Americans get $3-9 in health benefits in return.*[53]

This is a rate of return that would make Warren Buffet envious.

Shale gas production lowers natural gas prices but has pollution costs too
The combination of hydraulic fracking and horizontal drilling has enabled a significant increase in production of shale gas. This development has expanded natural gas reserves and lowered prices.

In the Annual Energy Outlook 2013, the Energy Information Administration predicts that natural gas will continue to supplant coal for electricity generation.

> *Relatively low natural gas prices, facilitated by growing shale gas production, spur increased use in the industrial and electric power sectors, particularly over the next 15 years.*
>
> *After accounting for 16 percent of total [electricity] generation in 2000, the natural gas share of generation rose to 24 percent in 2010 and is expected to continue increasing, to 27 percent in 2020 and 30 percent in 2040.* [54]

The *Virginian-Pilot* reported in 2012 that "cheap natural gas hurting coal market."[55] It added that "American mines are closing because coal right now is too expensive to use to generate electricity. Natural gas is so abundant, and so cheap, that electricity companies are using it in new ways."

Like other fossil fuels, shale gas has costly side effects. They include potential groundwater contamination from leaking wells, surface water pollution from the discharge of millions of gallons of water used for fracking, and air pollution from the production, storage and delivery processes on the surface.[56] Perhaps most troubling is the potential for methane leakage from natural gas development since it is a very potent greenhouse gas pollutant. Methane produces much more warming than carbon dioxide (though lasting far less time in the atmosphere).[57]

We must reduce the external costs of shale gas production by requiring producers to reduce their air, water, and methane pollution. To reduce surface water pollution, we must ensure that Environmental Protection Agency (EPA) rules require adequate treatment of fracking wastewater before discharge into a sewage treatment plant. Strict standards for the construction, operation and monitoring of any wastewater storage pits are also essential. Additionally, the agency's study now underway on fracking which is to be completed next year leads to strong protections for groundwater. The Secretary of Energy's Advisory Board Subcommittee's recommendation for "full disclosure of all chemicals used in fracturing fluids" should be adopted.[58]

We also support the methane capture recommendation made by Frances Beinecke, President of the Natural Resources Defense Council, at a hearing before the Senate Energy and Natural Resources Committee on February 12. She noted that

> *Last year, EPA issued a Clean Air Act rule to curb VOC emissions from new and modified sources in the oil and gas industry. While this is a step forward, the rule is not*

*strong enough and doesn't cover existing sources. EPA should also regulate methane directly, which would achieve much larger emission reductions.*[59]

Climate change is real, here, and induced by human activity

There is a scientific consensus that climate change is real and due to the emission of carbon pollution and other heat trapping gases. The production, transportation, and combustion of fossil fuels produce carbon pollution responsible for climate change. The costly damages from climate change impacts – particularly extreme weather – increase the imperative to reduce this pollution by transitioning to significantly cleaner fuels.

The National Academy of Sciences left no doubt about the scientific consensus about carbon pollution, climate change, and its impacts. It reported in 2010 that:

> *There is a strong, credible body of evidence, based on multiple lines of research, documenting that climate is changing and that these changes are in large part caused by human activities. While much remains to be learned, the core phenomenon, scientific questions, and hypotheses have been examined thoroughly and have stood firm in the face of serious scientific debate and careful evaluation of alternative explanations.*[60]

The American Meteorological Society came to a similar conclusion last year.

> *There is unequivocal evidence that Earth's lower atmosphere, ocean, and land surface are warming; sea level is rising; and snow cover, mountain glaciers, and Arctic sea ice are shrinking.* ***The dominant cause of the warming since the 1950s is human activities. This scientific finding is based on a large and persuasive body of research.***
>
> *The observed warming will be irreversible for many years into the future, and even larger temperature increases will occur as greenhouse gases continue to accumulate in the atmosphere. Avoiding this future warming will require a large and rapid reduction in global greenhouse gas emissions.*[61]

Sea level rise due to the melting of Arctic glaciers exacerbates damages from extreme weather events. The National Climate Assessment is a congressionally mandated assessment of the latest climate science. The 2013 draft was undertaken by over two hundred scientists.[62] It determined that

> *Sea level rise, combined with coastal storms, has increased the risk of erosion, storm-surge damage, and flooding for coastal communities, especially along the Gulf of Mexico, the Atlantic seaboard, and Alaska.*[63]

Kevin E. Trenberth, senior scientist at the National Center for Atmospheric Research, recently noted:

> *All weather events are affected by climate change because the environment in which they occur is warmer and moister than it used to be. The air is on average warmer and moister than it was prior to about 1970 and in turn has likely led to a 5–10 % effect*

*on precipitation and storms that is greatly amplified in extremes. The warm moist air is readily advected onto land and caught up in weather systems as part of the hydrological cycle, where it contributes to more intense precipitation events that are widely observed to be occurring.*[64]

These are dozens of scientific organizations that conducted or assessed independent, peer reviewed studies that all came to the same conclusion: climate change is real and humans are responsible. Those that deny this climate science are akin to tobacco industry apologists who once denied the link between cigarette smoking and cancer.

Power plants are the largest source of climate pollution

Power plants are the largest domestic contributor to climate change, responsible for more than one-third of the greenhouse gas pollution in the U.S. in 2011.[65] There are no limits on carbon pollution from existing power plants. In April 2012, the Environmental Protection Agency proposed a carbon pollution standard for *new* power plants, which must be finalized by this April. This would slow the growth of carbon pollution, but not reduce existing emissions.

The second largest domestic source of carbon pollution is motor vehicles, responsible for 23 percent of greenhouse gas pollution in 2010.[66] The aforementioned modern fuel economy standards also established the first limit on carbon pollution from vehicles. When fully implemented, these standards will cut carbon pollution from vehicles by 2 billion tons over the lifetime of vehicles built from 2017 to 2025.[67]

Climate change pollution has real costs not included in the price of fossil fuels

The impacts of climate change – including extreme weather, sea level rise, and the spread of tropical diseases – have real costs. The U.S. was battered by many severely damaging climate-related extreme weather over the past two years. The National Oceanic and Atmospheric Administration reported that in 2011 there were 14 floods, drought, storms, and wildfires that each caused at least $1 billion in damages. There were another 11 such disasters in 2012. Together, these 25 $1 billion-dollar minimum in damages events caused 1,107 fatalities, and caused up to $188 billion in total damages.[68] *The New York Times* warned that "the economy won't function very well in a world full of droughts, hurricanes, and heat waves."[69]

The events during this time affected 43 of the 50 states.[70] A recent study by Munich Re, the world's largest reinsurance firm, found that North America is experiencing a tremendous rise in extreme weather disasters—a nearly fivefold increase over the past three decades.[71] The firm concluded that this is due to climate change.

**TABLE 1**

## The high cost of extreme weather

Estimated economic damages from U.S. extreme weather events that cost at least $1 billion, 2011 and 2012

| Event rank by economic damages | Event Name | Date | Fatalities | Estimated economic damages in billions of dollars (2012) | Estimated percent difference between disaster area median household income and U.S. median income | States with counties affected by $1 billion+ extreme weather events |
|---|---|---|---|---|---|---|
| 1 | [illegible] | 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 2 | Hurricane Sandy | October, 2012 | 113 | $[illegible] | [illegible] | [illegible] |
| 3 | [illegible] | 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 4 | Southwest/Midwest Fire outbreak | April 15-28, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 5 | [illegible] | August, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 6 | Midwest Tornadoes (including Joplin) | May 22-27, 2011 | 177 | [illegible] | [illegible] | [illegible] |
| 7 | Midwest/Ohio Valley Derecho | April 26, 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 8 | Derecho | July, 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 9 | Mississippi River flood | May-11 | [illegible] | [illegible] | [illegible] | [illegible] |
| 10 | Southeast/Midwest tornadoes and severe storms | April 4-5, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 11 | [illegible] | May 25, 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 12 | Severe tornadoes and storms | April 9-11, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 13 | Severe tornadoes and storms | April 14-16, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 14 | Missouri River flood | Summer, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 15 | [illegible] | August, 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 16 | Groundhog Day blizzard | February 1-3, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 17 | Severe storms and hail | [illegible] 2012 | | [illegible] | [illegible] | [illegible] |
| 18 | Severe tornadoes and storms | April 12, 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 19 | Severe tornadoes and storms | March 2-3, 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 20 | Severe tornadoes and storms | June 18-22, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 21 | Tropical Storm Lee | September, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 22 | Wildfire season* | 2012 | [illegible] | [illegible] | [illegible] | [illegible] |
| 23 | Wildfire season* | 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 24 | Severe tornadoes and storms | July 10-14, 2011 | [illegible] | [illegible] | [illegible] | [illegible] |
| 25 | Severe tornadoes and storms | April 2, 2012 | | [illegible] | [illegible] | [illegible] |
| Total | 25 events | | [illegible] | [illegible] | [illegible] | All States |

Note: U.S. Median household income: $51,914; Median income figures are Census Bureau 2005-2010 average
*Wildfires defined by NOAA as entire seasons costing $1 billion, rather than individual fires. States included incurred at least $50 million in costs from wildfires
**2012 damage figures are estimates from Dr. Jeff Masters' Weather Underground Blog; Official NOAA figures won't be out until mid-2013
Sources: National Oceanic and Atmospheric Administration; U.S. Census Bureau

Middle and lower income households harmed by recent extreme weather
One overlooked aspect of these disasters, however, is the rate at which they harm middle- and lower-income households—people who are less able to quickly recover from such disasters. A Center for American Progress analysis, "Heavy Weather: How Climate Destruction Harms Middle- and Lower-Income Americans," finds that on average, counties with middle- and lower-income households were harmed by many of the most expensive extreme weather events in 2011 and 2012.[72]

Most of these extreme weather events typically harmed counties with household incomes below the U.S. median annual household income of $51,914:

- Floods damaged households in affected counties with average household incomes of $44,547 annually—14 percent less than the U.S. median income

- Drought and heat waves affected counties with households that earned an average of $49,340 annually—roughly 5 percent less than the U.S. median income.

- Wildfires, tornadoes, and severe thunderstorms devastated areas with households that earned an average of $50,352 annually—3 percent less than the U.S. median income.[73]

In fact, tropical storms and hurricanes were the only types of extreme weather events that affected more-well-off areas, on average, since January 2011.

For instance, in 2011 and 2012, Oklahoma was affected by 8 extreme weather events that each caused at least $1 billion in damages in the disaster declared states. The average income of the households in Oklahoma's disaster declared counties affected by these drought and severe storms was 17 percent below the median U.S. household income. The people that bore the burden of these extreme weather events were less able to afford it compared to the average household.

Climate change has significant economic costs
The *National Journal* recently published "The Scary Truth About How Much Climate Change is Costing You: While policymakers fiddle, the threat of economic harm posed by rising sea levels, devastating storms, and drought is growing every day."[74]

Among the economic costs of climate change, *National Journal* described how the drought will cause a reduction on waterborne commerce.

> *Drought-related closures affecting commercial barge traffic will result in losses of about $7 billion through the end of January, according to the barging industry...The Army Corps of Engineers is dredging the river to keep it open. The cost to taxpayers is about $10 million.*[75]

The *National Journal* concluded that unchecked climate change will have real economic costs for the U.S.

> *Climate change is causing major disruptions to the nation's transportation and energy infrastructure, leading to increased power outages and fuel-price spikes, and slowing the movement of goods and people. Heavy levels of carbon are acidifying the oceans, destroying the organisms that support the nation's seafood industry.*
>
> *All of this comes with costs. A 2012* study *by the Madrid-based group DARA found that extreme weather associated with climate change is costing the world economy $1.2 trillion a year, destroying 1.6 percent of global gross domestic product. The study projects that the effects of climate change could cut global GDP by 3.2 percent a year by 2030.*[76]

On January 11th, 13 federal agencies released the draft National Climate Assessment.[77] It reflects the work of several hundred scientists. It concluded that Americans are already harmed by climate change. These impacts have real costs to Americans.

> *Impacts related to climate change are already evident in many sectors and are expected to become increasingly challenging across the nation throughout this century and beyond.*
>
> *Climate change is already affecting human health, infrastructure, water resources, agriculture, energy, the natural environment, and other factors – locally, nationally, and internationally. Climate change interacts with other environmental and societal factors in a variety of ways that either moderate or exacerbate the ultimate impacts. The types and magnitudes of these effects vary across the nation and through time. Several populations –including children, the elderly, the sick, the poor, tribes and other indigenous people – are especially vulnerable to one or more aspects of climate change. There is mounting evidence that the costs to the nation are already high and will increase very substantially in the future, unless global emissions of heat-trapping gases are strongly reduced.*
>
> *Climate change threatens human health and well-being in many ways, including impacts from increased extreme weather events, wildfire, decreased air quality, diseases transmitted by insects, food, and water, and threats to mental health.*
>
> *Climate change is increasing the risks of heat stress, respiratory stress from poor air quality, and the spread of waterborne diseases. Food security is emerging as an issue of concern, both within the U.S. and across the globe, and is affected by climate change. Large-scale changes in the environment due to climate change and extreme weather events are also increasing the risk of the emergence or reemergence of unfamiliar health threats.*[78]

With the possible exception of extreme weather or other climate impacts on fossil fuel production or transportation, almost none of these costs from climate change are incorporated in their fossil fuel prices.

Carbon pollution reductions from power plants necessary to attack climate change
Because the emission of carbon pollution from coal fired power plants is essentially free to these companies, they have no economic incentives to reduce this threat to the climate. This market failure must be corrected by requiring power plants to significantly reduce their carbon pollution.

There are several ways to accomplish this goal. Congress could pass a law establishing carbon pollution limits for power plants and other major sources. The House of Representatives passed the partisan American Clean Energy and Security Act in 2009, but the Senate was unable to muster 60 votes necessary to pass a companion bill.[79]

Alternatively, Congress could pass a carbon tax to be levied on every ton of pollution from major emitters.[80] If the price was set at an effective level, power plants and other big emitters would have an economic incentive to reduce their pollution. This system would also raise billions of dollars of revenue that could offset a reduction in pay roll taxes, support deployment of clean power sources, and/or reduce the deficit. Both conservative and progressive nongovernmental organizations have endorsed a carbon tax. Unfortunately, Congress is unlikely to pass such a tax any time soon.

The President has the authority and obligation under the Clean Air Act to set a carbon pollution standard for existing power plants and other major emitters. In 2007 the Supreme Court ruled in *Massachusetts v. EPA* that greenhouse gases are pollutants under the Clean Air Act, and as such, the agency's administrator must consider whether these pollutants "may reasonably be anticipated to endanger public health or welfare."[81] If the administrator finds that this is the case, the EPA has the authority to limit pollutant emissions.

After the Supreme Court decision, EPA scientists conducted an assessment of the public health and welfare impacts of carbon and other climate change pollutants, and concluded that these emissions endangered the public. Agency Administrator Stephen Johnson wrote a January 2008 memo to President Bush stating, "Your Administration is compelled to act on this issue under existing law."[82] The president ignored this recommendation.

In December 2009, EPA Administrator Lisa Jackson adhered to the recommendation of agency scientists and finally made the endangerment finding for six major greenhouse gases, including carbon dioxide. [83] Jackson noted that the "impact on morbidity and mortality associated with higher temperatures" provided support for "a public health endangerment finding."[84]

Despite claims by some climate science deniers, exercising this authority is little more than enforcing a law passed by Congress, signed by President George H.W. Bush, and defined by the Supreme Court.

EPA should set carbon pollution standard for existing power plants

After lengthy consultation with large numbers of stakeholders, the EPA proposed a carbon pollution standard for new power plants in March 2012.[85] Since power plants are designed to last for at least 50 years, this rule would effectively prevent the construction and operation of new coal-fired plants that don't incorporate carbon pollution capture and storage, therefore ensuring that we will not build the next generation of uncontrolled coal-fired power plants that would further exacerbate climate change.

There was overwhelming public support for the new power plant rule. Americans submitted 3.2 million comments in favor of limiting carbon pollution for both new *and* existing power plants—a record number for the agency.[86]

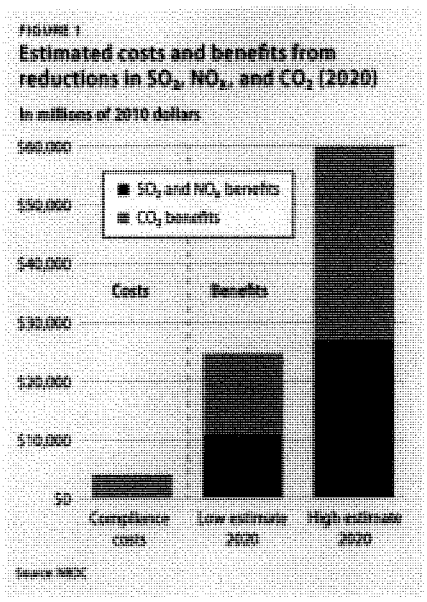
After the agency finalizes the carbon pollution standard for new power plants by mid-April, it must begin to focus on carbon pollution limits for existing power plants. They are the greatest stationary source of carbon pollution in the United States, representing more than one-third of greenhouse gas pollution in 2011.[87] Cutting carbon pollution from existing power plants will help reduce global warming and help the United States achieve its carbon goals.

A carbon pollution standard for existing power plants would have significant impact on the roughly 600 existing coal-fired power plants by requiring them to reduce their emissions to the level determined in the rulemaking process.[88] To reduce their pollution, these plants would probably employ some combination of fuel-switching to natural gas or co-firing with biomass; demand reduction via energy efficiency measures; and development of clean, renewable electricity generation.

The Natural Resources Defense Council, (NRDC) an environmental advocacy organization, recently released a plan to unlock the Clean Air Act's potential to curb carbon pollution from existing power plants. The plan would cut emissions from existing power plants by 26 percent by 2020. It would operate by:

- Considering individual state baseline pollution levels
- Establishing separate targets for oil/gas and coal-based power plants, crediting plants for energy efficiency and renewable energy modifications
- Generally creating a flexible approach for states and power plants to meet carbon pollution limits

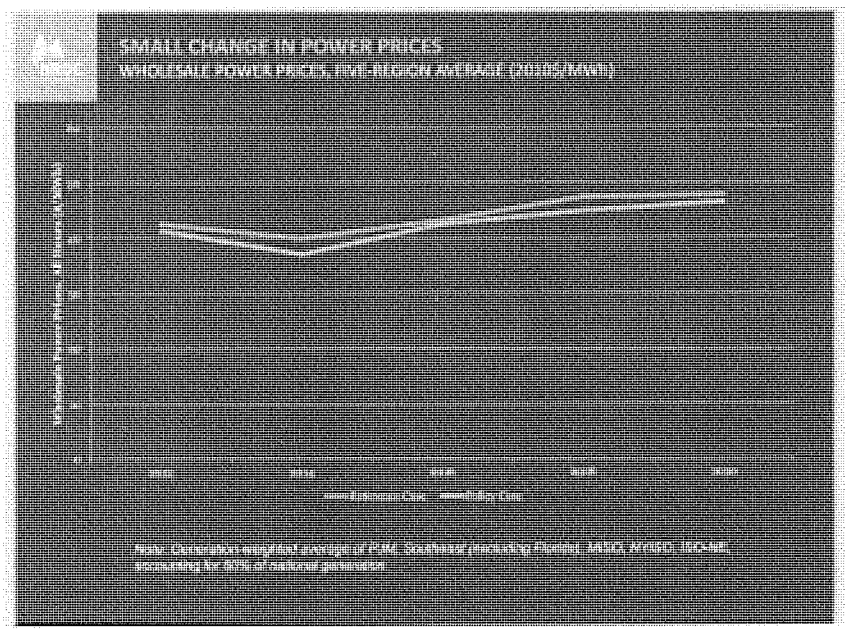
The plan achieves climate protection and public health benefits, grossing between $26 billion and $60 billion in 2020 for a net benefit between 6 times and 15 times more than the cost of the plan. There would also be no disruption in power supply even as emissions decline.[89]




This plan has wide bipartisan support. William Reilly, Environmental Protection Agency administrator under President George H.W. Bush, noted that the plan "deserves to be carefully analyzed and to be taken seriously." Carol M. Browner, Senior Distinguished Fellow at the Center for American Progress and Environmental Protection Agency administrator under President Bill Clinton, said that this plan is "very thoughtful and should be part of any debate" on reducing greenhouse gas emissions. John Podesta, Chair of the Center for American Progress and former White House chief of staff under President Clinton, noted, "Investments to achieve these reductions would create manufacturing, construction, and other well-paying jobs."[90]

Reducing power plant carbon pollution will have little impact on electricity rates

Undoubtedly, opponents of reducing carbon pollution to fight climate change will claim that a power plant standard would lead to sky rocketing electricity prices. Modeling conducted for NRDC by ICF using the IPM® model, the model used by EPA, and NRDC assumptions found that this plan would *reduce* wholesale power prices primarily because a major portion of the carbon pollution cuts would occur from energy efficiency measures that reduce the use of more expensive electricity. Retail electricity prices would remain about the same, while families' electricity bills would decline because they would use less electricity due to efficiency measures..[91]




In addition, opponents of public health standards regularly provide wildly inflated cost estimates as part of their effort to block them. For instance, in the late 1980's EPA studied the proposal to reduce the sulfur and nitrogen pollution from power plants responsible for acid rain. It predicted that the "annual cost of the program was expected to be $2.7 billion – 4.0 billion."[92]

The utility industry predicted that the cost of acid rain controls would be even higher – and it was even more wrong. For instance, a study for the Edison Electric Institute (EEI) predicted

> *That the acid rain provisions alone of H.R. 3030 could cost electric utility ratepayers $5.5 billion annually between enactment and the year 2000, increasing to $7.1 billion per year from 2000-2010. These estimates were developed in an analysis conducted by Temple, Barker & Sloane.*[93]

Yet an EPA analysis a decade later determined that the actual cost of cutting sulfur emissions by 40 percent was substantially lower—"$1 to $2 billion per year, just one quarter of original EPA estimates."[94]

An EEI representative testified before the House Energy and Commeree Committee in 1989 and claimed that rate-payers in states with many coal-fired power plants would face particularly high increases. Consumers in 10 states—Alabama, Georgia, Illinois, Indiana, Kentucky, Missouri,

Ohio, Pennsylvania, Tennessee, and West Virginia—would face utility rate hikes of 5.5 percent to 13.1 percent by 2009. [95] All states except for Tennessee now pay *lower* electricity rates than they did in 1990, despite three series of sulfur reduction requirements.

EEI 1989 predictions of electric rate increases under acid rain program were wrong[96]

| State | EEI prediction of 20 year levelized average rate increase with acid rain controls, low cost scenario | 1990 Electricity cost: cents per kWh (2011$) | 2011 Electricity cost: cents per kWh (2011$) | Percent Change between 1990 and 2011 Electricity Costs |
|---|---|---|---|---|
| Alabama | 5.5% | 9.59 | 9.10 | -5.38% |
| Georgia | 6.2% | 11.29 | 9.61 | -17.48% |
| Illinois | 4.5% | 12.89 | 8.97 | -43.70% |
| Indiana | 12.2% | 9.22 | 8.01 | -15.11% |
| Kentucky | 7.3% | 7.71 | 7.17 | -7.53% |
| Missouri | 13.1% | 11.12 | 8.32 | -33.65% |
| Ohio | 10.9% | 10.14 | 9.03 | -12.29% |
| Pennsylvania | 5.6% | 13.17 | 10.45 | -26.03% |
| Tennessee | 0.6% | 9.14 | 9.28 | 1.51% |
| West Virginia | 10.1% | 8.14 | 7.88 | -3.30% |

Sources: Energy Information Administration; Bureau of Labor Statistics Inflation Calculator[97]

Industry sponsored studies examining the economic effects of carbon pollution reductions from existing power plants will be released in the coming months. Many of them will predict that slashing their pollution will cause huge hikes in electric rates, reductions in jobs, and all sorts of other economic havoc.

But these studies also have one other common element: they will eventually be proven wrong once the program is underway.

These studies base their cost assumptions on existing technologies and practices, which means that they do not account for the vast potential for innovation once binding reductions and deadlines are set. A carbon pollution standard for existing power plants can rely on state designed programs that rely on efficiency measures that lower pollution and save money.

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[12] House Natural Resources Committee Democrats, "Use it or Lose It – Big Oil not using drilling leases in the Gulf of Mexico," (Government Printing Office, 2012)
[13] According to the report, "The definition of idle, or inactive, leases used in this report is the same definition used by the Department of Interior. According to the department, idle leases are those leased areas that are not producing and have no approved exploration or development plan. Certain activities such as geophysical and geotechnical analysis, including seismic and other types of surveys, may be going on in some of these areas."
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Mr. LANKFORD. Mr. Simmons.

**STATEMENT OF DANIEL R. SIMMONS**

Mr. SIMMONS. Mr. Chairman, Ranking Member Speier, and members of the subcommittee, thank you for the opportunity to talk today about the impacts of rising energy prices on American families, and particularly about oil prices.

It's easy to take affordable, reliable energy for granted, but we should not do that. Having a plentiful supply of affordable, reliable energy is the result of deliberate policy choices, and these policy choices matter for many of the reasons that Mr. Trisko talked about.

Energy prices are frequently unavoidable costs for family and businesses, and they are—and high energy prices are disproportionately felt by middle- and low-income families. Families that make over $50,000 a year spend 9 percent of their income on energy, but families that make less than 30 percent spend nearly—well, spend three times that portion, or 27 percent of their income, on energy costs. And this is the fundamental disconnect with President Obama's energy policies. During the State of the Union, he talked about wanting to strengthen the middle class, and yet his policies intentionally increased the price of energy.

So why have we had high oil prices over the past few years? The reason for that is that oil is a globally traded commodity, and with global supply and demand for—because of the global supply and demand for petroleum products, increased global—global demand, particularly from Asia, is driving price increases, especially combined with unrest in the Middle East and with OPEC intentionally limiting supply.

In the U.S. over the past couple weeks, we have all noticed prices have increased, gasoline prices have increased. The reason for that is a decline in U.S. refinery production and seasonal maintenance. Refineries have spent over $128 billion in regulatory compliance since the 1990s. These high refinery costs have reduced the amount of spare capacity and refining diversity. Over that time, 66 refineries have closed, and as a result, when a refinery closes for maintenance and repairs, gasoline prices increase.

So what can we do about high oil prices? One is to increase North American oil production. Robust oil production in North America does two, two critical things. First of all, it increases the global oil supply; and, second, it increases global spare oil capacity. When we have more spare capacity, it lessens the impact of unrest in the Middle East, such as when—during the Libya civil war when Libya's oil production went offline, and it lessens the global dependence on Middle Eastern oil. That leads to lower global oil prices overall.

In 2011, the United States experienced the largest 1-year increase in oil production in our history. These large increases, however, occurred almost exclusively on private and State lands. President Obama likes to take credit for this. That credit is—is completely wrong.

According to CRS, 96 percent of the increase of oil production between fiscal year 2007 and 2012 came from private and State lands. This rapid increase is the result of hydraulic fracturing and

directional drilling on private and State lands combined with rational regulation from the States. Because this is—and that is the difference between the State regulators and—and the Federal regulators.

Some say that hydraulic fracturing is dangerous or controversial, but let's just look at the record. It's been used for over 60 years in more than 1.2 million wells, and even EPA Administrator Lisa Jackson says there isn't a single confirmed case of groundwater contamination from hydraulic fracturing.

And Federal lands have even more energy potential. We know there's more than 1.4 trillion barrels of oil shale and shale oil. But—for example, but the Federal Government leases less than 2 percent of offshore areas and less than 6 percent of onshore areas for energy production.

If the Federal Government were serious about lowering oil prices, they would do two things. First of all, they would follow the States' example on leasing and regulation of oil development, and they would help export the States' exemplary policies around the world.

For example, it takes 307 days for the Federal Government to process a permit to drill on Federal lands, but it only takes the State of Colorado 27 days and North Dakota 10 days. While the President in the State of the Union said that he would, quote, "keep cutting red tape and speeding up new oil and gas permits," close quote, the reality is quite the opposite. The amount—since 2005, the amount of time that it takes the Federal Government to process a permit to drill has nearly doubled.

There are vast oil and natural gas resources in the United States and Canada. Even more oil resources are available if the Federal Government and other countries around the world were to follow the lead of States like North Dakota, Texas, and Pennsylvania with their regulation and benefits from hydraulic fracturing. So far the only place in the world they have seen the transformative power of hydraulic fracturing to dramatically increase oil and natural gas production is on private and State lands. Rational regulation on Federal lands and around the world would lead to greater energy produced—production and lower prices.

Thanks for the opportunity to testify, and I'd be happy to answer any of your questions.

Mr. LANKFORD. Mr. Simmons, thank you.

[Prepared statement of Mr. Simmons follows:]

**BEFORE THE SUBCOMMITTEE ON ENERGY POLICY, HEALTH CARE AND ENTITLEMENTS**

**COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM**

**HEARING ON THE EFFECTS OF RISING ENERGY COSTS ON AMERICAN FAMILIES AND EMPLOYERS**

**FEBRUARY 14, 2013**

**TESTIMONY OF DANIEL R SIMMONS**

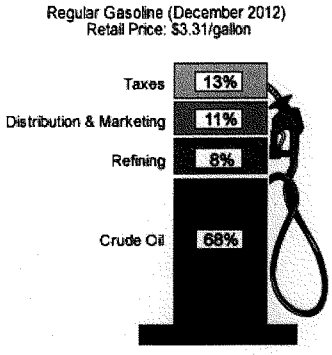
**THE INSTITUTE FOR ENERGY RESEARCH**

The Institute for Energy Research (IER) is a non-profit organization that conducts intensive research and analysis on the functions, operations, and government regulation of global energy markets. IER articulates free market positions that respect private property rights and promote efficient outcomes for energy consumers and producers. IER staff and scholars educate policymakers and the general public on the economic and environmental benefits of free market energy. The organization was founded in 1989 as a public foundation under Section 501(c)(3) of the Internal Revenue Code. Funding for the institute comes from tax-deductible contributions of individuals, foundations, and corporations.

## Why are gasoline prices so high?

A majority of the price paid for a gallon of gasoline comes directly from the wholesale price of crude oil, which is refined to make gasoline and other petroleum products. According to the Energy Information Administration (EIA), in December 2012, 68 percent of the price of gasoline was the cost of crude oil, 8 percent was the cost of refining, 11 percent the cost of distribution and marketing, and 13 percent was the cost of taxes.[1]

Petroleum is a globally-traded commodity. On net, the United States imported 41 percent of the crude oil it consumed in 2012.[2] The United States exports some crude oil and petroleum products due to geography and location and ownership of refineries. For example, the United States purchases crude oil from Canada and sells Canada a small amount of crude oil produced in Alaska. The United States purchases crude oil from Mexico and sells Mexico gasoline in return. Also, Venezuela owns three CITGO refineries in the United States and ships some of the products refined in the United States back to Venezuela.




To understand the movements in crude oil prices over the last several years, the obvious answer from an economist is "supply and demand." Getting more specific, we can see that there are "fundamental" factors involved, which amplify consumption demand and restrict supply. In addition, the supply and demand fundamentals can be augmented in the presence of loose monetary policy, as investors rush into commodities as a hedge against future inflation.

**Supply and Demand**

1. **World Oil Demand Growth**: World crude oil and liquid fuels consumption grew to the highest level ever in 2012, with an estimated 89.2 million barrels per day (bpd) consumed in total.[3] EIA projects that total world oil consumption will grow by 0.9 million bpd during 2013 and 1.3 million bpd in 2014 with countries outside the Organization for Economic Cooperation and Development (OECD) comprising most of the growth in consumption.[4] The largest increases in oil consumption will be non-OECD Asian countries, which are using increasing amounts of oil to sustain their rapid economic growth.

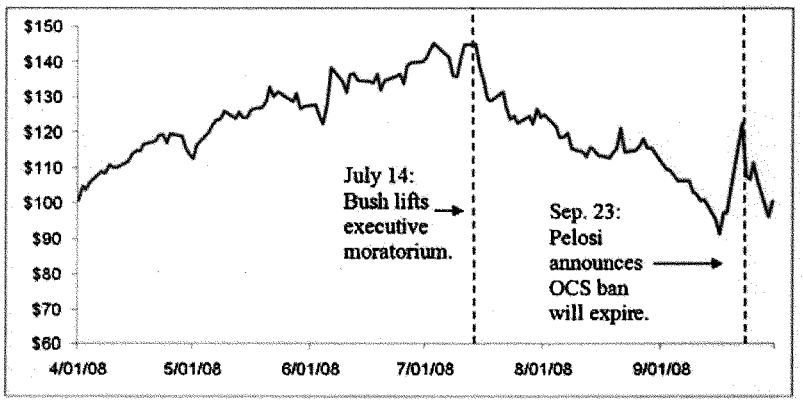
   China, in particular, has a large role in the increased global demand for oil. China is the second-largest consumer of oil behind the United States and as of 2009, China became the second-largest net importer of oil. In 2011, Chinese crude oil imports were 5.52 million bpd[5]—up 8.2 percent from 2010 levels.

2. **Domestic Supply**: According to the EIA, the U.S. produced 6.4 million bpd of crude oil in 2012,[6] up from 5.6 million bpd in 2011—the largest one-year increase ever. The EIA expects production from the Federal Gulf of Mexico (GOM)—which produced 28 percent of U.S. oil in 2010—to produce only 19 percent of U.S. oil production in 2013.[7] There are two reasons for this. First, hydraulic fracturing on private and state lands is rapidly increasing total domestic oil production and second, because oil production in the Gulf of

Mexico is predicted to fall by 12 percent from production levels in 2010 mainly due to government policies that restricted drilling in the Gulf.[8] Another important point for the Committee, I note later in my testimony that 96 percent of the increase in domestic production since 2007 has come from non-government lands. This increase could be much larger, but for government policies.

Some people argue that allowing more domestic offshore drilling would have little impact on oil prices. It is true that oil is a global commodity, and that it takes time—perhaps several years—for oil to actually hit the market after a new site has been approved for development. Nonetheless, after President Bush lifted the executive moratorium on July 14, 2008, and then again after Speaker Nancy Pelosi announced on September 23, 2008 that Congress would allow the congressional moratorium to expire, there were immediate price decreases. For example, prices dropped $9.26 per barrel—or 22 cents per gallon—on world markets during President Bush's speech explaining the lifting of the moratorium. The chart below illustrates this effect:

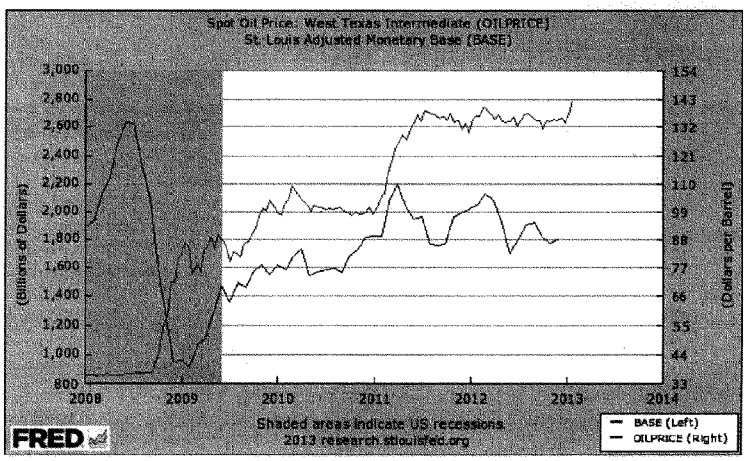
**West Texas Intermediate Spot Crude Prices (EIA)**




Economic theory predicts that the potential for greater future oil production should lead to price relief. It is true that lifting the moratorium could not immediately increase oil production from the affected areas, but other oil producers with excess capacity, such as Organization of Petroleum Exporting Countries (OPEC) nations, would have an incentive to produce more in the present once they believe that future U.S. output will be higher. This episode from 2008 is one example of immediate oil price relief because of a policy change implying potential future oil production.

3. **OPEC Production Restraints, Actual and Potential:** About 23 percent of our oil product supply in 2012 arrived from the twelve OPEC countries:[9] Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. These twelve oil-exporting nations possess much of the world's known conventional oil reserves, and as such, have excess production capacity. However, in order to maintain favorably high oil prices, these nations agree on production targets that curtail the supply of oil from member states. For instance, in December 2008, the 11 members bound by quota restrictions, all but Iraq, agreed to a 4.2 million bpd production cut to keep oil prices high. In December 2012, OPEC agreed to cut production by 465,000 bpd to maintain high oil prices.[10] In addition, oil prices are buoyed due to unrest in the Middle East and the boycott of Iranian oil[11] in an attempt to make Iran abandon development of nuclear weapons. Finally, the mere *potential* of the outbreak of a major war in the Middle East keeps oil prices artificially high, as oil traders factor in the chance of a major disruption in exports from the region.

4. **Expansionary U.S. Monetary Policy:** Since 2009, commodity prices (like food and fuel) have risen with Federal Reserve interest rate cuts and the various rounds of "quantitative easing." This increase is precipitated by investors choosing to secure their finances with non-income generating real assets, like oil and precious metals, in the face of inflation and the threat of a devalued dollar. In particular, oil prices surged along with other commodity prices when the Federal Reserve Board revved up its second burst of quantitative easing in 2010–2011 and stabilized when QE2 ended.



As IER economist Robert P. Murphy has explained:

> The fit [of the above chart], is not perfect of course—nothing ever is in macroeconomics—but since early 2009, the movements in oil prices closely follow the movements in the Fed's balance sheet (approximated here by the "monetary base"), particularly during the two years from early 2009 to early 2011.
>
> In fairness, one could defend Ben Bernanke by saying that with every round of "quantitative easing," investors thought the world economy was on the road to future growth, and hence bid up the price of oil. Yet a cynic could equally well argue that the world economy is hardly in a robust recovery, despite literally unprecedented monetary inflation from the Fed and other central banks. A more plausible explanation of the chart above is that commodity prices are being bid up by the flood of liquidity crashing into an economy with very weak fundamentals because of misguided government policies.

In recent months, the Federal Reserve Board has again signaled its commitment to near-zero interest rates first through 2013, and then through 2014. Oil and other commodity prices have begun another surge and hedge funds are again betting on commodity plays.

### Federal and State Taxes

The second main cost of the price of gasoline is federal and state taxes. In December 2012, federal, state and local taxes accounted for 13 percent of the price of gasoline.[12] The federal tax on gasoline accounts for 18.4 cents per gallon, while the volume-weighted average state and local tax is 30.4 cents per gallon as of January 2013. This amounts to a 48.8 cent nationwide average tax on gasoline.[13]

### Refining Costs

The third cost to factor into the price of gasoline is the refining process, where crude oil is "cracked" and formulated into its chemical components and made into gasoline. In December 2012, refinery costs comprised 8 percent of the retail price of gasoline.[14] This figure varies regionally because different parts of the country require different additives and processing steps in their gasoline formulations. The figure of 8 percent would also vary in other months, owing to seasonal changes in refinery operations. For example, in the spring when refineries need to retool to produce summer-blend gasoline and to meet summer gasoline demands, the cost of refinery operations is higher.

It is becoming harder and harder to refine oil in the United States. Over the past 30 years, refineries have dealt with a huge number of ever-stricter regulations. Between 1981 and April 2012, the federal government has promulgated 65 major regulations and 755 non-major regulations that affect the subset of manufacturers that includes refineries.[15] A major regulation is a regulation that the federal government calculates will cost over $100 million.

This dramatic increase in regulation has led to higher costs which have driven 66 U.S. refineries out of business since the 1990s. According to the Department of Energy the costs of regulatory compliance is one of the prime reasons for these closures.[16] Since 1990, refineries have spent $128 billion to comply with federal environmental regulation.[17] To put that in context, that works out to over $850 million per operating refinery in 2011.[18] In essence, the result has been that refineries have become fewer but larger, which makes logistics more difficult when problems occur at a refinery, as they do in any major industrial operation.

Refinery costs are set to continue to increase as a result of a number of federal regulations including new ozone national ambient quality standards, greenhouse gas emissions regulations on refineries, Tier III gasoline mandate, EPA's mandate to buy commercially unavailable cellulosic biofuel, just to name a few. According to a study conducted by the economic consulting firm NERA, energy-intensive sectors such as chemicals and petroleum products output could be on average 10 percent lower over the next decade due to major regulations due over the next 10 years.[19]

**Distribution and Marketing Costs**

The last component of the price of gasoline is the retail dealer's costs and profits, which constituted a combined 11 percent of the cost of a gallon of gasoline in December 2012.[20] From the refinery, most gasoline is shipped first by pipeline to terminals near consuming areas and then loaded into trucks for delivery to individual stations. Ethanol must also be transported by truck or train because it cannot be mixed with gasoline prior to delivery.

Even though many gas stations are branded as Shell, Exxon, BP or another major oil company, the major oil companies actually own fewer than 5 percent of gas stations.[21] The vast majority of gas stations are actually independent businesses that purchase gasoline for resale to the public. In addition, some retail outlets are owned and operated by refiners.

The price at the pump reflects both the retailer's purchase cost for the product and the other costs of operating the service station. It also reflects local market conditions and factors, such as the desirability of the location and the marketing strategy of the owner. Everyone in Washington has seen this at the gas station on the corner by the Watergate.

**Additional Issues:**

***Limited Energy Production on Federal Lands***

The federal estate contains vast energy resources, but the federal government allows energy production on a very small percentage of taxpayer-owned federal lands. The Interior Department has leased just 2 percent of federal offshore areas and less than 6 percent of federal onshore lands for oil and gas development.[22] This is particularly important because, while the entire U.S. including Alaska and Hawaii is 2.271 billion acres, the government owns mineral access to 2.4 billion acres due to the Outer Continental Shelf.

The large increases, however, in oil production that have occurred in the United States are almost entirely on private and state lands. The Congressional Research Service (CRS) found that oil production on private and state lands makes up about 70 percent of total U.S. oil production.[23] According to CRS, 96 percent of the increase in oil production between fiscal years 2007 and 2012 came from private and state lands and production there increased 11 percent in fiscal year 2011 from fiscal year 2010 levels. In contrast, the CRS report found that oil production from the federal onshore mineral estate was a mere 306,000 barrels per day (5.5 percent) out of a total of 5,590,000 barrels produced daily in the United States in fiscal year 2011.[24]

***Limited Hydraulic Fracturing on Federal Lands***

Hydraulic fracturing is changing the world's oil and natural gas outlook, but primarily on private and state lands in the United States. The states have a very good track record of regulating hydraulic fracturing. Over the past 60 years, more than 1.2 million wells have been hydraulic fractured, and according to EPA administrator, Lisa Jackson, there has not been a single confirmed case of groundwater contamination from the process.[25] Given that technologies are getting better and cleaner, as they always do, there is no reason to think that things will get worse.

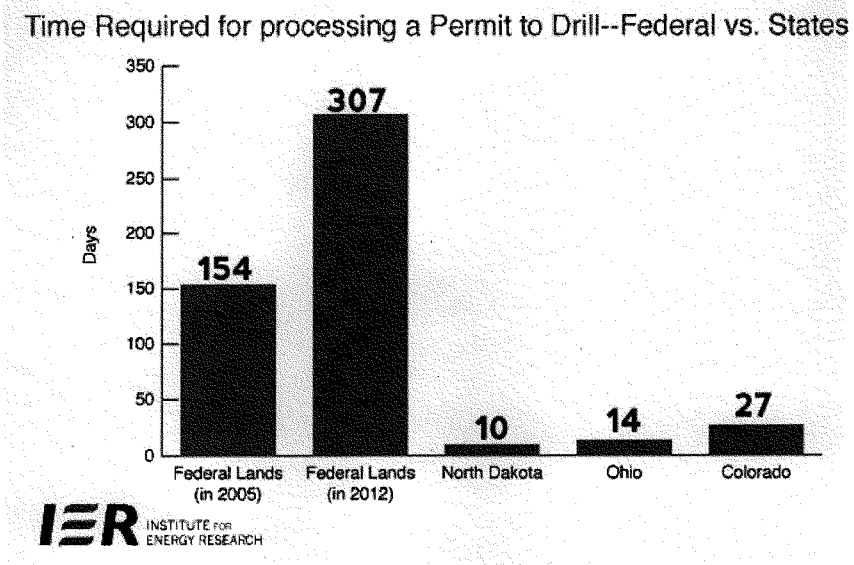
Despite the states' track record of dramatically increasing oil and natural gas production on federal lands without problems relating to the process, the federal government now wants additional regulation of hydraulic fracturing.

The Bureau of Land Management (BLM) has proposed new and costly regulations for hydraulic fracturing on federal lands. According to a study by John Dunham & Associates, the BLM's hydraulic fracturing regulation will cost society $1.5 billion.[26] The cost per well to comply with the regulations tops $250,000.[27] If there is no problem, there is no reason for this except to penalize investment on federal lands. The result will be that businesses will continue to skip doing business with the federal government and the taxpayers and energy consumers of the country will suffer.

It is important for the Committee to remember that vast areas of protected lands are not subject to leasing for oil and gas, including the National Park System, almost all of the National Wildlife Refuge System, the National Wilderness System and others. The Administration is proposing a whole new set of regulations for lands that are supposed to be used for multiple uses, including oil and gas development, and must be returned to their original condition by law once the activity is over.

The Department of Interior is reworking the regulations somewhat and recently announced that BLM "is making improvements to the draft proposal [to regulate hydraulic fracturing] in order to maximize flexibility, facilitate coordination with state practices and ensure that operators on public lands implement best practices." The revised draft is scheduled to be out by March 31.[28] Many of the states where drilling occurs already require these regulations, but the federal government now wants to assume these traditional state functions for itself, and the example below demonstrates the inefficiencies involved.

Consider one example of the time required to get a permit to drill on federal land versus some energy producing states. It takes 307 days for the federal government to process a permit to drill, but only 27 days for Colorado and 10 days in North Dakota. It should come as no surprise why North Dakota's oil production is rapidly increasing while energy production on federal lands is stagnating. The federal government has vast energy resources, but the federal government's current energy plan is designed to limit energy production on federal lands.



The federal government's land use policies have reduced oil and natural gas production on federal lands because federal regulations make it much more difficult to work on federal lands. Instead of following the example of the states, the federal government continues to slow down energy production.

### *Increased Energy Production on Federal Lands Is a Win-Win*

If the federal government were to get serious about increasing oil and natural gas production on federal lands, the results could be dramatic. Areas that the federal government could open to oil and gas development include:

- The 10.4 billion barrels of oil and 8.6 trillion cubic feet of natural gas in the Arctic National Wildlife Refuge
- The 86 billion barrels of oil and 420 trillion cubic feet of natural gas in the outer continental shelf of the lower 48 states
- The 896 million barrels of oil and 53 trillion cubic feet of natural gas in the Naval Petroleum Reserve-Alaska
- The 25 billion barrels of oil in the outer continental shelf of Alaska
- The 90 billion barrels of oil and 1,669 trillion cubic feet of natural gas in the geologic provinces north of the Arctic circle
- The 982 billion barrels of oil shale in the Green River Formation in Colorado, Utah, and Wyoming.

These technically recoverable resources total 1,194 billion barrels of oil and 2,150 trillion cubic feet of natural gas that is owned by the federal taxpayer. At today's prices ($100.00 per barrel of oil and $4.00 per thousand cubic feet of natural gas), the value of the estimated oil resources is $119.4 trillion and the value of the estimated natural gas resources is $8.6 trillion for a grand total of $128 trillion.[29] These numbers, however, are likely to be low, since little is known, for example, about the offshore energy resources where a moratorium has been in place since 1981 on 85 percent of the waters in the lower 48 states and most of Alaska. The Obama Administration has effectively continued the moratorium lifted by Congress in 2008 through its 2012–2017 leasing plan.

The Congressional Budget Office (CBO) estimated that under current policies, revenues from royalties, rents, and bonuses from oil and gas leases on public lands will generate about $150 billion over the next 10 years. The CBO further estimated that if certain resources currently off limits were immediately opened to oil and gas leasing, another $7 billion would be realized over that period.[30] The CBO study estimates are considered to be conservative when compared to historical data and estimates by other analysts and do not consider the earnings from taxes paid by these industries or their employees.

Partially in response but also for education purposes, IER commissioned a groundbreaking paper highlighting the larger economic effects, including economic

growth, wages, jobs, and federal and state and local tax revenues, of opening Federal lands and waters to oil and gas leasing. The IER paper relies on the CBO natural resource and oil and gas price estimates to maintain direct comparability with the CBO analysis while recognizing that those figures have historically been proven to vastly underestimate resources and revenues. The government's resource information is poor in large part due to the lack of exploration resulting from practices limiting access to federal lands such as the moratoria.

The study finds that if the federal government opened up additional federal lands and waters to exploration and production, the increase to GDP would be $127 billion *annually* for the next seven years, and $450 billion *annually* in the long run. Most impressively, the opening of federal lands would have a cumulative increase in economic activity of up to $14.4 trillion over a period of 37 years. And the ripple effect of that boom would be 552,000 in job gains *annually* over the next 7 years with *annual* wage increases of up to $32 billion over that time period and an increase of 1.9 million jobs *annually* in the long run with *annual* wage increases of $115 billion. Federal and state and local tax revenues would also increase to the tune of $2.7 trillion in federal revenues and $1.1 trillion in state and local revenues over 37 years.[31]

These, I'm sure you will agree, are staggering additions to our nation's wealth. And unlike some of the government's priority energy sources which require huge subsidies that are probably unsustainable, all the federal government must do to put millions to work and add to GDP and revenues is allow the private sector and Americans to go to work.

**Conclusion**

Oil prices are high because of supply and demand. Much of the new petroleum demand is coming from developing Asian countries such as China and India and not from developed countries. In fact, petroleum demand in the United States has fallen from the highs set in 2005.

The United States can help increase the global supply of oil. According to the International Energy Agency, the United States will overtake Saudi Arabia as the world's leading oil producer by 2017.[32] But the vast majority of this increase in oil production is only happening on private and state lands. Federal lands, however, contain vast oil resources and the United States could expand its energy production even more if the federal government wanted to increase domestic oil production.

Lastly, one additional factor that increases the price of gasoline in the United States is the large amount of regulation of the refining industry. As noted above, since 1990 refineries have spent $128 billion to comply with federal environmental regulation. This regulatory compliance has caused dozens of refineries to go out of business. All of these regulations and restrictions lead to higher prices at the pump.

[1] Energy Information Administration, *Gasoline and Diesel Fuel Update*, Feb. 11, 2013, http://www.eia.gov/petroleum/gasdiesel/.

[2] On a gross basis 60 percent of U.S. oil demand is imported from foreign countries. There is a difference between the gross and net imports because the U.S. exports some oil and refined products.

[3] Energy Information Administration, *Short Term Energy Outlook: January 2013*, http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf.

[4] Energy Information Administration, *Short Term Energy Outlook: January 2013*, http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf.

[5] Energy Information Administration, *China: Country Analysis Brief*, Oct. 16, 2012, http://www.eia.gov/countries/country-data.cfm?fips=CH&trk=c

[6] Energy Information Administration, *Monthly Energy Review January 2013, Table 3.1 Petroleum Overview*, http://www.eia.gov/totalenergy/data/monthly/pdf/sec3_3.pdf

[7] Energy Information Administration, *Short-Term Energy Outlook—January 2013, Table 4a. U.S. Crude Oil and Liquid Fuels Supply, Consumption, and Inventories*, http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf.

[8] *See* Energy Information Administration, *Short-Term Energy Outlook—January 2013, Table 4a. U.S. Crude Oil and Liquid Fuels Supply, Consumption, and Inventories*, http://www.eia.gov/forecasts/steo/pdf/steo_full.pdf and Energy Information Administration, *Crude Oil Production*, http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_a.htm.

[9] Energy Information Administration, *Monthly Energy Review: January 2013, Table 3.3c Petroleum Trade: Imports From OPEC Countries*, http://www.eia.gov/totalenergy/data/monthly/pdf/sec3_10.pdf.

[10] PennEnergy, Saudi Arabia keeps oil production steady as OPEC maintains ceiling

[11] Zaida Espana and Dmitry Zhdannikov, *Analysis: Oil price rise raises specter of global recession*, Feb. 26, 2012, http://www.reuters.com/article/2012/02/26/us-oil-recession-idUSTRE81P0JA20120226?feedType=RSS&feedName=topNews&rpc=71

[12] Energy Information Administration, *Gasoline and Diesel Fuel Update*, Feb. 11, 2013, http://www.eia.gov/petroleum/gasdiesel/.

[13] American Petroleum Institute, *Gasoline Taxes January 2013*, http://www.api.org/oil-and-natural-gas-overview/industry-economics/~/media/Files/Statistics/gasoline-diesel-summary.ashx.

[14] Energy Information Administration, *Gasoline and Diesel Fuel Update*, Feb. 11, 2013, http://www.eia.gov/petroleum/gasdiesel/.

[15] Manufacturers Alliance for Productivity and Innovation, *Macroeconomic Impacts of Federal Regulation of the Manufacturing Sector*, Aug. 12, 2012, http://www.mapi.net/research/publications/macroeconomic-impacts-federal-regulation-manufacturing-sector.

[16] Department of Energy, *Small Refinery Exemption Study An Investigation into Disproportionate Economic Hardship*, p. 29–30, March 2011, http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/small-refinery-exempt-study.pdf.

[17] Written Statement of American Fuel & Petrochemical Manufacturers as Submitted to the Subcommittee on Counterterrorism and Intelligence, Committee on Homeland Security, United States House of Representatives on *Implications of Refinery Closures for U.S. Homeland Security and Critical Infrastructure Safety*, Mar. 19, 2012.

[18] Energy Information Administration, *Number and Capacity of Petroleum Refineries*, http://www.eia.gov/dnav/pet/pet_pnp_cap1_a_(na)_8o0_count_a.htm.

[19] Manufacturers Alliance for Productivity and Innovation, *Macroeconomic Impacts of Federal Regulation of the Manufacturing Sector*, Aug. 12, 2012, http://www.mapi.net/research/publications/macroeconomic-impacts-federal-regulation-manufacturing-sector.

[20] Energy Information Administration, *Gasoline and Diesel Fuel Update*, Feb. 11, 2013, http://www.eia.gov/petroleum/gasdiesel/.

[21] Associated Press, *Exxon to sell all of company's gas stations*, Jun. 13, 2008, http://www.nbcnews.com/id/25126563/ns/business-oil_and_energy/t/exxon-sell-all-companys-gas-stations/.

[22] *See* Bureau of Ocean Energy Management, Regulation and Enforcement, *Offshore Energy and Minerals Management*, http://www.boemre.gov/offshore/. According to the administration's website, the outer continental shelf is 1.76 billion acres (http://www.boemre.gov/ld/PDFs/GreenBook-LeasingDocument.pdf page 1) and only 38 million acres are leased *(Department of Interior, Oil and Gas Lease Utilization – Onshore and Offshore,* http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=239255 *page 4*). That is a mere 2.16% of the entire Outer Continental Shelf. According to the Department of Interior, 38 million acres of onshore lands are leased for oil and natural gas production. See Table 3 in Department of Interior, *Oil and Gas Lease Utilization—Onshore and Offshore,* http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=239255. According to the Congressional Research Service, the federal government owns just over 650 million acres of land. See Appendix A. Congressional Research Service, *Major Federal Land Management Agencies: Management of Our Nation's Lands and Resources*, May 15, 1995, http://www.ncseonline.org/nle/crsreports/natural/nrgen-3.cfm. The federal government also controls an additional 58 million acres of federal mineral estate below privately owned surface estate. *See* Bureau of Land Management, *Split Estate,* http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/bmps.Par.98100.File.dat/SplitEstate08finalWeb.pdf.

[23] Marc Humphries, *U.S. Crude Oil Production in Federal and Non-Federal Areas*, Congressional Research Service, Mar. 20, 2012, http://freebeacon.com/wp-content/uploads/2012/03/R42432.pdf.

[24] *Id.*

[25] *See* Lisa Jackson, http://www.youtube.com/watch?v=im-yJhCHhCo.

[26] John Dunham Associates, *Business Impact of Proposed Changes to Well Completion Regulations*, June 11, 2012, http://westernenergyalliance.org/wp-content/uploads/2009/05/John-Dunham-Associates-Economic-Analysis-of-BLM-Fracing-Regulations-FINAL.pdf.

[27] *Id.*

[28] *Id.*

[29] Institute for Energy Research, *Federal Assets Above and Below the Ground*, Jan. 17, 2013, http://www.instituteforenergyresearch.org/2013/01/17/federal-assets-above-and-below-ground/.

[30] Congressional Budget Office, Potential Budgetary Effects of Immediately Opening Most Federal Lands to Oil and Gas leasing, August 2012, http://cbo.gov/sites/default/files/cbofiles/attachments/08-09-12_Oil-and-Gas_Leasing.pdf.

[31] Joseph R. Mason et. al., *Economic Effects of Immediately Opening Federal Lands to Oil and Gas Leasing: A Response to the Congressional Budget Office*, http://www.instituteforenergyresearch.org/beyond-the-congressional-budget-office/.

[32] International Energy Agency, *World Energy Outlook 2012*, http://iea.org/publications/freepublications/publication/English.pdf.

Mr. LANKFORD. Thank you, all of you. All of you, as you know, your written testimony will be made part of the permanent record as well, because I know that is in addition to what you did in your oral testimony.

I'd like to also submit with unanimous consent some of the other documents to go into the record, the two different charts that Mrs. Speier submitted during her oral testimony.

Also, Ms. Carmody had referenced a resolution from her organization. I would like to make that part of the permanent record as well.

The report that was done on Energy Cost Impacts on American Families that Mr. Trisko referenced in his testimony, make that part of the record as well.

And then there have been several comments about the weatherization program. This committee actually last session did a pretty extensive study on the weatherization program. And I hate to say some serious problems. There are many of the programs that we have that are very efficient. That one proved to not be very efficient in the distribution of funds from DOE actually down to homes. So I'd like to be able to put that report as well into the permanent record as well.

Without any objection, all that will be submitted.

Let me begin our questioning time, and we'll take 5 minutes for questioning and then begin to move back and forth on that for those of you that have not done questioning before on it.

Mr. Hand, let me begin with you on this. You talked about diversification of fuel, and talked about some history as well, when natural gas was then prohibited by the Federal Government, and so the industry went to coal and is now shifting back to natural gas again. I look forward to the day that 30 or 40 years from now that we have this same conversation again about coal and begin to shift back again and to see what happens on that.

What is the lifetime of a power-generating facility? What's the typical life expectancy for them?

You need to get your microphone turned on there. Sorry.

Mr. HAND. We've talked about that many times in our board rooms and especially because it—we look to see what the depreciation costs are. The coal plants can be updated. We believe that 50 years on a coal plant is a reasonable lifetime for it to be—technology is something that—at times gas is an area where technology may have caused the—to shorten that to—as far as a base-load generation on the older gas plants because of the combined cycles and the lower amount of fuel that it—natural gas it takes to create that kilowatt hour.

Mr. LANKFORD. So whatever means it may be, let's say if the plant was built in the 1990s, and it was expected to be a coal plant for a 50-year time period on that, pushing them down and pushing them out is very difficult to do, obviously, with capital costs. And then also you're planning a decade ahead of time for construction of new production. So that becomes a—a significant burden in the past.

Can anyone begin to define now as far as a breakout for me of the cost of, let's say, electricity, of where it would break out, the cost that's actually delivered to the consumer, what part of that is

the fuel, what part of that would be regulatory costs, what part of that would be the delivery costs of that? Anyone give an estimation?

Mr. HAND. I have some costs that we actually experienced through Western Farmers, what their costs were. That would not be the same for every utility, but I can give their numbers for last year.

Mr. LANKFORD. Okay. Do you have those at hand, or do you want to submit those?

Either way. I have them here.

Go ahead. List some of those out.

Mr. HAND. The coal was 2.6 cents. The combined using, combined cycle natural gas, this was at a lower gas cost than today, but during 2012 was 2.5 cents. This—the simple cycle was 3.2 cents for natural gas. Combustion turbine, 3 cents. We did purchase some hydro, which had an all-in cost of about 1 cent. Our purchased wind, which was about 12—almost 13 percent, was an average cost of 3.9 cents, which we would consider that all as a fuel cost.

Then we had other purchased power, which we—in the 2.7 cent range for the fuel portion of the kilowatt hour.

Mr. LANKFORD. Okay. And a typical kilowatt hour purchase is how much, so the actual charge to the consumer? The charge to the consumer is how much for a kilowatt hour?

Mr. HAND. For just the fuel component?

Mr. LANKFORD. Just the total cost to them. They are paying how much?

Mr. HAND. Just to the—for the generation of the kilowatt hour, not including distribution cost——

Mr. LANKFORD. I'm talking about how much the consumer pays.

Mr. HAND. How much the consumer pays?

Mr. LANKFORD. Yes, sir.

Mr. HAND. A residential consumer on our system with an all-in cost would be around 9–1/2 cents.

Mr. LANKFORD. Okay.

Mr. HAND. I don't have that number exactly in front of me.

Mr. LANKFORD. All right. Thank you for that.

Mr. Simmons, you made several—several comments about gasoline itself and about increasing supply on Federal lands. You also referenced the President during his State of the Union made a very strong comment about increasing production on Federal lands and decreasing the regulatory environment. You made a comparison between State and Federal regulations.

What do you experience right now or are seeing in the reduction of oil and natural gas as far as the—the pressure towards Federal regulations versus State primacy and State regulations?

Mr. SIMMONS. Well, especially in the area of hydraulic fracturing, the Federal—hydraulic fracturing is regulated by the States because it deals with groundwater. It always has been regulated by the States. And the Federal Government, now the Bureau of Land Management wants to regulate it on Federal lands. That will definitely increase costs. And according to one study, it would cost over $250,000 per well for the Federal Government to do that.

And the Federal—the hydraulic fracturing is the critical technology. So far it has not been regulated by the Federal Govern-

ment, and that's one of the reasons that we're seeing dramatic increases of oil and natural gas production.

Mr. LANKFORD. Okay. Thank you.

Ms. Speier.

Ms. SPEIER. Thank you, Mr. Chairman. And thank you all for your testimony.

I'm trying to find some consensus here. And we're talking about the high costs of energy for families and employers. And three of you, Ms. Carmody, Mr. Trisko, and Mr. Weiss, all spoke about the LIHEAP program. So let's see if we can get some consensus here on LIHEAP.

It was a $5.1 billion program. It has since been cut. I don't know to what extent it's been cut. If we're really trying to help the low-income people in this country not spend 20 percent of their income on energy, LIHEAP is part of the solution; is it not?

Ms. CARMODY. Yes. Ranking Member Speier, from our point of view, NASUCA has consistently for any number of years supported full funding of LIHEAP. In my testimony I did mention the $5.1 billion cost figure and the fact that it's down to, I believe, around 3.4 billion at this time. This is not sufficient from our purposes or for our low-income consumers to provide adequate funding.

One of the things that we have noted in the State of Maryland, certainly over the past 4 to 5 years, are a few things. One, of course, is the significant increase in the number of applicants for energy assistance; that is, that they meet the income guidelines. Because of reductions in State funding and private donations, there are actually lower dollars available to supplement LIHEAP from the State level. So what this means is that the average benefit that our customers in Maryland are getting between LIHEAP and State contributions is running around what it was in 2002 and far less than it was in 2008. So we do support full funding, and NASUCA's on record as doing that.

Ms. SPEIER. Thank you.

Mr. Trisko?

Mr. TRISKO. Thank you, Ranking Member Speier.

My paper submitted for the record notes that LIHEAP's current funding level, about 3.4- or $3.5 billion, is equivalent to 6 percent of the total residential energy bills that I've calculated for the year 2013 for the income category of gross income $30,000 or less.

Ms. SPEIER. So only 6 percent of those making $30,000 or less actually access it.

Mr. TRISKO. Only 16 percent.

Ms. SPEIER. Sixteen.

Mr. TRISKO. Pardon me. The 6 percent number is $3–½ dollars represents 6 percent of the total energy bills, residential energy bills, for households with gross incomes of $30,000 or less. In other words, it only scratches the surface. But also bear in mind that the participation rate in the LIHEAP program is only 16 percent; that is, only 16 percent of those households that qualify for LIHEAP assistance actually apply for and receive it. So there's a serious lack of participation in the program in addition to an apparent lack of adequate funding. And it's my understanding generally that all of the major energy associations support adequate funding——

Ms. SPEIER. All right.

Mr. TRISKO. —for LIHEAP.

Ms. SPEIER. Thank you.

Mr. Weiss, do you have anything to add to that? Or I'm going to ask you another question.

Mr. WEISS. Just very briefly that I would observe that the $1.6 billion funding cut for LIHEAP is less than the $2.4 billion a year that the Big Five oil companies received in special tax breaks, according to the Congress' Joint Committee on Taxation.

Ms. SPEIER. Okay. Thank you for that comparison.

Let me ask a question of all of you: How many of you believe in climate change? Let's just go down the line. Mr. Hand?

Mr. HAND. Yeah.

Ms. SPEIER. It's not a trick question, yes or no.

Mr. HAND. To say that I don't believe that climate ever changes would be to deny history. I believe history as far as far as full climate change.

Do I—am I convinced that man is the——

Ms. SPEIER. All right. Thank you. You're not certain man is.

I'm running out of time. I just want to make sure everyone gets the question answered, and then I have a question for Mr. Weiss. And I don't think I'm going to be able to ask it.

Go ahead.

Ms. CARMODY. Yes. I would just note that in 2007, a NASUCA resolution did indicate that there was a growing scientific consensus on the need to reduce emissions of greenhouse gases, and did cite a number of reports and studies on climate change. And I will decline to offer my personal views since I'm here on behalf of——

Ms. SPEIER. All right. Thank you.

Mr. Trisko.

Mr. TRISKO. Ranking Member Speier, I am in an even more difficult position. And I would speak on my own behalf. I have attended for the past 20 years every United Nations International Framework Convention on Climate Change meeting, and it is abundantly clear that unilateral actions by the United States on CO2 reductions would have no meaningful

impact on future concentrations of global CO2. Further, any actions——

Ms. SPEIER. All right, Mr. Trisko, my time has expired.

Mr. Weiss.

Mr. WEISS. Yes. There is an overwhelming scientific consensus that climate change is real, it's here, and it is caused by human activity burning fossil fuels.

Mr. LANKFORD. Mr. Simmons.

Mr. SIMMONS. Yes, I believe in climate change.

Ms. SPEIER. Mr. Chairman, I regret that I'm going to have to leave temporarily to participate in a press conference that is bipartisan in nature. So I will return as soon as possible.

Mr. LANKFORD. Thank you.

Mr. Walberg.

Mr. WALBERG. Thank you, Mr. Chairman. And thank you to the panel for being here.

Mr. Trisko, appreciate the fact that you're a man of numbers and statistics.

The President stated in his State of the Union Address we produce more natural gas than ever before; nearly everyone's energy bill is lower because of it.

Do you believe that nearly everyone's energy bill is lower once EPA's regulations go into effect?

Mr. TRISKO. Congressman, I believe that one of the most telling statistics noted in my testimony, in the submitted testimony, is that EPA's current MATS rule, the Mercury and Air Toxic Standard rule that Mr. Weiss referred to, has an estimated annualized cost by EPA of some $9.6 billion annually. And that compares to EPA's estimate of the annual costs of all prior Clean Air Act regulations on the utility sector of $6.6 billion.

Mr. WALBERG. All prior.

Mr. TRISKO. All prior. So this one regulation alone exceeds the costs of all prior Clean Air Act regulations.

And we are basically now confronting a chain of future regulations, including potential regulations on water intake, on coal ash, and whatever is determined with respect to existing source emissions of CO2, that could potentially dwarf the cost of that 9.6 billion.

So looking forward, the expectation in terms of impacts on electric bills is for increases both in current and real dollars.

Mr. WALBERG. How much——

Mr. WEISS. Mr. Chairman.

Mr. WALBERG. Let me continue on here.

How much can Americans expect their electricity bills to increase in the next couple of years, based upon those figures?

Mr. TRISKO. I believe that it's—the EIA publishes a series of projections in their long-term energy outlook in which they take into account the EPA regulations. I don't know the average annual rate of increase offhand. Mr. Weiss does.

Mr. WEISS. May I answer?

Mr. Chairman—sorry, Mr. Walberg, the Energy Information Administration projects that electricity costs will remain essentially flat over the coming 10 years.

Mr. WALBERG. Well, it will be interesting to see it essentially flat. I'd be delighted, but hearing the figures about this eclipses all previous regulations, I'd find that hard to believe. But thank you.

Ms. Carmody, can you please go into some detail on NASUCA's June 2012 resolution on EPA regulations and also what prompted it?

Ms. CARMODY. Yes. Thank you, Mr. Walberg.

As I mentioned previously, we've got members from over 40 States in the United States, and as you can imagine, they come from every region of the country, you know, certainly, the Midwest the Northeast, West, Southeast. And the individual members and States have different perspectives. The resolution that came out in June of 2002, and this is the one that recommended, you know, or urged the EPA to certainly factor in cost impacts in terms of looking at compliance deadlines, this was a result of a—lots of discussion and an attempt to reach consensus of agencies with different perspectives on a broad point of view to protect consumers basically across the country. And we were not able certainly to reach agree-

ment on the EPA regulations themselves because of varying points of view.

But we all recognized as individual State agencies that deadlines or compliance deadlines, if they are too rapid, can impose certain rate shocks and abrupt cost impacts on consumers, particularly in certain States. And that was the impetus for passing the resolution to urge that these factors be taken into account as we're moving forward with environmental regulations.

Mr. WALBERG. Thank you.

Mr. Hand, I notice in your testimony you have troubles with the lesser prairie chicken and the costs that could come from that. I've got troubles in my district with the Eastern fox snake and siting of the new—new proposed Fermi nuclear plant.

But let's move over to Utility MACT. Will regulations like Utility MACT increase the costs of electricity that you provide to your customers, and what implications does that specifically have in rural areas?

Mr. HAND. Yes, that will, because it will require additional capital investments that have to be paid for. And one of the things I'd address about—I'm glad you asked me about rural areas. We serve our roughly 90 percent resident—farm residential with about 40 percent of that group retired. Many are homes that are not the most energy efficient. And approximately half of the homes being built in our area today are mobile home manufactured housing that do not have the same potential to be energy efficient. We're very concerned about the people that are there today and the ones that are coming, because many of these homes are there because that's all the people could afford to put there, and their electric bills we see many times in the hot months and cold months far exceed their house payments.

Mr. WALBERG. Thank you. Thank you, Mr. Chairman. I mean, these, as recognized in rural America, are lower-income and middle-class families that we are talking about here and the impact of these regulatory costs.

Mr. LANKFORD. Ms. Carmody, before we move on, I want to be able to check one thing in your reference. You reference a 2002 report on that. Did you mean the 2012?

Ms. CARMODY. If I said 2002—I think I have to recall what—we do have a 2012 resolution. And that was the one that I just discussed with the compliance deadlines. If I said 2002, my apologies. I need to correct it to 2012.

Mr. LANKFORD. That is great. A decade in Federal time is no time at all. I just wanted to make sure your record was clear on that. Thank you.

I want to be able to recognize for 5 minutes a new member of the panel Mr. Horsford. You are welcome to be able to do questioning for 5 minutes. Thanks for being here.

Mr. HORSFORD. Thank you very much, Mr. Chairman. It is my pleasure. And this is a very important discussion today, as it affects all of us as consumers, both residential as well as businesses.

And I would like to ask each of you quickly to just touch on energy production from a renewable energy standpoint. I am from Nevada. Over 80 percent of our land is controlled by BLM. And we have an abundance of wind, solar, geothermal resources, and can

be a net exporter of energy. And I am of the view that we need all of our energy resources to be considered on the table in a fair and equitable manner. So I would like to ask you to just touch on briefly renewable energy production as part of the equation here.

Mr. HAND. I would be glad to. And I would just say in Oklahoma, the Western Farmers, our power supplier, we were the first utility in Oklahoma to embrace the large wind farm, sign the first contract with them, and bring it into our system. We have continually added to that at every opportunity.

We have had some concern over how much we can bring in just to manage the system and keep it stable, but it has been more than we thought. And we consider it, as I said earlier, a hedge.

Again, now, there are costs, such as the transmission to move it, that kind of gets blended in and don't get charged to that. But we believe that is part of coming forward with a balanced energy program.

The mention of the lesser prairie chicken not only affects us and the ability to build transmission lines to move this power, it is going to affect the ability to build the wind generators where they are needed.

Mr. HORSFORD. Thank you.

Ms. CARMODY. Thank you. I am here, and I stated earlier before you entered the room, in my official capacity on behalf of the National Association of State Utility Consumer Advocates. So I did want to make a distinction between that, that I am speaking on the association's behalf.

In the resolutions that I referred to in my written testimony and orally today, those resolutions do contain support for the inclusion of different and diverse energy resources in long-term planning, generation planning. And in those resolutions we do identify renewable resources as part of that diverse portfolio.

Mr. HORSFORD. Okay. Let me just break in so that I don't take up all the time.

On the question, though, of the Federal land, Mr. Simmons, I know you touched on it, Mr. Weiss, I don't know if you have any additional comments. So the focus was more on natural gas. But what about Federal land use for renewable energy development? Again, I have one county in my rural part of my district where over 90 percent of that county is controlled by the BLM, and, therefore, they cannot enter into local agreements for development for renewable energy without a lot of BLM involvement. So what's your perspective on that, Mr. Weiss?

Mr. WEISS. Well, first, under the current administration, they met a goal of siting 10,000 megawatts of renewable electricity on Federal lands. Second, there is vast potential on Federal lands for additional renewable electricity. We actually did an analysis on it, and I would be happy to submit it for the record. And third is that one of the things that the current administration did is they sped up the paperwork process for getting approval of wind or solar facilities on Federal lands.

Mr. SIMMONS. If I may, obviously renewables have positive and negatives, as all sorts of energies. With renewables it is frequently the cost. And in the case of the Federal lands, it is so difficult to do any type of activity, any type of energy production on Federal

lands, that even when it comes to solar or wind that the administration would like to expedite on Federal lands, it is still very difficult and time consuming.

One thing that would—I think would definitely be a positive for all sorts of energy is to streamline the process for all types of energy, and that way, you know, we can be able to use the Federal lands in a more multiuse method.

Mr. HORSFORD. Mr. Chairman, I agree with the need for us to look at streamlining the process. I know the Interior, under the leadership of Secretary Salazar, has done yeoman's work and made tremendous progress, but there is much more that can be done. And on behalf of a State that is controlled by more than 80 percent by the BLM, we need to have this discussion in ways that really produce some solutions for local governments and States that want to have more control over the development of our resources.

Mr. LANKFORD. I would completely agree on that. People asked me about the State of the Union Address and where I found common ground with the President, and he listed and articulated very clearly he wanted to be able to speed up the regulatory process and the speed of that for Federal lands for both oil and gas and renewables. And we would welcome that and work in any way we can with the administration for that. So thank you for your testimony.

Mr. DesJarlais.

Mr. DESJARLAIS. Thank you, Mr. Chairman.

Mr. Simmons, oil refineries on the east coast and the Gulf of Mexico have had difficulties with expeditiously getting oil to their facilities. What would more pipelines like the Keystone XL mean for gasoline prices?

Mr. SIMMONS. Well, the problem with the refineries on the east coast is that for years they have been dependent on Brent crude, oil that is transported from—essentially from the North Sea, and traditionally that has been cheaper oil. And for the last few years, it has been much more expensive. In fact, for a while a couple years ago, it was—the refined products were actually cheaper than the cost of the oil itself.

What more pipelines to those facilities means is that you can move the cheap, low-cost oil that's being produced in the Bakken and in other parts of the country, or all the way from—all the way from the oil sands in Canada to those refineries, giving them access to low-cost energy—low-cost oil supplies. And here is the price difference. Brent crude is currently $110 a barrel. The cost per barrel for the oil coming out of the oil sands is about $50 to $55 a barrel. So when you can buy a barrel of oil for $55, or, you know, it will obviously cost more after pipelining costs, but you are still able to make money compared with buying from Brent Sea crude. And that is why the pipelines matter, is to move it to where there is spare refining capacity.

Mr. DESJARLAIS. Do you think it is realistic, then, that we can build more reliable and efficient transmission systems even to the east coast? Obviously, the Keystone would be an asset, I think you would agree. Can we build pipelines to the east coast as well?

Mr. SIMMONS. Oh, sure. Sure. What matters is reliable supply, that it makes sense to make those multimillion-dollar and multibillion-dollar investments.

Mr. DESJARLAIS. Thank you.

Mr. Hand, many people say that since the United States now has a lot of natural gas that we do not need to use coal anymore. Is this accurate?

Mr. HAND. Me working in an area where we have to deal with the price of electricity every day, and have been doing that for a long time, I remember when the price of natural gas after Katrina went to nearly $15, and the price of electricity followed it very rapidly. I have seen many changes with favoring oil. I believe that it is important that we have a diversified supply of energy. But we know that we have an abundant amount of coal in the ground that is available, and I don't believe we should ever ignore that valuable resource.

Mr. DESJARLAIS. Now, you serve rural and underserved areas. If we were to limit the co-op from burning coal, how will the underserved rural areas receive their electricity?

Mr. HAND. When you say limit, that concerns me greatly, because as I regularly read even in Oklahoma, we have had one major utility negotiate a settlement, I don't know how far it has gone, with the EPA to shut down a coal plant. I continue to see that across the country, where more coal plants are being shut down. Today we don't have the capacity to be able to supply all the needs with those plants, and you don't bring them online tomorrow.

Mr. DESJARLAIS. So regulations are seriously preventing or limiting your ability now, and that would get much worse. In other words, it's the regulations right now that are a major hindrance for you and your ability to provide services?

Mr. HAND. Today we are only beginning to see the costs of some of the control technologies that we are having to put in. The CO2 issue and how strict it is on existing plants could be a matter of rationing in our area.

Mr. DESJARLAIS. Are there even—I guess that would bring me to my next question. Are there any other sources of electricity even available in some of your areas if you didn't have coal?

Mr. HAND. Well, they would rapid—I don't believe there is that much capacity, especially with today's transmission system, to be able to move it in. Today much money is being spent in the area of transmission to better move power, but today we have become so dependent—and not so much more than other States, I don't mean to claim that—as the part of our capacity that comes from coal-fired generation. It would be an extreme hardship.

Mr. DESJARLAIS. Okay. Thank you, Mr. Chairman. I am going to try to get just a few bonus points, so I yield back.

Mr. LANKFORD. Thank you, Mr. DesJarlais.

Ms. Norton.

Ms. NORTON. Thank you, Mr. Chairman.

In this very room this morning the GAO reported on its—or testified here on its, quote, "annual high risk report." And, you know, normally we are looking at things like Medicaid or Medicare, and, of course, all of those things are always there. Number one on its list was climate change. So here we had a government agency known for its objectivity which not only spoke about the increasing evidence of climate change, but went further and spoke of what I can only call shocking exposure of the Federal Government, leave

aside all the rest of us, because of the amount of land the government owns, because the government, of course, must give assistance all over the country, and because of the unpredictability of what had been rare, which has now become routine, extreme climate episodes.

Now, I noticed on page 3 of your testimony, Mr. Weiss, you speak about higher gasoline prices due to Middle East unrest and speculation, and then you go into some of the unrest in the Middle East. I am interested in the speculation. It's going to be very hard to come to grips with the unpredictability of climate change and what the Federal Government ends up having to do. But analysts for some time have told us that notwithstanding what's happened in the Middle East in the recent year or so, that speculation accounts for as much as a third, or almost a third, of the price of gasoline. Is there anything that a free-market government can do in light of that kind of inflation that is absolutely useless and hard to justify?

Mr. WEISS. Thank you, Ms. Norton.

A couple years ago the head of Exxon Mobil testified to the Senate Finance Committee that the price of speculation, which are people investing in oil futures who do not plan to take physical possession of the oil, so they are different than end users such as an airline who actually has to buy the physical oil, that speculation was responsible for anywhere from $20 to $40 a barrel of the price of oil, and at that time the price of oil was about $100 a barrel.

In fact, last year McClatchy did an analysis that found that two-thirds of the trades in the oil futures back in the winter of 2012, when we were having unrest in the Middle East and Libya, was due to speculators who were making two-thirds of the trade, end users were one-third of the trade.

Fortunately, the Commodity Futures Trading Commission has new authority under the Dodd-Frank law to be able to limit the ability of speculators to drive up prices based on the fear that the price is going to keep rising. They have not really been put into place yet, but they are being implemented now by the CFTC. So hopefully that will limit the ability somewhat of speculators to drive up the price, which makes the end users like the airlines and other industries have to pay more for their oil.

Ms. NORTON. Not to mention you and me.

Since there is much we can't control, the increasing evidence of gas prices going up when we least expect it has, of course, led to much concern about what you've just described. I can only hope that—and I don't know how they do it—but however they control this speculation will help us, it seems to me, at least in the long run on that portion of the issues with gas prices that comes from inflated speculation.

Yes, Mr. Weiss?

Mr. WEISS. One initiative the President announced on Tuesday night was the Energy Security Trust, which would be funded by oil and gas royalties paid to the Federal Government for oil owned by all Americans that they then take off of our lands. And that money would be invested in alternatives to oil, like electric vehicles and recharging stations and natural gas trucks.

And one of the ways to help protect people from gasoline and oil price volatility is to give them other options of other fuels, whether

it's electricity, natural gas, or investment in public transit. That will make people less subject to the volatility that comes from gasoline.

Ms. NORTON. Thank you very much, Mr. Weiss.

Mr. LANKFORD. Thank you.

Mr. Farenthold.

Mr. FARENTHOLD. Thank you.

And I would like to actually follow up on that for a second with Mr. Weiss. We talk about the increased income that is potential to the Federal Government for the exploitation of the oil and gas and other natural resources under public land, but we see time and time again the regulatory burdens make it next to impossible to do that.

Now, ignoring for a fact that we spent that money two or three times already with the programs the President was outlining—I think there has been talk about spending that money to repair our aging transportation infrastructure, be it fixing roads, bridges, or, you know, even going so far as to do high-speed rail—what is—what do you see as the holdup here, and how do we fix it? I will let Mr. Weiss and Mr. Simmons both take about 30 seconds at that one, if you please.

Mr. WEISS. Thank you, sir.

Well, in fact, as I mentioned earlier, oil production on Federal lands under the first 3 years of Obama were about 13 percent higher than oil production on Federal lands and waters under the last 3 years of President Bush.

Mr. FARENTHOLD. Compared to a substantially higher number on private land.

Mr. WEISS. Pardon?

Mr. FARENTHOLD. A substantially higher increase on private land.

Mr. WEISS. Understood. But it's still increasing on public land as well.

Second, just lack week the Department of Interior put up for auction another 37 million acres of leases.

Mr. FARENTHOLD. I am from Texas, I understand the oil and gas industry. We have a lot of—it's no problem getting the lease; it is getting the permit to drill that's the problem and the permit to do the operations. You have operators whose leases—have to beg for extensions of their leases because they can't get the permits.

Mr. WEISS. Can I add one quick thing?

Mr. FARENTHOLD. Quickly.

Mr. WEISS. One way to speed that process is to provide more resources to the people who are to review the permits over at the Department of Interior and make sure they have the bodies they need to do the work.

Mr. FARENTHOLD. Or additionally get rid of some of the regulations.

Mr. Simmons.

Mr. SIMMONS. Well, yes. Instead of—follow much more of the States model. The model from the Texas Railroad Commission, for example, is a much better model about if we're actually serious about increasing oil production and natural gas production on Federal lands.

And, you know, Mr. Weiss mentioned that oil production in the last 3 years of the Obama administration were higher than the Bush administration, and the question is why? Well, it has to do—those were all—80 percent of the production, of the oil production, on Federal lands comes from offshore. Almost all of that is deep-water offshore that where a lease was issued during the Clinton administration and the Bush administration, unfortunately. And sadly, that is—I mean, that's why we had an increase, not because of unfortunately——

Mr. FARENTHOLD. And I don't mean to rush you and cut you short. I have a lot of questions, because this is an issue I'm passionate amount.

I'd like to go to Mr. Hand for a second. I was intrigued, as I was preparing for your questioning, reading your testimony. You talk about how as you grew up, your energy was a wood-burning stove, and how despite the fact you work for an electric company, your mom still doesn't like to turn on the air conditioning because the electricity is so expensive.

And this is something that I see is a real problem is we've gotten the low-hanging fruit on people lowering their energy costs. I mean, we've been doing it since the Carter administration. Take gasoline, for example. It's almost doubled in price since President Obama. There's not a lot of ways you can cut your gasoline consumption. You cut out your unnecessary trips, but there are very few unnecessary trips now. People don't have the time or the money to go on vacation. You go to work, you go to school, you go to the doctor's office. There's no real way to cut it. Really it's just turning off the air conditioning, getting very uncomfortable.

So I guess my question is what are we missing for how do people lower their energy costs through what they can do? Or do we just need to force the price down through, you know, more production and lower cost?

Mr. HAND. One of the things that—a number I heard earlier, which I'm sure is right, which I had some of this in my testimony, I had to dig it out, but that only 16 percent of the eligible customers were availing themselves of the LIHEAP program.

Mr. FARENTHOLD. So existing programs. There are some ways to——

Mr. HAND. No, I am not going that direction. I'm saying we still have a lot of people who will themselves still don't just automatically sign up. Now, some people get pushed into it, and it becomes a way of life for them. But we still have the majority who are within that 84 percent who want to take care of themselves, and they do it by reducing their use.

Mr. FARENTHOLD. I'm sorry, I have less than a minute. I want to get one more question in to you, and that has to do with wind. You indicated that your cost of purchasing wind is in line with the fuel costs that you use for gas and other. But isn't that held substantially lower by the production tax credit, and without that tax credit, wind would not be competitive just on a free-market basis?

Mr. HAND. That is exactly right. I think it is 2.2 cents that comes into——

Mr. FARENTHOLD. So almost double the price of the wind energy.

Mr. HAND. And another point of the cost of wind, and, again, I am not—wind is good for—wind production is good for Oklahoma.

Mr. FARENTHOLD. I've got a ton of wind farms in the district I represent.

Mr. HAND. But that cost doesn't have assigned the additional transmission costs that are being imposed to bring that wind into the mix.

Mr. FARENTHOLD. I don't want to go over my time. I appreciate your answering my questions, and thank you very much.

Mr. LANKFORD. Thank you.

And I am going to yield to Mr. Massie in just a moment, but Mr. Hand brings up a point there about 16 percent of the people that are eligible for LIHEAP don't use it. And that has come up several places. And that's because people in Oklahoma are like many places in the country, they don't want to take Federal assistance when they don't have to. They would rather work hard, save, be efficient than use Federal assistance because they want to earn it on their own. It's still a unique American characteristic, and is very much so in Oklahoma as well.

Mr. Massie.

Mr. MASSIE. This question is for Mr. Hand. I am from Kentucky, and I was recently informed by a CEO of a power company in Kentucky that they built a state-of-the-art clean-coal facility, within the past 2 years it's come online; but that currently, even though this thing was eligible for tax credits 2 years ago, it would be illegal to build today. But it was so state-of-the-art, it qualified for these tax credits.

Is it true that the New Source Performance Standards effectively keep us from building another coal plant today? And if that's not true, what is the technology that exists, if any of the other members are aware of it? And what would that add to the cost per kilowatt hour? Mr. Hand first.

Mr. HAND. I don't know that I can fully answer your question. About 3 years or 4, in that time frame, but in the early 2000s, there were three new coal plants proposed in Oklahoma. None of them have been built. And they were canceled before the New Source Review. I assume that's talking about the 50 percent reduction in CO2. I'm not aware of any technology that does that today. I don't believe the sequestration is even greatly accepted as a possibility.

Mr. MASSIE. Any of the other Members like to comment?

Witnesses?

Thank you.

Mr. TRISKO. Congressman Massie, yes, happy to respond. The proposed EPA greenhouse gas New Source Performance Standard applicable to coal and natural gas combined cycle plants is based on an emission rate limit of 1,000 pounds of CO2 per megawatt hour. That is a rate that can be met by natural gas combined cycle plants, but not by coal plants without the use of carbon capture and storage technology. That technology has not been commercially demonstrated in this country, according to the interagency task force report on CCS technology.

Now, with reference to the incremental costs of CCS, EPA's estimate in this rulemaking is that the application of CCS technology

to a new coal plant would increase the cost of power produced by the plant by 80 percent. I think it is, therefore, on its face clear that such a plant could not be commercially viable in today's market; in other words, could not be financed, could not be permitted, could not be operated.

Mr. MASSIE. Yes, Mr. Weiss.

Mr. WEISS. Thank you, Mr. Massie.

I would just observe that after the Senate failed to pass a comprehensive climate energy legislation in 2010, which included that bill as well as the one that passed the House, the American Clean Energy and Security Act, both included significant subsidies to help coal plants build the very first commercial-scale carbon capture and storage technology. Because, as with any technology, it is very expensive when you first start it, so let's get some experience. Copious subsidies, billions of dollars. But after that bill failed, some of the larger utilities, for example, I believe, Southern Company, had pilot carbon capture and storage projects going at power plants, and they shut them down because they knew they weren't going to have to do any cleanup.

So what you would need to do to be able to address this in the way that you just described is to create a system that requires cleanup, but also provides revenue in the way that the American Clean Energy and Security Act does to help them build the first CCS facilities.

Mr. MASSIE. So whether it was—the burden was placed on the consumer or the taxpayer, you're saying it would cost billions of dollars to develop this technology.

Mr. WEISS. Yes. But there is also, as we were talking about earlier, substantial economic costs for leaving climate pollution unchecked: extreme weather, health, smog, tropical diseases. Those also have real costs for our economy.

Mr. MASSIE. Thank you very much. I yield back my time, Mr. Chairman.

Mr. LANKFORD. Thank you.

Let me do a quick round of questions on a couple things, because I'm trying to sum up some of the things that we've dealt with today.

There seems to be two different perspectives on how do we get to the cost of energy to the consumer and the affordability of that. One seems to be trying to find a way to increase affordability by continuing to increase subsidies for some so that those who can't afford it continue to get Federal subsidies to be able to offset the rising costs. The other one is to try to determine why does it cost so much, and why are the costs going up, and to deal with that for everyone.

Now, those divergent, different opinions that say we continue to allow costs to rise on everyone and then just subsidize more heavily a smaller amount, I think it would make more sense to try to find what can we do to solve the problem of rising energy costs and be able to determine how to fix that for everyone. Does that make sense? The issues that we deal with on it are how do we get to those things? And I understand there is a diverse perspective of both infrastructure, of trying to get fuel to market, of trying to make sure it's clean and efficient, trying to deal with health issues

that we have as a Nation. I get all that. But I think our best course of action would be to say, how do we make this more affordable for everyone?

And I think it goes back to something Mr. Hand mentioned an hour ago, and that is the diversification of fuel. When the cost of one goes up, you supplement it with another one. And when the other one goes down in cost, you begin to offset that. If we ever push to getting to one type of fuel, or a couple types of fuel, we are in trouble, I think, as a Nation. So a diverse fuel package seems to be essential in this process, and trying to find that correct formula on that.

There were a couple things that came out as well that I heard. One was dealing with the last 3 or 4 years of oil and gas production.

Now, Mr. Simmons, you had mentioned as well the permitting issue. And I think we can't leave that unchecked. A typical permit takes about how long on Federal lands to acquire that permit?

Mr. SIMMONS. I don't know the total time for the permit. It is not too long for the first permit for the lease, but then you have to do a NEPA analysis.

Mr. LANKFORD. Right. I understand. But before you start, though, when you actually poke a hole in the ground and get going, how long does that take?

Mr. SIMMONS. It's years. But I would have to get back to you on that.

Mr. LANKFORD. So are we talking 4, 5, 6, 7 years?

Mr. SIMMONS. It could be.

Mr. LANKFORD. Mr. Weiss, how long do you think it is?

Mr. WEISS. I believe, and I know I'm under oath so I'm saying I believe, that the permit time has been collapsed dramatically under the current administration down to about 150 days. It takes about 5 to 7 years from the time an acre offshore is leased.

Mr. LANKFORD. What about onshore?

Mr. WEISS. Much less. I don't know the time. But offshore takes 5 to 7 years because these are very complicated——

Mr. LANKFORD. Right. I understand. Those are complicated and became more complicated when BP made some errors that they have now admitted to and complicated it even more. Onshore it is several years in the process. So it's interesting to note that the Federal land increase of oil production in the first 3 years of the Obama administration is not due to permits that were started during the Obama administration. Those are permits that were started in a previous administration and then now we're facing production.

The better question long term will be how much production of oil and gas is there on Federal lands in the last 3 years of the Obama administration—that will be the most telling part of the administration's opinion about it— and in the first 3 years of the next administration, whoever they may be.

Mr. Weiss as well, oil and gas production in the United States, up or down in the last 5 years?

Mr. WEISS. It is up. It the highest it has been since, I believe, 1996.

Mr. LANKFORD. CO2 emissions up or down in the United States in the last 5 years?

Mr. WEISS. CO2 emissions are down for three reasons. One is the new fuel economy standards means that people are emitting less carbon from their cars. Second, the switch from coal to natural gas for electricity generation.

Mr. LANKFORD. Replacing that because of cost. It's cheaper now.

Mr. WEISS. Yes, because of cost.

And third is increased energy efficiency. Demand for electricity is basically flat even though our economy is growing steadily.

Mr. LANKFORD. Terrific. Has our Nation met the Kyoto Protocol? Though we didn't sign off on it, have we met the standards of the Kyoto Protocol?

Mr. WEISS. I couldn't tell you that, but we are halfway to meeting the goal that President Obama articulated in 2009 of a 17 percent CO2 reduction below 2005 levels by 2020. We're at about a 9 percent reduction right now.

Mr. LANKFORD. The understanding of this is there is a sense of we have all these increased storms, we have all these increased things, we are meeting the Kyoto Protocol. We've dramatically reduced carbon emissions not because of the mandates in cap-and-trade, but because of price. Natural gas has come online. It has become easy to be able to get access to, or easier. I say it's been easy; I'm not the one actually drilling a horizontal well and trying to hit something as big as a suitcase 4 miles away with a drill bit. So I can say easy for me on that. But the challenges that we face as a Nation are being solved by the technology, not by a government mandate as much.

Mr. Weiss?

Mr. WEISS. Mr. Chairman, the fuel economy standards were due to a mandate worked out with the auto companies, but it was possible under a law passed under President George W. Bush, the Energy Independence and Security Act, which did mandate an increase in fuel economy standards.

Mr. LANKFORD. Sure. No, I understand. I was talking specifically about coal versus natural gas. Yeah. That's correct.

And then the issue of speculation that you mentioned earlier. You mentioned the cost of speculation, which I agree, there is speculation that is going on that becomes a serious issue. If we are North American energy independent, and we are not speculating on what happens in the Middle East, and we're dealing with more west Texas intermediate crude than we are Brent and other prices on it, because what's happening is from Canada, the United States, and Mexico, how does that affect speculation on the market for us?

Mr. WEISS. Well, the State Department looked at that question with regards to the Keystone XL pipeline and concluded that building the pipeline would have no impact on the amount of oil that we consume here or on its price or the price of its products.

Mr. LANKFORD. Not on consumption. I'm talking about—because the Keystone doesn't get us to independence. The Keystone basically does the equivalent of removing our dependence on Venezuela. So the amount that would come in from Canada——

Mr. WEISS. Actually, even less than that.

Mr. LANKFORD. Right. The amount that comes in from Canada, which Canada seems to be a pretty good trading partner since the whole War of 1812——

Mr. WEISS. They are our number one——

Mr. LANKFORD. Yeah, since the War of 1812 was settled, we seem to get along pretty well with Canada since then.

Mr. WEISS. And they were British back then, too.

Mr. LANKFORD. I know. That's what I'm saying. So since that time period, they have been a very reliable trading partner for us, and great relationship, much more so than Venezuela. So we have not only the issue of price, but we also have the issue of long-term relationships between us and Venezuela versus us and Canada. That possibility of bringing fuel in there brings us one step closer—let's say 15 years from now, due to increased production, we're able to achieve North American independence, where it's Canada, Mexico, and the United States only for oil and gas. How does that affect price? That is not the State Department report. Mr. Trisko, you have a response to that I'm seeing?

Mr. TRISKO. Mr. Chairman, I would like to add that in addition, moving in the direction of an all-domestic energy supply would also tremendously—would greatly reduce, if not eliminate, this country's national security vulnerabilities with respect to its imports. And in terms of the costs associated with maintaining that defense structure in the Middle East and elsewhere in the world, those benefits alone would justify moving in the direction of a domestic energy supply.

And I note that in that regard I concur totally with your opening remarks in this line of questioning, which suggested that an "all of the above" approach is what we need. What we do not need in order to effectuate this goal of a domestic self-sufficiency is a policy that precludes the construction of state-of-the-art coal plants, which represent the largest single fossil energy reserve on the planet.

Mr. LANKFORD. Right. Right.

Ms. Norton.

Ms. NORTON. Thank you very much.

Now, we have information that I'm going to say startled me that in 2011, the United States—when you speak of we could get this all-domestic oil supply—in 2011, the country exported more gasoline and diesel and oil-based fuels than it imported. This apparently was the first time that we were a net exporter since 1949.

Now, oil is traded on an international market. So I don't understand this notion that somehow we could be an island unto itself, and that will take care of oil prices. Mr. Weiss, perhaps you could speak to that.

Mr. WEISS. Yes, you're right. In fact, the export of refined product, diesel and gasoline predominantly, has continued to increase since 2011. As you know, U.S. law prohibits, for the most part, exports of crude oil, because that's seen as a—it's related to our energy and economic security. I would observe that, you know, one of the things that the chairman talked about was price volatility. One of the reasons why we have—we're so tied to—we're so harmed by price volatility for gasoline is because it's basically the only transportation fuel that we have. We do have a diverse set of fuels for electricity, not for transportation. That's why we need to invest a lot more in developing these alternatives to oil to use for transportation.

Ms. NORTON. Such as?

Mr. WEISS. Such as electric-powered vehicles, natural gas buses and trucks, and, of course, public transit, which we have a great system here in your city.

But it's important to note that—Mr. Lankford, you were talking about government subsidies—in fact, every new and even mature energy technology that we have had in this country in the last 100 years has received heavy government subsidies. For example, the oil and gas industry has received $80 in subsidies going back to 1919 for every $1 that the renewables industry has received. And so I think it's a smart strategic move to invest in research and development and deployment of some of these technologies that can get us less hooked on gasoline as a transportation fuel.

Ms. NORTON. Yes, Mr. Simmons.

Mr. SIMMONS. I don't think anyone is saying that if the United States—if we were an island to ourselves in terms of oil production, if we produce all this oil domestically, that we will be 100 percent insulated from global oil—from global oil markets. I mean, oil, as has been stated, is a globally traded commodity, but what producing more oil at home does is it makes us more resilient, and it also reduces the global spare capacity.

One of the problems, and this was particularly a problem during the Libya crisis, was that there was very little global spare capacity. If somewhere else besides Libya had stopped producing oil, prices would have spiked even more. By having the United States and other very stable countries like Canada producing more oil, it means that there's much less of a risk when these, you know, geopolitical situations happen.

Ms. NORTON. Yeah. Everybody wants us to be less dependent on foreign oil. So I think we can all agree on that. On the price, on the price, I'm not sure it would make any difference.

Yes, Mr. Weiss?

Mr. WEISS. Representative Norton, you're absolutely right. As long as the oil price is tied to the world market, which is controlled by a cartel, the OPEC cartel provides 40 percent of the world's oil, it is going to be hard for us to produce our way to lower prices. Look at where we are right now. We're producing the most oil in 15 years, yet gasoline prices are high. Why? Because the world oil price is high. The Washington Post just reported a couple days ago that since 2011, the world has increased 2 million barrels of oil a day in terms of production, half of that is from the U.S., but yet oil prices remain high. Why? Because there's also been growing demand. So as long as it is a worldwide market and a worldwide price controlled by a cartel, it's going to be hard to do that.

Gasoline is a bit of a different story. It is much more of a local and regional price because of refining measures, the kinds of things that Mr. Simmons was discussing.

Ms. NORTON. Thank you very much, Mr. Chairman.

Mr. LANKFORD. Would the gentlelady yield?

Ms. NORTON. I'd be glad to yield.

Mr. LANKFORD. It's the two of us left, so we can field whatever questions we would like from here.

But it is interesting to me that oil production specifically, when we get into this, we're now at a spot it wasn't that long ago 60 per-

cent of the oil that we were using in the United States was imported. Now 60 percent of the oil that we're using in the United States is from the United States on that. And we're pushing over 80 percent of the oil that we're using in the United States is from North America only. And so we're only 20 percent away from being North American energy independent, which I think is the first step towards being American energy independent.

The last forecast I saw from the energy statistics showed that just 32 percent—in just 10 years, 32 percent of the oil we're expecting to be from the United States only, as far as the imports coming from outside the United States. So it's a very significant jump that is happening right now based on the current technology and what's happening.

Mr. Weiss, I did have to smile at one of your statistics about the tax treatments between oil and gas and all the renewables and going back to 1919 to compare those. I don't remember a lot of solar subsidies that were occurring in the 1920s. So I would encourage you to take that statistic and bring it a little more up to date on it.

I do remember as a high school student paying attention to what was happening during the administrations there, and even as a middle school student, and seeing the solar panels that were on the White House at that point. I have no opposition to solar and to wind and every other technology, but comparing some of the subsidies that are the start-up subsidies—and I get that—for some of these renewables to some of the tax treatments that are normal business treatments for oil and gas is a little bit of a jump in between. And if you look at the top five energy companies in the world versus the top five technology companies in the world, the top five technology companies make more and have greater—like the 199s—greater subsidies, if you would want to call them that, as far as tax treatment.

So, there is a fairness system to make sure that we keep all the stats and everything all clean and consistent on that.

So, Ms. Norton, I want to close up unless you have any other final comment. I do appreciate the witnesses coming. I appreciate all the time that you spent not only getting here, but in your written statements, which were extensive. And I appreciate the research and the insight in that. And I look forward to getting a chance to hear if you have any other additional follow-up comments. Feel free to submit those for the record.

Mr. LANKFORD. With that, this hearing is concluded.

[Whereupon, at 2:45 p.m., the subcommittee was adjourned.]

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**Opening Statement of Rep. Jackie Speier**
**Ranking Member, Subcommittee on Energy Policy, Health Care, and Entitlements**
**Hearing: "The Effects of Rising Energy Costs on American Families and Employers"**

**Committee on Oversight and Government Reform**

**February 14, 2013**

Thank you, Chairman Lankford. First, let me say that I am very pleased to join you as Ranking Member of this Subcommittee. While you and I come from two different regions of our great country, the jurisdiction of this Subcommittee – Energy Policy, Health Care, and Entitlements – touches all of our constituents on many different levels. I look forward to working with you in a bipartisan manner to conduct rigorous and effective oversight in these areas.

No matter who controls the White House, oversight of the Executive Branch is a fundamental responsibility of Congress. Holding the federal government, its contractors, and corporations accountable isn't a partisan issue – it is a Congressional duty.

The title of today's hearing is "The Effects of Rising Energy Costs on American Families and Employers." In this economy, it is imperative that we in Congress do more to help families recover from the recession as they pay off their bills. What are we doing, for example, to raise the minimum wage in this country? What are we doing to create more jobs for the middle class and ensure that hard work leads to a decent living?

To be sure, we must investigate the high prices consumers and small businesses are paying on their energy bills. Are regulations the sole factors causing prices to rise? Or should we also look at the activities of major energy companies, which continue to make record-breaking profits?

One thing is certain: the American people do not have to choose between economic growth and environmental protection. We can do both, responsibly.

The good news is that the United States is already making great strides toward energy independence. Under the Obama Administration, domestic oil production has reached its highest level in 15 years.

U.S. total crude oil production averaged 6.4 million barrels per day in 2012, an increase of 0.8 million barrels per day from the previous year – the largest single increase in domestic annual production since 1859. Furthermore, domestic natural gas production reached a record 28.6 trillion cubic feet in 2011, marking the highest level of natural gas production in this country in more than 30 years.

At the same time, we have made investments in renewable energy, by providing loan guarantees to build the nation's first commercial-scale cellulosic ethanol plant in Kansas, the world's largest wind farm in Oregon, and the world's largest solar plant in California, among many other cutting-edge projects. An energy company in my district said it best: "Congress shouldn't pick winners and losers. We should support all of the above."

All of these gains have been achieved while maintaining strong protections for public health and the environment. We have doubled the distance our cars can travel on a gallon of gas, reduced CO2 emissions from power plants, and weatherized homes to make them safer and more fuel efficient. The benefits of our environmental policies, meanwhile, have far exceeded the costs of regulatory compliance.

But as the President made clear in his State of the Union address, we must also confront the reality of climate change. In 2011, the United States endured more than 14 extreme weather disasters, each costing in excess of $1 billion. There were another 11 such disasters in 2012.

According to the National Oceanic and Atmospheric Administration (NOAA), the combined 25 disasters from 2011-2012 are estimated to cost $188 billion in total. The record drought of 2012 is estimated to cost $12 billion, and Super Storm Sandy is estimated to cost $71 billion.

Responding to these extreme weather events will produce a measurable drag on our economy, and the timing for American families could hardly be worse. Paying the bills is strain enough, let alone after the crops are wiped out by searing drought or the house left flooded after a super-storm.

In conclusion, Mr. Chairman, I don't believe in the false dichotomy that energy and environmental innovation precludes economic growth. In the face of climate change, seizing the opportunities before us in clean energy is critical – not just to preserve a livable planet for our children and grandchildren, but to prevent Americans from bearing the real economic consequences of inaction.

With that, I would like to thank our panel of witnesses for being here today. I look forward to your testimony, and once again I thank the Chairman for holding this hearing.

I yield back.

# Statement for the Record

## Congressman Matt Cartwright

***Subcommittee on Energy policy, Health Insurance and Entitlements***

***Hearing on: "The Effects of Rising Energy Costs on American Families and Employers"***

*February 14, 2013*

Thank you, Chairman Lankford and Ranking Member Speier. I am grateful to have this opportunity to discuss a very important issue in energy prices. The rise in energy prices has hit families all over the nation, and this essential utility is something our families cannot go without. I would like to ensure balancing these prices with ensuring that we do not abuse our environment in favor of a few months of reduced energy bills. This problem directly impacts my district through fracking- the desire for cheaper natural gas has caused serious environmental issues that plague my constituents. The stakes are too high to support operations that, by their very nature, put at risk our ability to drink clean water or breathe fresh air. At the end of the day, we have to pass this world on to our children, and their children, and I do not appreciate gambling with my sons' future.

America is a nation of innovation. Put a barrier in front of us and we will go over, under or around until that barrier is conquered. I am confident that our nation can come up with a comprehensive solution to our energy crisis through research and ingenuity; a solution which decreases cost for the average American citizen while simultaneously ensuring we will leave our children a better Earth than the one we received.

Thank you, Mr. Chairman.

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**Opening Statement**
**Rep. Elijah E. Cummings, Ranking Member**

**Hearing on "Exploring GAO's High Risk List and Opportunities for Reform"**

**February 14, 2013**

Thank you, Mr. Chairman, for holding this hearing. I believe this will be one of the most important hearings this Committee will hold this Congress. Mr. Dodaro, thank you for testifying today and for the work GAO put into creating the new High Risk report.

Every one of GAO's High Risk reports has been important. However, this year's report is especially significant because the Comptroller General and the nonpartisan experts at GAO have made a landmark decision to add the issue of climate change to their biannual High Risk report, which details the most pressing challenges facing our nation and the federal government.

In its report, GAO identifies a serious risk facing our nation, one that we cannot continue to ignore. GAO finds that climate change poses particularly significant financial risks to our nation's economy, including agriculture, infrastructure, ecosystems, and human health. GAO warns that our government "is not well positioned to address this fiscal exposure," and GAO recommends a "government-wide strategic approach with strong leadership and the authority to manage climate change risks."

GAO finds that the government has already spent tens of billions of dollars on damage from severe weather events related to climate change. According to the National Oceanic and Atmospheric Administration, over the past two years, the United States experienced 25 weather disasters that cost over a billion dollars each.

GAO's historic decision to add climate change to the list of high risk challenges facing our nation is a wake-up call for Congress to finally start addressing this critical issue. Unfortunately, in the last Congress, House Republicans voted 37 times to block action to address the threat of climate change. For example:

- They slashed climate change research funding by more than $100 million.
- They voted to prevent the State Department from using funds to send a Special Envoy for Climate Change to international climate negotiations.

- They voted to zero out the US contribution to the Intergovernmental Panel on Climate Change, the world's leading authority on climate change science.
- They voted to prohibit the Department of Homeland Security from using any funds to participate in the Interagency Climate Change Adaptation Task Force.
- And they voted to prohibit the Department of Agriculture from using any funds to implement its climate change adaptation program.

What GAO is telling us today is that Congress cannot afford to block or delay action any longer. We must act now to implement GAO's recommendations and mitigate the risks from climate change.

For these reasons, I sent a letter to the Chairman today requesting that our Committee hold a series of hearings to address each of the four specific areas that GAO highlights in its report relating to climate change.

Mr. Chairman, when we were here two years ago considering GAO's last High Risk report in 2011, you said it was our Committee's obligation to conduct "vigorous oversight" over the issues raised by GAO and to insist on "plans for change by each of the agencies listed here today."

I agreed then, and I agree now. With our Committee's extremely wide jurisdiction across multiple federal agencies and departments, we have a unique opportunity to conduct hearings that will lead to vigorous oversight, responsible funding decisions, and legislation to address the growing threats to public health and our economy.

I stand ready to work with you and all Members of the Committee in a bipartisan manner to make that happen.

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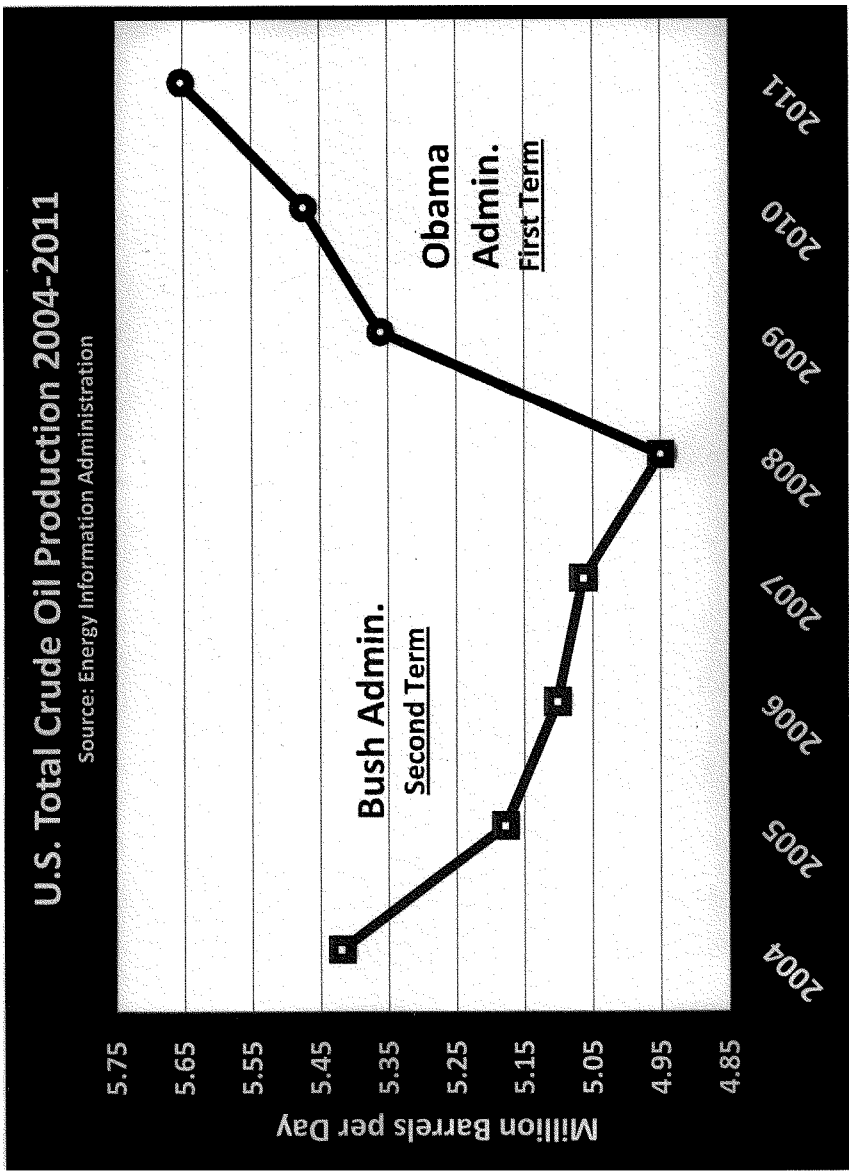
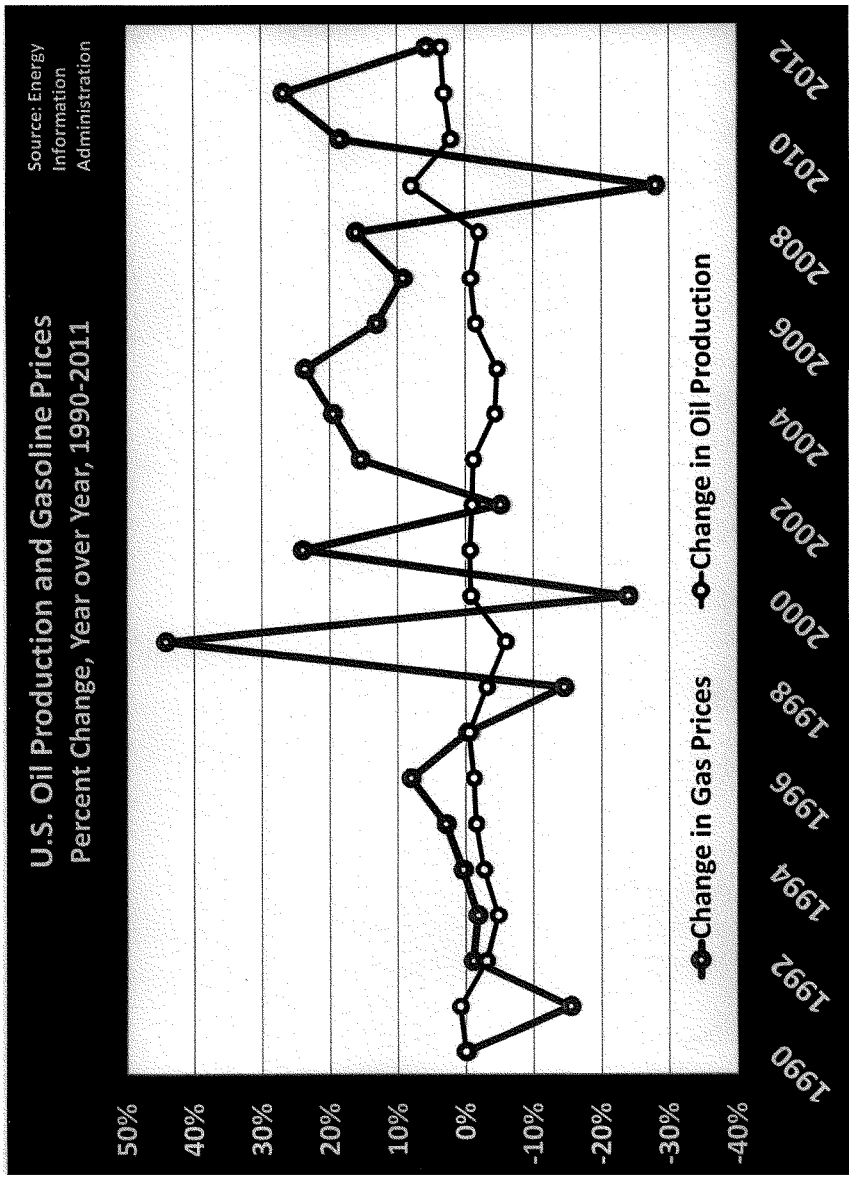
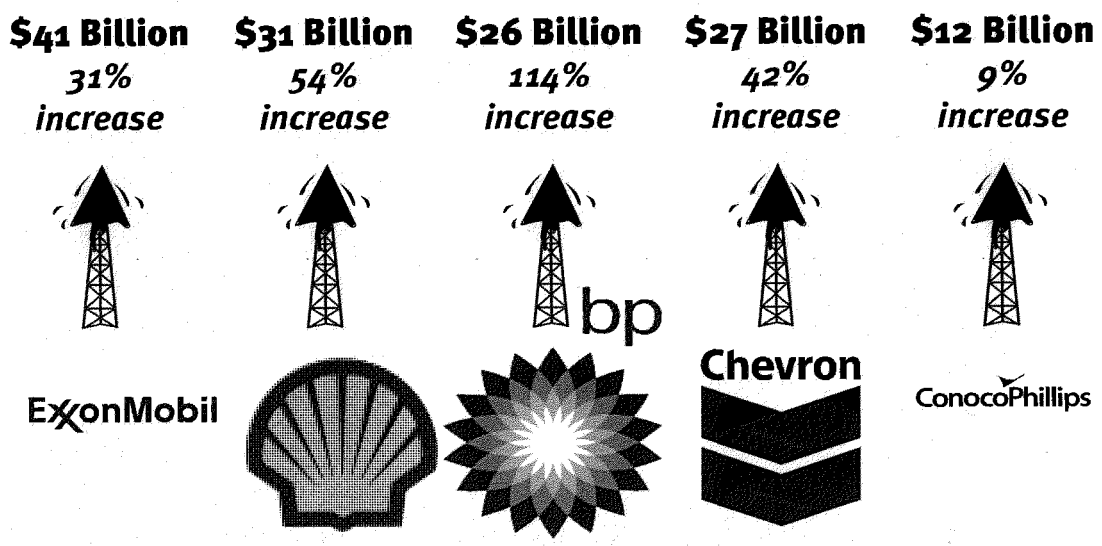
Contact: Jennifer Hoffman, Press Secretary, (202) 226-5181.


U.S. Total Crude Oil Production 2004-2011
Source: Energy Information Administration
Million Barrels per Day
5.75
5.65
5.55
5.45
5.35
5.25
5.15
5.05
4.95
4.85
2004
2005
2006
2007
2008
2009
2010
2011
Bush Admin.
Second Term
Obama
Admin.
First Term


U.S. Oil Production and Gasoline Prices
Percent Change, Year over Year, 1990-2011
Source: Energy Information Administration
50%
40%
30%
20%
10%
0%
-10%
-20%
-30%
-40%
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
Change in Gas Prices
Change in Oil Production

# Big Five Oil Company Profits in 2011




**TOTAL: $137 Billion** *(75% increase)*

SOURCE: Company Profits Report

# OBAMA ADMINISTRATION Fuel Economy Standards In the year 2025

The fleet-wide average will be

**54.5 MPG**

**Consumers will have saved**

**$1.7 TRILLION**

**at the pump over the life of the program.**

A family that purchases a new vehicle in 2025 will save

**$8,200**

in fuel costs when compared with a similiar vehicle in 2010.

**Over the life of the program, the standards will:**

**Save 12 billion barrels of oil.**

**Eliminate 6 billion metric tons of carbon dioxide pollution.**

This program, together with standards already put into place by this administration for Model Years 2011-2016, will result in significant cost savings for consumers at the pump, dramatically reduce oil consumption, cut pollution and create jobs.

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**RESOLUTION 2012 - 05**

**NASUCA Resolution Urging the Environmental Protection Agency to Establish Compliance Timelines that Provide Sufficient Time to Consider Appropriate Least Cost Responses so as to Avoid Rate Shock to Electric Utility Customers**

*Whereas*, the Environmental Protection Agency (EPA) has recently issued, or will issue in the near future, a wide range of regulations relating to air emissions, waste handling from coal generation plants, as well as water regulations, which will impact many types of electric generation facilities, particularly coal generation. These recent, new, and/or forthcoming regulations include:

- Cross State Air Pollution Rule
- Mercury and Air Toxics Standards Rule
- Impingement and Entrainment of Aquatic Species in Water Intakes (Clean Water Act §316(b))
- Coal Combustion Residuals Rule
- National Ambient Air Quality Standards
- Potential Greenhouse Gas Reduction Requirements
- Regional Haze State Implementation Plans

*Whereas*, in order to meet these and other EPA regulations, it is anticipated that the nation's utilities will have to retrofit existing generation plants, close older coal-fired electric generation plants and develop new supply and/or demand-side resources over the next three to five years;

*Whereas*, the goal of state ratemaking, integrated resource planning and other regulatory proceedings will be to determine the most cost-effective means to comply with the EPA regulations and to determine the just and reasonable costs of any supply side and demand side resources to replace the capacity and energy currently supplied by older coal-fired generation plants,

*Whereas*, the development of demand-side resources, building new generation and/or making extensive upgrades to existing coal plants requires adequate lead time for engineering, procurement, construction and regulatory review;

*Whereas*, utility ratepayers in many states are already facing substantial rate increases due to a variety of factors, in addition to any costs related to complying with the EPA regulations;

*Whereas*, any compliance costs borne by ratepayers through higher rates will be magnified if utilities do not have sufficient lead time for the development of new or increased demand side programs, construction of new generation, and/or extensive upgrades to existing coal-fired generation;

*Whereas*, compliance timelines that do not account for supply chain constraints could unnecessarily raise prices; *and*

*Whereas,* compliance timelines must not prevent state regulators from having an adequate opportunity to review utility compliance plans to assure that ratepayers are being provided reliable service at the lowest reasonable cost.

***NOW THEREFORE NASUCA RESOLVES***

Without specifically taking a position on the merits of any of the existing, proposed or future regulations, or proposed legislation related to the regulations, NASUCA urges the EPA and other relevant policymakers to implement such regulations consistently with the following considerations:

- Compliance timelines must make reasonable allowance for the physical, financial, and regulatory challenges associated with the engineering, procurement, construction, and regulatory review of new demand-side resources, supply-side resources and/or upgrades at existing electric generation plants;
- Compliance timelines must allow state regulators sufficient time to fully evaluate utility compliance proposals in evidentiary hearings;
- Compliance timelines must provide sufficient time and flexibility to maintain the integrity and reliability of the existing electric system;
- Compliance timelines must take into account the impact of rate increases that can result as utilities seek recovery from customers.

***BE IT FURTHER RESOLVED*** that NASUCA authorizes its Executive Committee to develop specific positions and to take appropriate actions consistent with the terms of this resolution. The Executive Committee shall advise the membership of any proposed action prior to taking such action, if possible. In any event, the Executive Committee shall notify its membership of any action taken pursuant to this resolution.

Approved by NASUCA: 2012 NASUCA Mid Year Meeting

Place: Charleston, SC

Date: June 26, 2012

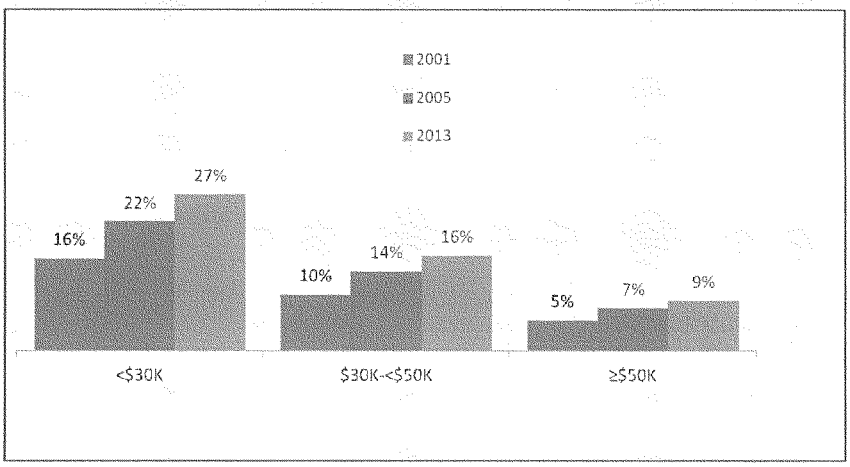
Submitted by:

NASUCA Electric Committee

Abstained Votes: New Jersey, Iowa, Massachusetts, Colorado, Michigan, Ohio, Tennessee
Voted Against: Wyoming

ACCE
AMERICAN COALITION FOR CLEAN COAL ELECTRICITY

# Energy Cost Impacts on American Families, 2001-2013




Energy Costs as Percentage of Nominal After-Tax Household Income

January 2013

www.americaspower.org

## Summary of Findings

This report analyzes consumer energy cost increases since 2001 for all U.S. households and examines the pattern of energy expenditures among four income levels and for senior and minority families in 2013. It relies on historical energy consumption survey data and current energy price forecasts from the U.S. Department of Energy's Energy Information Administration (EIA).[1] Energy costs are summarized in nominal (then-current) dollars by household income category for U.S. households in 2001, 2005, and 2013, using data from EIA and the U.S. Bureau of the Census.[2] Energy price projections for 2013 are based on the DOE/EIA Short-Term Energy Outlook released in December 2012.

Energy expenditures as a percentage of nominal after-tax income are estimated after the effects of federal and state income taxes and federal social insurance payments. The 2013 projections in this report are based on U.S. Bureau of the Census household income and population data for 2011 (the most recent available) and projected energy prices for 2013.

Key findings of this report are:

- Approximately one-half of U.S. households have average pre-tax annual incomes below $50,000. Real median household income has declined by 8% since 2007, and is nearly 9% lower than the median household income peak ($53,252) in 1999. The declining median income of American households over the past decade marks the reversal of a 50-year trend of rising American family incomes.

- Family incomes are not keeping pace with the rising costs of energy. In 2001, households with gross annual incomes below $50,000 spent an average of 12% of their average after-tax income of $21,635 on residential and transportation energy. In 2013, these households are projected to spend an average of 20% of their average after-tax income of $22,591 on energy. For low- and middle-income families, energy costs are now consuming a portion of after-tax household income comparable to that traditionally spent on major categories such as housing, food, and health care.

- In FY2011, federal funding for the Low Income Home Energy Assistance Program (LIHEAP) was cut from $5.1 billion to $4.7 billion. In FY2012, Congress again reduced annual funding for LIHEAP to $3.5 billion. Based on the residential energy costs estimated in this study, a $3.5 billion funding level for LIHEAP would offset less than 6% of residential energy bills for households with incomes below $30,000.

- Higher gasoline prices account for three-fourths of the increased cost of energy for consumers since 2001. Average U.S. household expenditures for gasoline will grow by 122% in nominal dollars from 2001 to 2013, based on EIA gasoline price projections for 2013. In comparison, residential energy costs for heating, cooling, and other household energy services will increase on average by 46%, from $1,493 in 2001 to a projected $2,177 per household in 2013.

- Residential electricity has maintained relatively low and stable average annual price increases compared with residential natural gas and gasoline. Electricity prices have increased by 54% in nominal dollars since 1990, below the rate of inflation, while the nominal prices of residential natural gas and gasoline have nearly doubled and tripled, respectively, over this period.

- Virtually all of the residential electricity price increases over the past two decades have occurred since 2000. These increases are due in part to additional capital, operating and maintenance costs associated with meeting clean air and other environmental standards.

- Lower-income families are more vulnerable to energy costs than higher-income families because energy represents a larger portion of their household budgets, reducing the amount of income that can be spent on food, housing, health care, and other necessities. Nearly one-third of U.S. households had gross annual incomes less than $30,000 in 2011. Energy costs accounted for an average of 27% of their family budgets, before taking into account any energy assistance.

- The Census Bureau finds that real median household incomes for both white and minority households have not returned to their pre-2001 recession peaks. For non-Hispanic whites, median household income in 2011 was 7.0% below its peak of $59,604 in 1999. Real median household income for Blacks was 16.8% lower (from $38,747 in 2000). Household incomes for Asians were 10.6% lower (from $72,821 in 2000), and 10.8% lower for Hispanics (from $43,319 in 2000.)

- In 2011, 62% of Hispanic households and 66% of Black households had average annual incomes below $50,000, compared with 45% of white households and 39% of Asian households. These income inequalities magnify the burdens of energy price increases on Black and Hispanic households.

- Fixed-income seniors are a growing proportion of the U.S. population, and are among the most vulnerable to energy cost increases due to their relatively low average incomes. In 2011, the median gross income of 26.8 million households with a principal householder aged 65 or older was $33,118, one-third below the national median household income.

## Energy Costs for U.S. Families, 2001–2013

Energy costs for residential utilities and gasoline are straining low- and middle-income family budgets. As Table 1 illustrates, the average American family with an after-tax income of $53,092 will spend an estimated $5,907 on energy in 2013, or 11% of the family budget. The 60.5 million households earning less than $50,000—representing 49.9% of U.S. households—will devote an estimated 20% of their after-tax incomes to energy, compared with an average of 9% for households with annual incomes above $50,000. For the 27.7 million lower-income families with pre-tax incomes between $10,000 and $30,000, energy expenditures in 2013 will consume 23% of average after-tax incomes, compared with 14% in 2001.

The summary income and energy expenditure data in Table 1 are based on U.S. Bureau of the Census pre-tax household income data for 2011 (the most recent available) and energy prices for 2013 projected by DOE/EIA. The Congressional Budget Office has calculated effective total federal tax rates, including individual income taxes and payments for Social Security and other social welfare programs.[3] Federal tax rates for 2013 are based on CBO's estimates for 2009, the most recent year available, adjusted for payroll and other tax increases in the American Taxpayer Relief Act of 2012.[4] State income taxes are estimated from current state income tax rates

**Table 1. Estimated Household Energy Expenditures as a Percentage of Income, 2013**

| Pre-tax income | <$10K | $10K-<$30K | $30K<$50K | <$50K | ≥$50K | Average |
|---|---|---|---|---|---|---|
| Est. average after-tax income | $4,726 | $18,261 | $33,297 | $22,591 | $84,828 | $53,092 |
| Percentage of households | 7.6% | 22.9% | 19.4% | 49.9% | 50.1% | 100.0% |
| Residential energy | $1,622 | $1,719 | $1,937 | $1,789 | $2,568 | $2,177 |
| Transportation fuel | $1,991 | $2,473 | $3,497 | $2,798 | $4,688 | $3,730 |
| Total energy | $3,613 | $4,192 | $5,434 | $4,587 | $7,256 | $5,907 |
| Energy pct. of after-tax income | 76.5% | 23.0% | 16.3% | 20.3% | 8.6% | 11.1% |

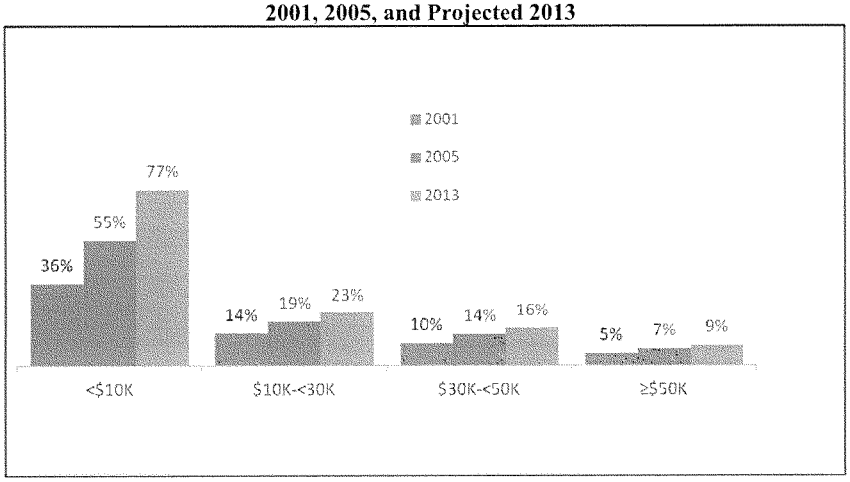
*Source*: Appendix Table 1.

Many lower-income families qualify for federal or state energy assistance. However, these programs are unable to keep up with the increase in household energy costs. In FY2011, federal funding for the Low Income Home Energy Assistance Program (LIHEAP) was cut from $5.1 billion to $4.7 billion.[5] In FY2012, Congress again

reduced annual funding for LIHEAP to $3.5 billion.[6] Based on DOE/EIA's 2009 Residential Energy Consumption Survey (2012), a $3.5 billion funding level for LIHEAP would offset less than 6% of residential energy bills for lower-income households with incomes below $30,000.

The portion of household incomes devoted to energy has increased substantially since 2001 (see Chart 1). In 2001, 62 million families with gross annual incomes less than $50,000 (2001$) spent an average of 12% of their after-tax income on residential and transportation energy. In 2013, energy will account for an average of 20% of the after-tax income of the 60 million American families in this income category. Energy cost burdens are greatest on the poorest families, those earning less than $10,000. Their average energy bills will more than double, from 36% of estimated after-tax income in 2001 to 77% in 2013. These estimates do not account for any government or private energy assistance that these families may receive, and thus do not reflect actual personal energy consumption expenditures.

**Chart 1**
**Energy Costs as Percentage of Nominal After-Tax Household Income, 2001, 2005, and Projected 2013**

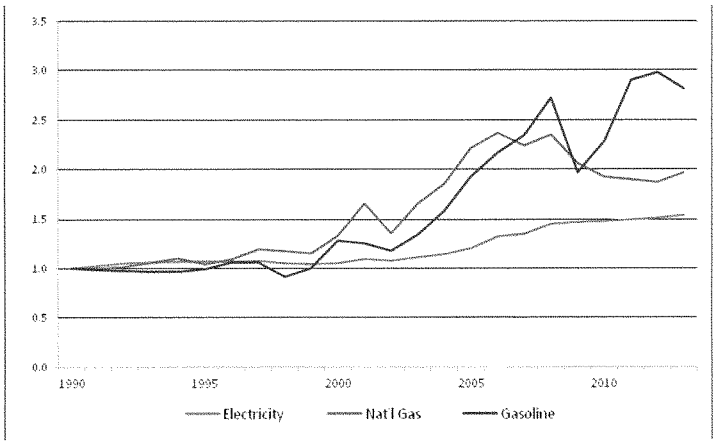



*Source*: Appendix Table 1.

## Relative Energy Price Increases

Among key consumer energy products, electricity has increased at the lowest rate measured in nominal dollars over the past two decades. Chart 2 provides an index of consumer energy prices in nominal dollars since 1990. Prices for residential natural gas and gasoline have nearly doubled and tripled, respectively, while residential electricity prices increased by 54%, well below the 76% rate of inflation based on the Consumer Price Index between 1990 and 2012.[7]

**Chart 2**
**Price Trends of Consumer Energy Products in Nominal Dollars, 1990-2013**
**(Index 1990 = 1.0)**




*Sources:* U.S. DOE/EIA, Annual Energy Review 2010 and Short-Term Energy Outlook (December 2012).

Unlike other consumer energy products, electricity has maintained relatively low rates of price increase below the overall rate of inflation. However, as Chart 2 indicates, virtually all of the residential electricity price increases over the past two decades have occurred since 2000. From 1990 to 2000, electricity prices increased by just 5% in nominal dollars. However, between 2001 and 2013, residential electric prices are projected to increase by 40% to a national average of 12.0 cents per kWh. These increases are due in part to additional capital, operating and maintenance costs associated with meeting U.S. EPA clean air and other environmental standards.[8]

Current and prospective EPA rules are expected to result in additional electricity price increases in many areas of the country. For example, EPA estimates the annual costs of compliance with one recent Clean Air Act regulation – the utility Mercury and Air Toxics Standards rule – at $9.6 billion ($2007) in 2016.[9] The projected annual cost of this rule is 45% greater than EPA's $6.6 billion ($2006) estimate of the costs of compliance with all utility Clean Air Act requirements in 2010.[10]

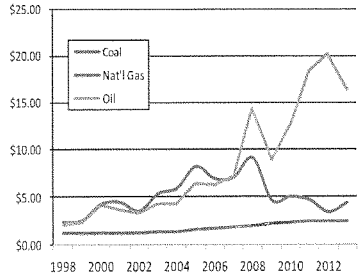
**Electric Utility Fuel Cost Trends**

The relatively modest long-term rate of price increase for residential electricity reflects, in part, the electric utility industry's reliance on domestic coal for a substantial portion of its energy supplies. As Chart 3 illustrates, coal prices at electric utilities have remained stable relative to competing fuels such as natural gas and petroleum.[11] Natural gas prices have declined sharply in the past five years due to increased supply, and have helped to restrain the rate of residential electricity price increases.

EIA forecasts that domestic coal will cost $2.44 per million British Thermal Units (MMBTU) delivered to power plants in 2013.[12] The cost of natural gas at utility plants in 2013 is projected at $4.47/MMBTU, a 29% increase over 2012 delivered gas prices.[13] These natural gas price increases will tend to increase the utilization of lower-cost coal.

EIA projects that natural gas wellhead prices will remain below $5 per MMBTU (in 2011$) through 2025.[14] Natural gas wellhead prices are forecasted to reach $6.32 (2011$) per MMBTU in 2035, and $7.83 per MMBTU in 2040.[15] Minemouth coal prices are projected to increase at a lower average annual rate, from $2.18 per MMBTU in 2012 to $2.94 per MMBTU in 2035 and $3.08 per MMBTU in 2040 (in 2011$).[16]

**Chart 3**
**Electric Utility Fuel Costs, 1998-2013**
**(Nominal $ per Million BTU)**




*Source:* DOE/EIA, Electric Power Annual (2010) and Short-Term Energy Outlook (December 2012).

## Consumer Energy Cost Estimates

The distribution of U.S. households by income categories provides the basis for estimating the effects of energy prices on consumer budgets in 2013. EIA's quadrennial Surveys of Residential Energy Consumption[17] are the principal sources for estimating energy expenditures for residential heating, cooling, electricity, and other household energy services. For this report, the most recent EIA 2009 survey (2012) is updated with Census Bureau 2011 population data and EIA's December 2012 forecast of 2013 residential energy prices.

EIA's 2001 Survey of Household Vehicles Energy Use[18] provides benchmark data on transportation energy costs by household income category based on gallons of gasoline used per household. These gasoline consumption data are updated using Census Bureau 2011 population data and EIA's December 2012 national average retail gasoline price forecast for 2013 of $3.43 per gallon.

It is assumed that household gasoline usage in 2013 will be 10.1% below the levels of the EIA 2001 survey, reflecting a population-adjusted decline of motor gasoline sales over this period. The more recent 2009 National Highway Transportation Survey (2011) confirms the aggregate gasoline expenditure estimates for 2013 in this report.[19]

**Residential and Transportation Energy Expenses**

The principal residential energy expenses are for electricity and natural gas for heating, cooling, lighting, and appliances. Some homes also use propane fuel (LPG) and other heating sources, such as home heating oil, kerosene, and wood.

Gasoline accounts for the largest single increase in consumer energy costs over the past decade. In 2013, the average U.S. family will spend an estimated $3,730 on gasoline, compared with $1,680 in 2001 – an average increase of $2,049 per household.

The increase in gasoline prices follows a long-term trend of increased market shares of pickup trucks and sport utility vehicles (SUVs), and an increase in the average number of vehicles owned per household.[20] While average vehicle efficiency has been improving in recent model years,[21] many families continue to own low-efficiency vehicles with low trade-in values. Improved vehicle quality, coupled with the recession, is increasing the average age of vehicles on the road.[22]

The impacts of residential and transportation energy costs on low- and middle-income families are summarized in Table 2 and in Appendix Table 1. Residential energy costs have increased on average by 46% since 2001, from $1,493 to $2,177 per household. Consumer costs for gasoline grew by 122% during this period, accounting for 76% of

the overall $2,688 increase in total household energy costs since 2001.

**Table 2. Estimated After-Tax Income and Energy Costs by Income Category, 2001, 2005, and Projected 2013**
**(In nominal dollars)**

| Pre-tax annual income: | <$10K | $10K-<$30K | $30K-<$50K | <$50K | ≥$50K | Totals |
|---|---|---|---|---|---|---|
| **Est. avg. after-tax income** | | | | | | |
| 2001 | $5,532 | $17,520 | $32,380 | $21,635 | $76,861 | $47,127 |
| 2005 | $5,238 | $17,450 | $32,259 | $21,879 | $78,178 | $47,771 |
| 2013 | $4,726 | $18,261 | $33,297 | $22,591 | $84,828 | $53,092 |
| | | | | | | |
| **Residential energy $** | | | | | | |
| 2001 | $1,039 | $1,260 | $1,456 | $1,299 | $1,836 | $1,493 |
| 2005 | $1,351 | $1,498 | $1,733 | $1,565 | $2,173 | $1,850 |
| 2013 | $1,622 | $1,719 | $1,937 | $1,789 | $2,568 | $2,177 |
| | | | | | | |
| **Transport energy $** | | | | | | |
| 2001 | $934 | $1,160 | $1,638 | $1,306 | $2,195 | $1,680 |
| 2005 | $1,513 | $1,878 | $2,652 | $2,119 | $3,554 | $2,790 |
| 2013 | $1,991 | $2,473 | $3,497 | $2,798 | $4,688 | $3,730 |
| | | | | | | |
| **Total energy $** | | | | | | |
| 2001 | $1,973 | $2,420 | $3,094 | $2,605 | $4,031 | $3,218 |
| 2005 | $2,863 | $3,375 | $4,385 | $3,684 | $5,725 | $4,640 |
| 2013 | $3,613 | $4,192 | $5,434 | $4,587 | $7,256 | $5,907 |

*Source:* Appendix Table 1.

## Household Energy Cost Impacts

As energy costs have risen over the past decade, the real, inflation-adjusted incomes of American families have declined. The U.S. Census Bureau reports in its latest assessment of income and poverty that real median household income declined by 1.5% between 2010 and 2011, a second consecutive year of declining family incomes. Real median household income has declined by 8% since 2007, and is nearly 9% lower than the median household income peak ($53,252) in 1999.[23]

The official poverty rate in 2011 remained virtually unchanged from its all-time historic high of 15% recorded in 2010.[24] The Census Bureau finds that 46.2 million Americans lived in poverty in 2011. For children under the age of 18, the poverty rate was 22%.[25] Poverty is more pervasive among some minority groups: more than 27% of Blacks and 25% of Hispanics lived in poverty in 2011.[26]

Therefore, increasing energy costs are straining low- and middle-income family budgets. Heating, cooling, and transportation are necessities of life, and increased energy costs are impacting low- and middle-income family budget choices among energy and other necessities such as health care, housing, and nutrition.

**The Shrinking Middle Class**

The decline of American household incomes over the past decade marks the reversal of a long-term trend of increasing incomes across all segments of society. A recent Pew Research study of middle-class income trends since 1950 found that:

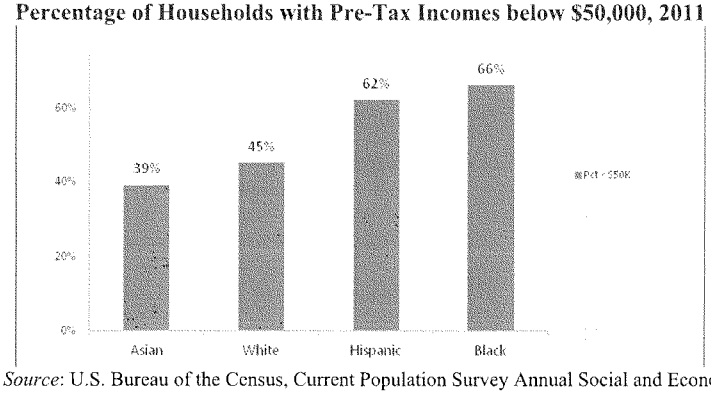
> For the half century following World War II, American families enjoyed rising prosperity in every decade—a streak that ended in the decade from 2000 to 2010, when inflation-adjusted family income fell for the middle income as well as for all other income groups, according to U.S. Census Bureau data. ...
>
> (T)hose in the upper-income tier now take in a much larger share of U.S. aggregate household income than they did four decades ago, while those in the middle tier take in a much lower share. ... (U)pper-income households accounted for 46% of U.S. aggregate household income in 2010, compared with 29% in 1970. Middle-income households claimed 45% of aggregate income in 2010, compared with 62% in 1970. Lower-income households had 9% of aggregate income in 2010 and 10% in 1970.[27]

The steady decline of household incomes since the 1999 peak of real median household income has contributed to the rising share of energy costs for typical family budgets. These impacts are most pronounced among households earning less than the national median income of approximately $50,000.

**Energy Cost Impacts on Minorities**

EIA's residential energy consumption surveys do not provide energy consumption expenditures by income group combined with minority status. However, as illustrated in Chart 4, the unequal distribution of household incomes is a principal factor leading to disproportionate energy cost impacts on many minority families. More than 60% of Hispanic households and two-thirds of Black households had pre-tax household incomes below $50,000 in 2011, compared with 39% for Asian families and 45% for white households.

**Chart 4**
**Percentage of Households with Pre-Tax Incomes below $50,000, 2011**




*Source*: U.S. Bureau of the Census, Current Population Survey Annual Social and Economic Supplement (2012).

The Census Bureau finds that real median household incomes for both white and minority households have not returned to their pre-2001 recession peaks.[28] For non-Hispanic whites, median household income in 2011 was 7.0% below its peak of $59,604 in 1999. Real median household income for Blacks was 16.8% lower (from $38,747 in 2000). Household incomes for Asians were 10.6% lower (from $72,821 in 2000), and 10.8% lower for Hispanics (from $43,319 in 2000.)

**Table 3. Distribution of U.S. Households by Pre-tax Annual Income, 2011**

| Pre-tax annual income<br>**Percentage of households** | <$10K | $10-<$30K | $30-<$50K | <$50K | ≥$50K | Totals |
|---|---|---|---|---|---|---|
| Asian | 7% | 16% | 16% | 39% | 61% | 100% |
| Black | 16% | 31% | 20% | 66% | 34% | 100% |
| Hispanic | 10% | 28% | 24% | 62% | 38% | 100% |
| White | 5% | 21% | 19% | 45% | 55% | 100% |
| U.S. average | 8% | 23% | 19% | 50% | 50% | 100% |
| **Avg. pre-tax income** | | | | | | Average |
| Asian | $3,215 | $19,758 | $38,878 | $24,533 | $124,783 | $85,644 |
| Black | $4,968 | $19,014 | $38,862 | $21,646 | $93,539 | $44,802 |
| Hispanic | $4,830 | $19,721 | $38,712 | $24,653 | $97,567 | $52,352 |
| White | $5,005 | $19,763 | $39,315 | $25,778 | $113,991 | $73,439 |
| U.S. average | $4,862 | $19,657 | $38,989 | $24,924 | $114,323 | $69,677 |

*Source:* U.S. Bureau of the Census, Current Population Reports – 2011 Annual (2012).

Table 3 (above) summarizes 2011 household incomes for Asian, Black, Hispanic, and white families by gross annual income bracket. The average incomes of Hispanic and Black households were 29% and 39% lower, respectively, than the average income of white households. Asian households, on the other hand, had average annual incomes 23% higher than the U.S. average income of $69,677. Based on these income inequality data, disproportionate numbers of Black and Hispanic families are more vulnerable to energy price increases than Asian or white families.

**Impacts on Senior Citizens**

In 2011, 29% of U.S. households received Social Security benefits. The average basic Social Security income of these 33 million households was $16,645.[29] Some 61% of households receiving Social Security benefits also received other retirement income in 2011 averaging $22,969.[30]

The U.S. Census Bureau reports that the median income of 27 million households with a principal householder aged 65 or older was $33,118 in 2011, or 34% below the national household median income of $50,054.[31]

Lower-income senior households that depend mainly on fixed incomes are among those most vulnerable to energy price increases. Food, health care, and other necessities compete with energy costs for a share of the household budget. The $33,118 median income of senior U.S. households means that half of these households depend on incomes below this level.

## Conclusion

Energy costs have increased substantially as a fraction of annual family budgets since 2001, with the largest impacts occurring among low- and middle-income households. The rapid escalation of consumer energy prices, along with stagnant income growth, magnifies the importance of energy costs to all American families. The unequal distribution of incomes in the United States imposes disproportionate energy cost burdens on tens of millions of minority and senior households.

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Acknowledgment – This report was prepared for ACCCE by Eugene M. Trisko, who has conducted these analyses annually since 2000. Mr. Trisko is an attorney and energy economist who represents labor and industry clients. He previously served as an attorney in the Bureau of Consumer Protection of the U.S. Federal Trade Commission and as an expert witness on utility cost of capital.

**Notes**

[1] Data on residential energy consumption patterns by income are derived from U.S. Department of Energy, Energy Information Administration, "Survey of Residential Energy Consumption," (2001, 2005 and 2009 surveys), available at http://www.eia.doe.gov/emeu/recs/contents.html. Data for 2009 energy consumption by household income are updated to estimated 2013 values based on changes in household income and population, and changes in consumer residential energy prices between 2009 and 2013 from EIA's "Short-Term Energy Outlook" (December 2012).

[2] Household incomes by gross income category are calculated from the 2011 distribution of household income in U.S. Bureau of the Census, Current Population Survey, "Annual Social and Economic Supplement" (2012).

[3] Congressional Budget Office (CBO), "Effective Federal Tax Rates Under Current Law, 2001 to 2014" (August 2004); "Effective Federal Tax Rates 1979-2006" (April 2009). Effective federal tax rates for the income categories in this paper were interpolated from CBO's tax rates by income quintile based on the distribution of 2001, 2005 and 2011 household incomes. State income tax rates were estimated from tax rates summarized in Federation of Tax Administrators, http://www.taxadmin.org/fta/rate/ind_inc.html.

[4] Effective federal tax rates for 2013 are estimated from CBO's estimates for 2009 adjusted for payroll and other tax increases in the American Taxpayer Relief Act of 2012 (January 1, 2013), as analyzed by the Urban-Brookings Tax Policy Center (January 1, 2013, ATRA versus patched 2012 base.) See, http://www.taxpolicycenter.org/numbers/displayatab.cfm?Docid=3755&DocTypeID=1.

[5] See, http://www.neada.org/appropriations/index.html.
http://www.acf.hhs.gov/programs/ocs/resource/low-income-home-energy-assistance-program-provides-help-for-struggling

[6] See, http://www.acf.hhs.gov/programs/ocs/resource/low-income-home-energy-assistance-program-provides-help-for-struggling

[7] U.S. Bureau of Labor Statistics, CPI Inflation Calculator, available at http://data.bls.gov/cgi-bin/cpicalc.pl

[8] See, U.S. EPA, "The Benefits and Costs of the Clean Air Act from 1990 to 2020" (2011) at Table 3-2 (electric utility direct annual compliance costs increased from an estimated $1.4 billion ($2006) in 2000 to $6.6 billion ($2006) in 2010.) Since 2000, the utility sector has complied with the federal acid rain program enacted in the 1990 Clean Air Act Amendments, EPA's 1998 Ozone Transport Rule reducing nitrogen oxide emissions in 19 eastern states, Phase I of EPA's 2005 Clean Air Interstate Rule requiring further reductions of sulfur dioxide and nitrogen oxide emissions in the eastern U.S., and a variety of other federal and state air and water quality standards.

[9] U.S. EPA, "Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards," (December 2011) at ES-14.

[10] U.S. EPA, "The Benefits and Costs of the Clean Air Act," *supra.*

[11] U.S. DOE/EIA, "Electric Power Annual 2010," (historical tables, 2011) and "Short-Term Energy Outlook," (December 2012).

[12] U.S. DOE/EIA, "Short-Term Energy Outlook" (December 2012), Table 2.

[13] *Id.*

[14] U.S. DOE/EIA, "Annual Energy Outlook 2013 Early Release," (December 2012).

[15] *Id.*

[16] *Id.*

[17] U.S. DOE/EIA, "Residential Energy Consumption Survey, 2009," (2012). Data in this report for households with incomes below $60,000 were provided to the author by EIA.

[18] U.S. DOE/EIA, "Household Vehicles Energy Use: Latest Data & Trends" (November 2005), available at http://www.eia.doe/gov/emeu/rtecs/nhts_survey/2001/.

[19] U.S. Department of Transportation, National Household Travel Survey, Summary of Travel Trends (June 2011) at Table 34 (average household gasoline expenditures increased from $1,275 in 2001 (2001$) to $3,308 (2009$) in 2009.) The average price of gasoline in the NHTS 2009 survey was $2.96/gallon, 16% less than the $3.43/gallon price that EIA projects for 2013. Adjusted by the change in average gasoline prices, the 2009 NHTS data imply average 2013 household gasoline expenditures of $3,837, compared with the $3,730 estimate in this report. The 2009 NHTS does not provide gasoline expenditure or consumption data by household income category.
[20] *Id.*, at Fig. 1, Tables 1, 20.
[21] *See*, U.S. EPA, Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends:1975 Through 2011 (March 2012) at iv, available at http://www.epa.gov/otaq/cert/mpg/fetrends/2012/420s12001a.pdf.
[22] R.L. Polk & Co. reports that the average age of automobiles on the road was 10.8 years as of the second quarter of 2012, reflecting a rising trend for the past 10 years. *See*, http://blog.polk.com/blog/blog-posts-by-lonnie-miller/americans-are-holding-their-vehicles-longeris-it-good-for-loyalty.
[23] U.S. Census Bureau, "Income, Poverty, and Health Insurance Coverage in the United States: 2011" (2012), at 5.
[24] *Id.*, Table 3.
[25] *Id.*
[26] *Id.*
[27] Pew Research Center, "The Lost Decade of the Middle Class" (August 22, 2012) at 9-10 (footnotes omitted.) Pew defines middle income households as those with incomes 67% to 200% of the median household income.
[28] U.S. Census Bureau, "Income, Poverty, and Health Insurance Coverage in the United States: 2011" (2012), at 8.
[29] U.S. Census Bureau, "American Community Survey – 2011 American Community Survey 1-Year Estimates," (2012).
[30] *Id.*
[31] U.S. Census Bureau, "Income, Poverty, and Health Insurance Coverage in the United States: 2011" (2012), Table 1.

U.S. House of Representatives

# Committee on Oversight and Government Reform

Darrell Issa (CA-49), Chairman

**The Department of Energy's Weatherization Program: Taxpayer Money Spent, Taxpayer Money Lost**

STAFF REPORT

U.S. HOUSE OF REPRESENTATIVES

112TH CONGRESS

March 20, 2012

**Executive Summary**

The Department of Energy's (DOE) $5 billion Weatherization Assistance Program is a stunning example of how the Obama Administration has wasted billions of taxpayer dollars in a misguided effort to achieve energy savings but ultimately commissioning work that put people's lives and homes at significant risk. The Weatherization Program, as administered by Energy Secretary Steven Chu, has resulted in excessive waste, fraud, and abuse of taxpayer dollars with very little benefit to show for it.

The Weatherization Program represents the kind of failure that materializes when you have an economic stimulus strategy contingent on asking the federal bureaucracy to absorb billions of dollars when the structural infrastructure to administer, disseminate and manage that influx of new money is not put in place. This report reveals how the Weatherization Program has suffered from poor administration and lack of effective oversight, which resulted in the hiring of unqualified subcontractors who performed shoddy work that left homeowners worse off.

Secretary Chu referred to this program as "one of our signature programs" and President Obama stated it was "exactly the kind of program that we should be funding." The reality is this program is the signature example of how the Obama Administration's government-first philosophy has resulted in significant waste of taxpayer dollars and brought very real material harm directly into the homes of the American people.

This report details how DOE contractors left exposed wires in a home, installed windows that were easily pushed out of their frames, left a home with raw sewage standing in a crawl space, sealed a basement that accumulated mold and cat feces, left a hole in a wall, damaged a ceiling, replaced a door with a hollow door and left a house with an unvented kerosene heater.

The reality is the rush to blindly spend billions of taxpayer dollars resulted in organizations with no previous experience weatherizing homes receiving contracts. Entities like the African Heritage Center for African Dance and Music, the Prosperity Media Inc. and the Black Rover Area Development Corporation all received grants despite not having any previous experience to justify receiving millions of taxpayer dollars.

The stunning lack of oversight of this program by DOE created a situation where no one was checking the quality of the work performed, allowing poor workmanship to go undetected and undeterred. Many DOE contractors did not do the work promised by DOE and many of them actually damaged homes, created hazards and actually made houses less energy efficient. Even the Inspector General for the DOE said the weaknesses of the program "pose health and safety risks to resident."

**Introduction**

In February 2009, President Obama declared, "We're going to weatherize homes, that immediately puts people back to work and we're going to train people who are out of work, including young people, to do the weatherization. As a consequence of weatherization, our energy bills go down and we reduce our dependence on foreign oil. What would be a more effective stimulus package than that?"[1] However, evidence gathered by the Committee on Oversight and Government Reform suggests that the Department of Energy's (DOE) Weatherization Assistance Program (Weatherization Program) is a stunning example of a management failure which has wasted billions of dollars, done little to achieve energy savings, and may have put people's lives and homes at risk. With some states exhibiting a failure rate 80% (12 out of every 15 homes fail inspection) due to substandard workmanship, this program is far from being a shining example of what the government can do for its citizens. The Weatherization Program, as administered by Energy Secretary Steven Chu, has resulted in excessive waste, fraud, and abuse of taxpayer dollars with very little benefit to show for it.

In an effort to jump start the economy and create jobs, President Obama advocated for the American Recovery and Reinvestment Act (the "stimulus"). Under this law, DOE received $41.7 billion to allocate to loan and grant recipients.[2] These funds were to be spent quickly in hopes of creating government sponsored jobs. The Weatherization Program received $5 billion of DOE's stimulus money, a 2,000% increase over the prior year, which was to be spent on the weatherization of 600,000 homes.[3] The Weatherization Program's previous annual allocation was only $225 million.[4] At a hearing before the Committee in November, the DOE Inspector General described pushing this much money through the weatherization program as being akin to hooking up a garden hose to a fire hydrant.[5]

Providing federal funds to weatherize homes of the economically disadvantaged is not a new concept. This practice was first authorized under the Energy Conservation and Production Act of 1976 ("ECPA"), with the goal of mitigating the pain of high energy prices for low income households.[6] Between 1976 and 2008, the Weatherization Program had funded the weatherization of approximately six million homes.[7] This program had been administered on a small scale using known subcontracting partners for over three decades. Within six months of

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[1] Interview by Katie Couric, Anchor, CBS Evening News, with President Obama, in Washington, D.C. (Mar. 10, 2009), http://www.cbsnews.com/2100-18563_162-4773752.html [hereinafter Couric].
[2] *Oversight of DOE Recovery Act Spending: Hearing before Subcomm. on Oversight and Investigations of the H. Comm. on Energy and Commerce,* 112th Cong. (2011) (statement of Frank Rusco, Director, Natural Resources and Environment, Gov't Accountability Office) [hereinafter GAO Testimony].
[3] *Id.*
[4] *Id.*
[5] *The Green Energy Debacle: Where Has All the Taxpayer Money Gone?: Hearing on H.R. Before the Subcomm. On Regulatory Affairs, Stimulus Oversight and Gov't Spending of the H. Comm. On Oversight and Gov't Reform,* 112th Cong. (2011) (Statement of Hon. Gregory H. Friedman, Inspector Gen., U.S. DOE) [hereinafter Friedman Oversight Hearing].
[6] U.S. Dep't of Energy, *History of the Weatherization Assistance Program* (2011), http://www1.eere.energy.gov/wip/wap_history.html (last visited Feb. 22, 2012).
[7] *Id.*

ARRA passage, all fifty-eight grantees received massive increases in funding, exceeding most grantees' prior Weatherization Program budgets by an order of magnitude.[8] Despite the massive surge in WAP spending, DOE failed to adequately ramp up its oversight of this program.

Through the Weatherization Program, DOE awarded large sums of money to state-level entities, who in turn hired sub-grantees responsible for much of the work. Often the sub-grantees contracted the work out to a third party, after subtracting an administrative fee. In too many cases, these sub-grantees received little or no supervision, and therefore ignored program goals and conducted haphazard work. But beyond the poor value obtained by the expenditure of taxpayer dollars, in some cases poor workmanship may actually have endangered the health and safety of the individuals whose homes were weatherized.

Building on the prior work of the DOE Inspector General (IG) and the Government Accountability Office, this report explores the ways in which the Weatherization Program has failed to accomplish its mission, while succeeding in wasting billions of taxpayer dollars.

**Weatherization: A Failed Anti-Poverty Program**

"The nine most terrifying words in the English language are, 'I'm from the government and I'm here to help.'"
--Ronald Reagan, August 12, 1986

During an interview with CBS News in his first few weeks in office, President Obama stated that "we're going to weatherize homes; that immediately puts people back to work…as a consequence of weatherization, our energy bills go down and we reduce our dependence on foreign oil. What would be a more effective stimulus package than that?"[9] The Administration's focus on weatherization has continued over the past three years. In August 2010, Vice President Biden traveled to New Hampshire to tour a weatherized house and announce that DOE contractors had weatherized 200,000 houses to date.[10] Energy Secretary Steven Chu also labeled weatherization as "one of our signature programs."[11]

DOE's web site for the Weatherization Program asserts that the program "enables low-income families to permanently reduce their energy bills" by an average of around $437 annually.[12] In an op-ed in the *Huffington Post*, Secretary Chu argued that the $5 billion in funding for weatherization through the stimulus would help "low-income families who are hit

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[8] U.S. DEP'T OF ENERGY, OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY WEATHERIZATION AND INTERGOVERNMENTAL PROGRAM, MONITORING PLAN FOR WEATHERIZATION ASSISTANCE PROGRAM STATE ENERGY PROGRAM ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANTS (Aug. 14, 2009) [hereinafter Monitoring Plan].
[9] Couric, *supra* note 1
[10] Press Release, White House, *Vice President Biden Announces 200,000 Homes Weatherized Under the Recovery Act* (Aug. 26, 2010) *available at* http://www.whitehouse.gov/the-press-office/2010/08/26/vice-president-biden-announces-200000-homes-weatherized-under-recovery-a.
[11] *Id.*
[12] U.S. Dep't of Energy, *Weatherization Assistance Program*, http://www1.eere.energy.gov/wip/wap.html (last visited Mar. 7, 2012) (last updated Jan. 30, 2012).

hardest by high utility bills" by "putting money back" in their pockets.[13] Energy Secretary Chu even teamed up with Housing and Urban Development (HUD) Secretary Shaun Donovan to sign a Memorandum of Understanding to allow DOE and HUD to work together closely "to streamline and better coordinate federal weatherization programs" and make it easier for people living in public housing to have their homes weatherized.[14]

Cathy Zoi, former Assistant Energy Secretary for Energy Efficiency and Renewable Energy, summed up the Administration's vision for weatherization:

> Right now across the country, folks are getting a knock at the door from someone who is going to make their lives and homes better. As part of the Weatherization Assistance Program, low-income families are having their homes tuned up by energy experts. These weatherization 'tune-ups' are improving comfort and saving money for householders from Florida to Utah, from Maine to Arizona—and every state in between.[15]

On paper, this program seems sound in theory. With a one-time investment by the government, lower income households receive the benefit of a more energy efficient home that will cost less to heat in the winter or cool in the summer. As a result of this investment, low income households will save on utility bills years into the future, freeing up scarce dollars to pay for other household needs. In theory, the federal government could potentially reduce other anti-poverty spending over the long run (such as heating assistance) because of the investment made in weatherization spending.

However, since the influx of stimulus dollars, the Weatherization Program has suffered from poor administration and lack of effective oversight, which led to the hiring of unqualified subcontractors who performed shoddy work. For many of the recipients, the DOE contractor who showed up at their door did not "make their lives and homes better,"[16] and in most cases even left the homeowner worse off.

*The Promise of a Newly Weatherized House Turns into a Nightmare for Many*

It appears that DOE's failure to put in place effective oversight mechanisms in the Weatherization Program created a situation where no one was checking the quality of the work performed, allowing poor workmanship to go undetected and undeterred. As a result, many DOE contractors did not do the quality work that DOE promised, and many DOE contractors actually damaged houses, created new hazards, or made houses less energy efficient. This

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[13] Steven Chu, *Weatherization: Saving Money by Saving Energy*, THE HUFFINGTON POST (Oct. 30, 2009) *available at* http://www.huffingtonpost.com/steven-chu/weatherization-saving-mon_b_339935.html.
[14] Press Release, White House, Secretaries Chu and Donovan Sign Agreement to Help Working Families Weatherize Their Homes (May 6, 2009) *available at* http://www.whitehouse.gov/the_press_office/Secretaries-Chu-and-Donovan-Sign-Agreement-to-Help-Working-Families-Weatherize-their-Homes.
[15] Cathy Zoi, *Weatherization: New Jobs for Americans, Help for Families in Need,* THE WHITE HOUSE BLOG, (Aug. 13, 2009) *available at* http://www.whitehouse.gov/blog/Weatherization-New-Jobs-for-Americans-Help-for-Families-in-Need/.
[16] *Id.*

concern is echoed by DOE's IG. After spending nearly two years auditing the Weatherization Program stimulus spending, the DOE IG, Gregory Friedman, testified before Congress that the program suffers from significant problems relating to workmanship quality, cost controls, and performance monitoring of grantees and contractors.[17] The IG also reported that weaknesses in the Weatherization Program sometimes "pose health and safety risks to residents, hinder production, and increase program costs."[18]

The IG reports reveal how sub-grantees' poor workmanship impeded the program's ability to provide an actual benefit to recipients.[19] Friedman testified that substandard work caused 9 of 17 weatherized homes in Illinois to fail inspections (53% failure rate).[20] The IG noted that in some states, the failure rate was as high as 12 out of 15 homes in the program that failed subsequent inspection due to substandard workmanship (80% failure rate).[21]

According to the IG, the core problem was lack of accountability within the WAP program. For example, sub-grantees – those groups hired by the states to perform the weatherization services – needed proper training before they began to provide the services. However, the grantees – the states – faced immense pressure to hire new staff quickly to meet weatherization deadlines. As a result, auditors found that the "rapid expenditure of Recovery Act funds prevent[ed] the normal learning curve for new auditors and contractors."[22] As such, states failed to uniformly train contractors, assessors, and inspectors, which predictably resulted in substandard work and program waste.[23] The losers were the American taxpayer, who funded shoddy work, and the recipients, who in some cases were left worse off.

The Committee's investigation independently examined DOE monitoring reports, which were conducted by a third party auditor, and uncovered a troubling pattern of low quality or even potentially dangerous work product in the homes of low income Americans. A small sample of examples contained in this report include:

- DOE contractors in Alabama sprayed insulation on wires in a furnace compartment in a legally blind woman's kitchen in a way that could have caused a fire.[24]
- DOE contractors in Kentucky left exposed spliced wires posing the risk of electrocution to the home's inhabitants.[25]

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[17] Friedman Oversight Hearing, *supra* note 5.
[18] U.S. DEP'T OF ENERGY, OFFICE OF INSPECTOR GEN., AUDIT REP. OAS-RA-11-17, THE DEP'T OF ENERGY'S WEATHERIZATION ASSISTANCE PROGRAM UNDER THE AM. RECOVERY AND REINVESTMENT ACT IN THE STATE OF TENNESSEE (2011) [hereinafter Tennessee Audit].
[19] *Id.*
[20] *Id.*
[21] *Id.*
[22] *Id.*
[23] U.S. DEP'T OF ENERGY, OFFICE OF INSPECTOR GEN., AUDIT REP. OAS-RA-11-12, THE DEP'T OF ENERGY'S WEATHERIZATION ASSISTANCE PROGRAM UNDER THE AM. RECOVERY AND REINVESTMENT ACT IN THE STATE OF MISSOURI (2011) [hereinafter Missouri Audit].
[24] See exhibits below.

- DOE contractors in Arkansas installed windows in a home in such a shoddy way that they could easily be pushed out of their frames, creating a potential hazard for small children.[26]

- DOE contractors in New York weatherized a basement without addressing major health hazards. According to a monitoring report: "basement extensively air sealed in spite of possible mold and large, obviously long-standing accumulation of cat feces in basement sump hole."[27]

- DOE contractors in Massachusetts chiseled a large hole into an interior wall to insulate it. Rather than fix the problem they had created inside of a house, the contractors left the huge hole in the wall.[28]

- DOE contractors in New York damaged the interior kitchen ceiling of a house in such a way that parts of the ceiling were stained and other parts fell down.[29]

- DOE contractors in Tennessee did such a poor job weatherizing a home that the homeowner had to use rags to plug holes under the sink and around three doors where air leaked into the home and negated any weatherization energy efficiency savings.[30]

- DOE contractors in North Carolina left a house with an unvented kerosene heater and created a potential carbon monoxide hazard.[31]

These stories are just a small sample of the failures of the Weatherization Program. In many situations, the homeowners had no way of knowing that the contractors had done substandard work or had created health hazards in their home. In some cases, DOE auditors inspected the homes weeks or months later and only then discovered these significant problems.[32] Even when contractors had advanced warnings of inspections, these egregious problems were still left unresolved, only to be discovered after the fact by an auditor. Ultimately, the homes discussed in this report only represent a small fraction of homes weatherized through the program, as DOE auditors only inspected a very small fraction of weatherized homes.[33] Given the large size of WAP and the speed with which funding was expended by DOE and state grant recipients, it is likely that thousands of other problems and hazards have yet to be discovered and corrected in weatherized homes. Furthermore it is unclear if the conditions described above have subsequently been remedied by DOE since documented.

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[25] *Id.*
[26] *Id.*
[27] *Id.*
[28] *Id.*
[29] *Id.*
[30] *Id.*
[31] *Id.*
[32] David Eggert & Doug Caruso, *Ohio Failed to Monitor Money to Weatherize Houses: Inspector General's Report Cites Lack of Inspections*, THE COLUMBUS DISPATCH (Nov. 30, 2011) *available at* http://www.dispatch.com/content/stories/local/2011/11/30/ohio-failed-to-monitor-money-to-weatherize-houses.html [hereinafter Eggert & Caruso].
[33] *Id.*

**Factors that Lead to DOE's Mismanagement of the Weatherization Assistance Program**

The dramatic increase in funding for the Weatherization Program altered the framework of the program in ways that encouraged grantees and sub-grantees to mismanage funds. Dramatic increases in dollars in the system as a whole and on a per unit basis created incentives for wasteful spending. Early distribution of stimulus funds removed incentives for grantees to meet DOE goals, and a lack of monitoring and oversight encouraged poor workmanship. Finally, the pressure to rapidly distribute funds forced states to look beyond qualified sub-grantees, and to rely on non profit programs that had no prior experience to help administer the program. Instead, the management and distribution of weatherization funds created the perfect storm that led to widespread failures in the program.

*Dramatic Increase in Weatherization Funds*

The Recovery Act more than doubled the amount of funds available to renovate a single unit, increasing per unit limits from $2,500 to $6,500.[34] It is questionable whether this amount of money was necessary to fully weatherize the average home. The steep increase in per unit funding predictably created an incentive for grantees and sub-grantees to spend more money than was necessary. In some cases, the additional measures funded under the per unit allocation failed to increase a unit's energy efficiency in a cost effective manner.[35] While $6,500 was available for each unit, DOE reported spending an average of $4,900 to weatherize a single unit in September 2011.[36] But in California, state auditors determined that most homes could be weatherized for $3,600 (and often less).[37] Accordingly, California pushed sub-grantees to use the surplus funds to weatherize more units.[38] Minnesota and Oregon also made an official determination that weatherization services cost less than DOE appropriated.[39] Accordingly, the generous allocation on a per unit basis created an incentive for waste.

In 2009, the Weatherization Program received $5 billion of DOE's stimulus money, a 2,000% increase over the prior year, which was to be spent on the weatherization of 600,000 homes.[40] The overall increase in funding also increased the opportunities for wasteful spending. For instance, a Missouri audit revealed one sub-grantee used nearly $400,000 in funds to purchase 24 more vehicles than needed to reach Missouri's planned goal.[41] The sub-grantee claimed both the state and DOE approved the acquisition of vehicles based on the amount of

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[34] U.S. DEPT' OF ENERGY, OFFICE OF INSPECTOR GEN., EXAMINATION REP. OAS-RA-11-21, ACTION FOR A BETTER COMMUNITY, INC. – WEATHERIZATION ASSISTANCE PROGRAM FUNDS PROVIDED BY THE AM. RECOVERY AND REINVESTMENT ACT OF 2009 (2011) [hereinafter Action for a Better Community Report].
[35] Letter from Elaine M. Howle, Cal. State Auditor, to Edmund G. Brown Jr., Governor of Cal. (Feb. 2, 2012), *available at* http://www.bsa.ca.gov/pdfs/reports/2011-503.5.pdf.
[36] GOV'T ACCOUNTABILITY OFFICE, GAO-12-195, PROGRESS AND CHALLENGES IN SPENDING WEATHERIZATION FUNDS (2011) [hereinafter GAO Report].
[37] *Id.*
[38] *Id.*
[39] *Id.*
[40] *Id.*
[41] Missouri Audit, *supra* note 23.

projected staff and usage.[42] However, the IG found that the vehicles had been driven less than an average 100 miles each per week (i.e. about 2 hours a week per vehicle).[43] The flood of money into the weatherization program clearly created an opportunity for unscrupulous subcontractors to spend more than necessary to meet the program goals.

*Perverse Incentives*

At the outset, DOE management of stimulus funds for the Weatherization Program created a perverse incentive for grantees to not reach project goals. DOE implemented a three-year project period for grantees that ends March 31, 2012,[44] and announced a goal to weatherize approximately 600,000 homes before the project ended. Before collecting funds to start the project, grantees had to submit a Weatherization Program Recovery Act plan to DOE. DOE's project plans implemented two 50 percent disbursements to grantees. After DOE approved a grantee's Weatherization Program Recovery Act plan, they scheduled the first disbursement. By the end of 2009, DOE approved each grantee's Recovery Act weatherization plans and distributed 50 percent of the allocated funds.[45] The second and final disbursement of Recovery Act funds to grantees, however, required a grantee to complete only thirty percent of its approved weatherization plan.[46] Accordingly, DOE's disbursement plan enabled a grantee to take all three years just to reach thirty percent completion, yet the grantee still received all of its allotted Recovery Act funds. Furthermore when the subcontractors are paid with taxpayer money no incentive exists to produce adequate work product. This disbursement plan did not produce the weatherization rates DOE anticipated and as of March 2011, two years into the project, only 44 out of 58 of the grantees had reached thirty percent completion.[47]

In instances where grantee states reached its Weatherization Program stimulus goal, DOE Inspector General ("IG") audits demonstrate that grantees circumvented or violated guidelines to meet their quota. For example, Tennessee reached its program goal of 10,500 homes; however, audits reveal seventy percent of homes inspected did not meet DOE standards and sixty-five percent of homes violated state directives.[48] As a result, the State Auditor questioned Tennessee's use of $371,770 in Weatherization Program Recovery Act funding.[49]

*WAP Oversight and Monitoring System*

Although the stimulus provided unprecedented funding for the Weatherization Program, the Administration failed to put in place sufficient mechanisms to monitor and oversee the disbursement of billions of taxpayer dollars. The Committee tried to obtain all monitoring reports

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[42] *Id.*
[43] *Id.*
[44] Monitoring Plan, *supra* note 8.
[45] *Id.*
[46] *Id.*
[47] GAO Testimony, *supra* note 2.
[48] Tennessee Audit, *supra* note 18.
[49] *Id.*

conducted by DOE in order to review the agency's due diligence.[50] However, DOE provided very few actual audits and instead delivered to the Committee work done by Simonson Management Services, a contractor DOE hired to assist with DOE audits. This distinction is important because the Committee tried, for months, to obtain complete information regarding DOE monitoring to no avail.[51] The Committee has not been able to determine the extent of DOE's monitoring work outside of the IG's audits.

Evidence gathered by the Committee does suggest that states did a poor job of meeting program monitoring requirements. On the state level, DOE advised grantees to monitor each sub-grantee once a year, to inspect five percent of completed units a year, and to submit their findings in a report to DOE.[52] Grantees, however, frequently ignored their obligations to conduct inspections. In Ohio, for example, the state failed to inspect five percent of weatherized homes because Ohio's WAP budget quadrupled and the state had insufficient staff to keep up with inspections.[53] But even grantees that did conduct inspections did a poor job. According to a Tennessee state audit, local agencies had passed 28 homes that should have failed.[54] In Missouri, IG audits revealed 11 of 20 homes, or 55 percent, failed final inspections in cases where the state had initially rated the work as acceptable.[55] Furthermore, failure to re-inspect homes revealed another problem with sub-grantee monitoring. In Ohio, for example, the state required sub-grantees to follow up with 25 percent of all weatherized units, but auditors found only three percent of homes had a documented follow-up inspection.[56]

Another example of failed oversight is the program's inability to track past recipients of weatherization services, who would have been ineligible under this program. Prior to ARRA enactment, homes that had already received weatherization services were ineligible for future weatherization services.[57] However, ARRA expanded eligibility to include homes weatherized before September 30, 1994.[58] In order to implement this change, federal regulations required each grantee and sub-grantee to maintain records of the homes that had received weatherization services in the past.[59] Despite these regulations, the IG audits revealed numerous instances where states kept poor track of homes that had already been weatherized.[60] Indiana, for instance, weatherized homes that were most likely ineligible due to past assistance because the state only began keeping a record of weatherization services after 2000.[61] In Tennessee, the state did

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[50] *See* Letter from the Hon. Darrell E. Issa, Chairman, H. Comm. on Oversight and Gov't Reform, to Steven Chu, Sec'y, U.S. Dep't of Energy (Sep. 9, 2011) (on file with author).
[51] *Id.*
[52] Eggert & Caruso, *supra* note 32.
[53] *Id.*
[54] Tennessee Audit, *supra* note 18.
[55] Missouri Audit, *supra* note 23.
[56] U.S. DEP'T OF ENERGY, EXAMINATION REPORT ON "COMMUNITY ACTION PARTNERSHIP OF THE GREATER DAYTON AREA – WEATHERIZATION ASSISTANCE FUNDS PROVIDED BY THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009" (Sept. 2011), http://energy.gov/sites/prod/files/OAS-RA-11-18.pdf [hereinafter Dayton Area Report].
[57] U.S. DEPT' OF ENERGY, OFFICE OF INSPECTOR GEN., AUDIT REP. OAS-RA-11-13, THE DEP'T OF ENERGY'S WEATHERIZATION ASSISTANCE PROGRAM FUNDED UNDER THE AM. RECOVERY AND REINVESTMENT ACT IN THE STATE OF INDIANA (2011) [hereinafter Indiana Audit].
[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] *Id.*

maintain a Weatherization Program database of homes previously weatherized, but auditors found sub-grantees gave weatherization services to ineligible homes regardless of their eligibility status. [62] Even in cases where homes had never received weatherization services, auditors identified sub-grantees that were providing weatherization services to homes ineligible for service. Specifically, the IG testified that "one sub-recipient gave preferential treatment to its employees and their relatives for weatherization services over other applicants, thus disadvantaging eligible elderly and handicapped residents."[63]

*Dubious Sub-grantees*

Because the Stimulus Act flooded the existing weatherization infrastructure with billions of additional taxpayer dollars that needed to be spent on an expedited basis, grantees had to look beyond sub-grantees that met the standards set by a federal statute, such as cities, counties, community service centers, and housing services organizations. As a result, organizations with no previous experience weatherizing homes received contracts to weatherize homes and significantly increased the probability of mismanagement of taxpayer dollars. The Weatherization Program grants often dwarfed these organizations' primary operating budgets and introduced a new administrative burden of responsible monitoring for sub-grantees, including monthly reports, records of expenses, and whatever additional records the DOE deemed necessary.[64] A survey of grantees in 2009 reported that 90% found complying with federal reporting requirements "challenging."[65]

One organization that received WAP funding without any apparent experience or expertise was the Black River Area Development Corporation ("Black River"), which focuses primarily on child development and operating Head Start/Early Start programs in Arkansas.[66] This group traditionally focused its energies on serving more than 426 low income children.[67] But under the Stimulus, they received a weatherization grant totaling $1,664,323. The WAP grant swamped their traditional operating budget of $1,398,167.[68]

Another unusual WAP recipient is the African Heritage Center for African Dance and Music organization ("Heritage Center") and Prosperity Media Inc., both located in Washington D.C.. Each organization received nearly one million dollars through WAP in late 2011.[69] Melvin Deal, Director of the Heritage Center, claims that his organization is a "natural fit" for WAP: "The Greening of America has to be led by people with artistic and flexible minds…money is

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[62] Tennessee Audit, *supra* note 18.
[63] Friedman Oversight Hearing, *supra* note 5.
[64] 10 C.F.A. § 440.24.
[65] GAO Report, *supra* note 36.
[66] Black River Area Dev. Corp., *Programs*, http://bradheadstart.com/index.php?option=com_content&view=section&layout=blog&id=26&Itemid=227 (last visited Mar. 16, 2012).
[67] Black River Area Dev. Corp., *Gen. Info.*, http://bradheadstart.com/index.php?option=com_content&view=article&id=179&Itemid=233 (last visited Mar. 16, 2012).
[68] *Recipient Profile*, RECOVERY.GOV, http://www.recovery.gov/Transparency/RecipientReportedData/Pages/Recipient.aspx?duns=155993819 (last visited Mar. 16, 2012).
[69] *Id.*

not something that excites us. Our art excites us."[70] Deal's statement raises many questions; among them is whether an artistic perspective is a sufficient qualification for an organization tasked with dispersing nearly one million dollars of taxpayer funds. There does not seem to be any other reason why this group should be eligible for distribution of weatherization funds. Without a demonstrated base of knowledge for administering the weatherization assistance program, the wisdom of putting these groups in charge of millions of taxpayer dollars is highly questionable.

In addition to these administrative challenges, it appears that the general lack of experience among new sub-grantees also contributed to poor workmanship. For example, inexperienced sub-grantees also exercised poor decision-making and commonly failed to purchase reasonably priced home-improvement materials, contrary to state policies.[71] For example, Tennessee instructed sub-grantees to avoid replacing windows and doors, but the IG audit revealed sub-grantees spent approximately $40,000 replacing those items.[72] Tennessee's audit also questioned about $100,000 in spending not deemed cost-effective.[73] In New York, 13% of purchases auditors randomly sampled violated the New York Weatherization Program Policies and Procedures Manual because they failed to obtain the necessary price quotes.[74] In Ohio, auditors questioned $70,080 in stimulus funds after they discovered one sub-grantee procured weatherization materials, equipment, and services without conducting any cost-analysis.[75] Where a sub-grantee needed to purchase common items such as smoke alarms, thermostats, and fire extinguishers, auditors revealed they used stimulus funds to purchase the items at costs exceeding retail by as much as 200 percent.[76] More speculative spending took place in Indiana where 22 of 23 homes sampled by IG auditors had received work by contractors who billed over $8,000 for "special circumstance charges" not included on the price list.[77] One of the "special circumstance charges" included a $350 draft inducer motor that on retail sells for only $75.[78] Clearly, the reliance on inexperienced sub-grantees came at a significant cost to the program in terms of efficacy, customer satisfaction, and simple waste of taxpayer dollars.

**Documented Evidence of Failures of the Weatherization Assistance Program**

This section includes a sampling of the photographic evidence the Committee has obtained documenting the numerous failures of the Weatherization Program. This section highlights examples of weatherization work that led to health hazards, is an example of shoddy

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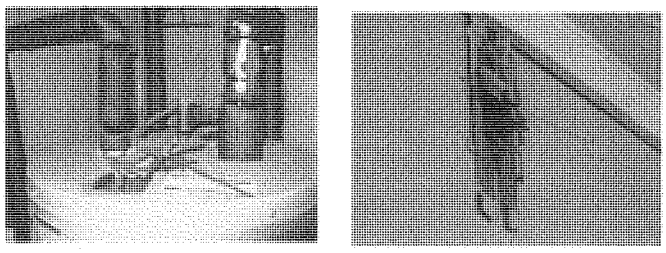
[70] *Dance Troupe and Other Non-Profits Boosted by Weatherization Program,* WAMU 88.5 FM AMERICAN UNIVERSITY RADIO, (Oct. 26, 2009), http://w.thedianerehmshow.org/news/09/10/26.php.
[71] *"Oversight of DOE Recovery Act Spending": Hearing before Subcomm. on Oversight and Investigations of the H. Comm. on Energy and Commerce,* 112th Cong. (2011) (statement of Gregory H. Friedman, Inspector Gen., U.S. Dep't of Energy) [hereinafter Friedman Energy Hearing].
[72] Tennessee Audit, *supra* note 18.
[73] *Id.*
[74] Action for a Better Community Report, *supra* note 34.
[75] Dayton Area Report, *supra* note 56.
[76] Friedman Energy Hearing, *supra* note 71.
[77] Indiana Audit, *supra* note 57.
[78] *Id.*

workmanship, or is simply a waste of taxpayer dollars. The images used in this section come from Technical Assistance Reports (TARS), compiled by Simonson Management Services (SMS), a company that received a contract from DOE to help with the monitoring of weatherization projects[79].

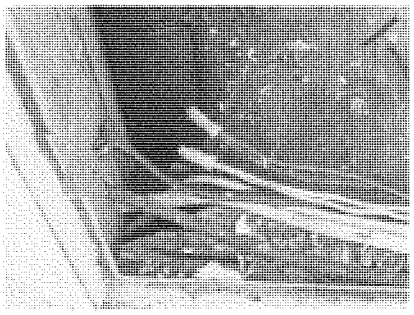
This section groups the images by type of problem (e.g., electrical hazards). Committee staff composed the descriptions that introduce each type of problem; the descriptions contained inside of each picture box come directly from the TARS monitoring reports.

*Electrical Hazards*

The following series of images feature examples of electrical hazards left in place by subcontractors. The pictures display various electrical shock hazards and unprotected spliced wires in contact with insulation creating a fire hazard.

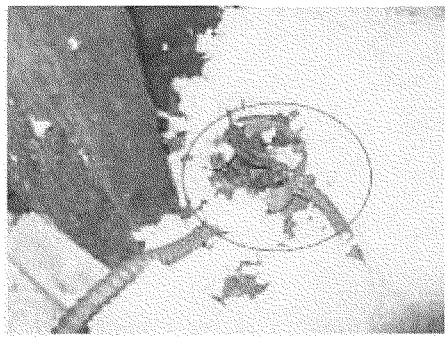


Untreated electrical hazards

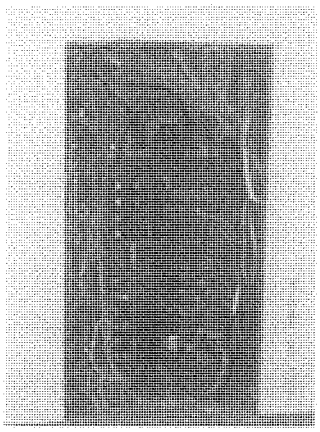


Exposed electrical splice in HWT closet

[79] SIMONSON MGMT. SERV., TECHNICAL ASSISTANCE REPORTS (2012).

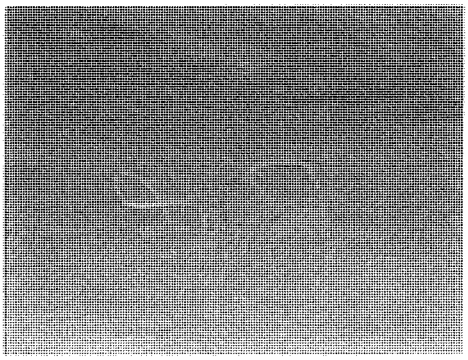


Uncovered electrical junction box



Unit # 6, Job Identifier ARRA-A-901, open electrical panel box.

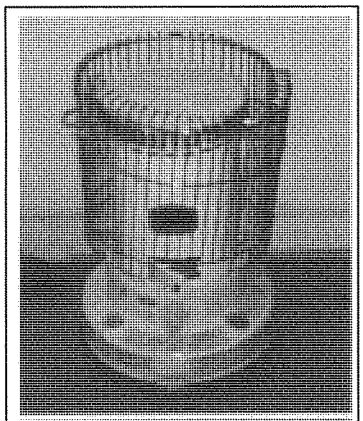
Unit #2, Job Identifier ARRA-C-199, exposed spliced wires



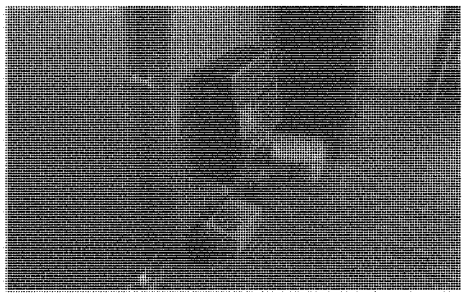
Unit # 6, Job Identifier ARRA-A-901, exposed spliced wires in attic.

*Unvented Gas Heaters*

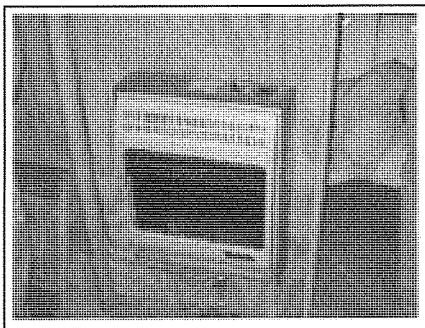
The following series of images features numerous examples of unvented gas heaters observed in residents' homes. Unvented heaters release combustion byproducts into homes including carbon dioxide, carbon monoxide, and sulfur dioxide. The residents are at risk of carbon monoxide poisoning.[80]



Unvented space heater in living room.

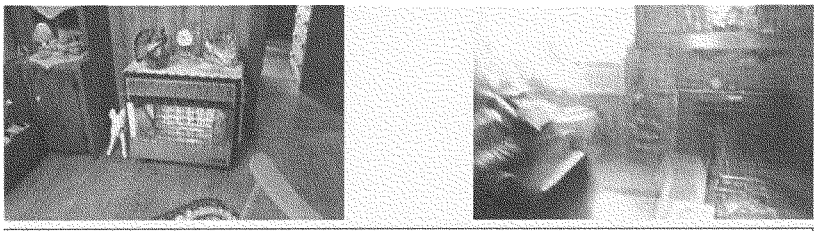


Unvented gas space heater left in bedroom, gas hooked up, pilot burning. Note rags substitute for door sweep in bottom left of photo.

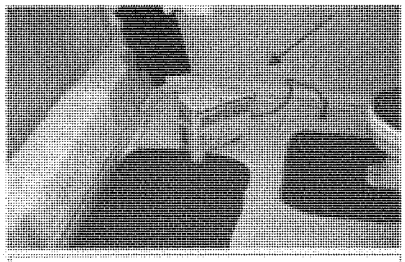


Unvented gas heater not addressed on audit report.

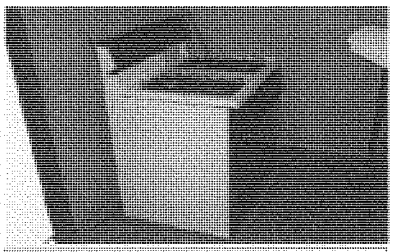
[80] U.S. DEP'T OF ENERGY, WEATHERIZATION ASSISTANCE PROGRAM STANDARDIZED CURRICULUM, WEATHERIZATION ENERGY AUDITOR SINGLE FAMILY: COMBUSTION APPLIANCES (Aug. 2010), http://www.waptac.org/data/files/events/conferences/2011-doe-national-conference/wenesday/w23_testing_combustion_efficiency_and_carbon_monoxide.pdf.



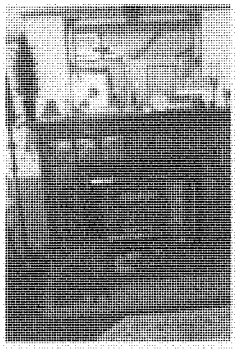
Left: unvented gas space heater left for back up heat. Right: in same room, new window heat pump and vented wood stove.



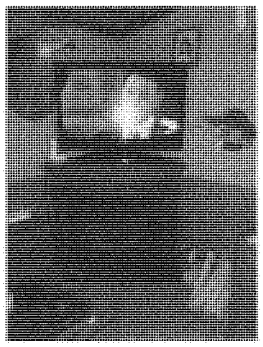
An unvented gas heater is observed in the bedroom.



An unvented gas stove remains unvented post-weatherization. This could be a health & safety issue.



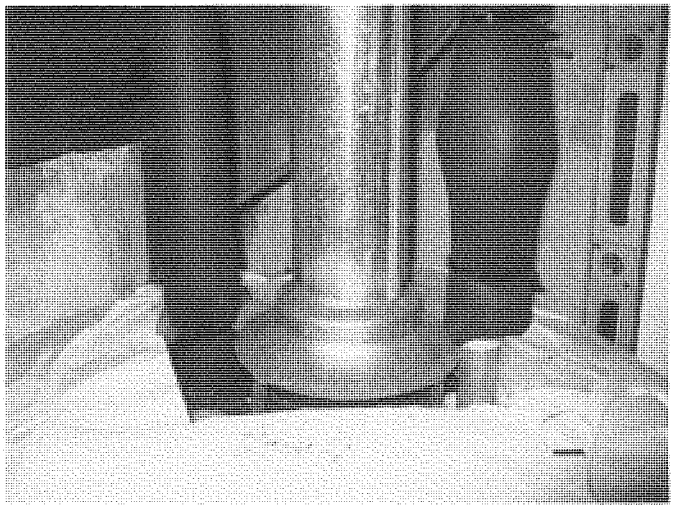
Unvented gas fireplace. CO detector resting on mantle, not installed.



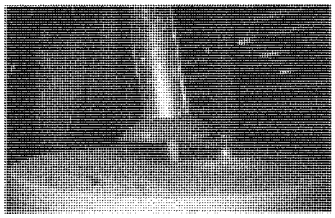
Ventless kerosene heater in living room.

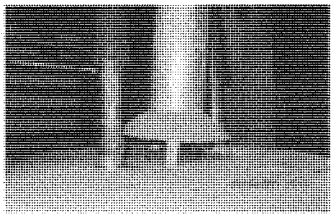
*Dangerous Hot Water Heaters*

The follow series of images illustrates dangerous hot water heater installations. The images include examples of insulation installed too close to the exhaust vent creating a fire hazard, examples of poor craftsmanship installing insulation, examples of pressure relief valves not in place, and examples of exposed electrical wiring to hot water heater.

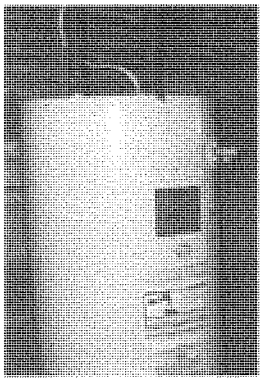


Fire hazard where HWT jacket was installed too close to vent

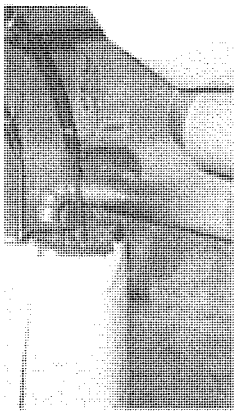




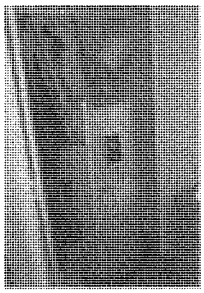
DHW pipe insulation was dangerously close to heat source. Proper clearance was ensured during site visit.

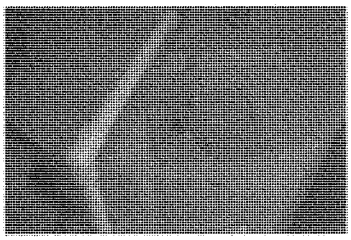


CAA installed pressure relief valve on domestic hot water tank. – No discharge tube as required by national plumbing code.

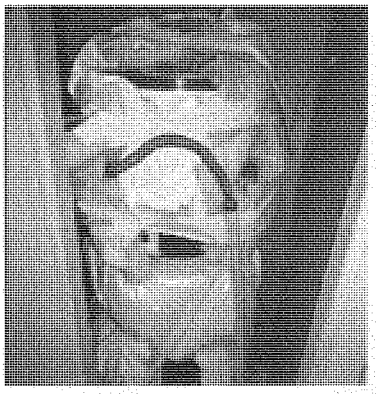


Tank wrap installed over pressure relief valve. Impossible for valve to "blow-off" – very dangerous.

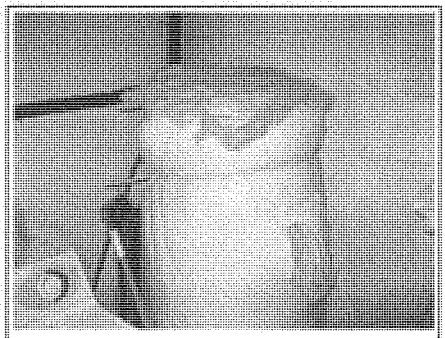




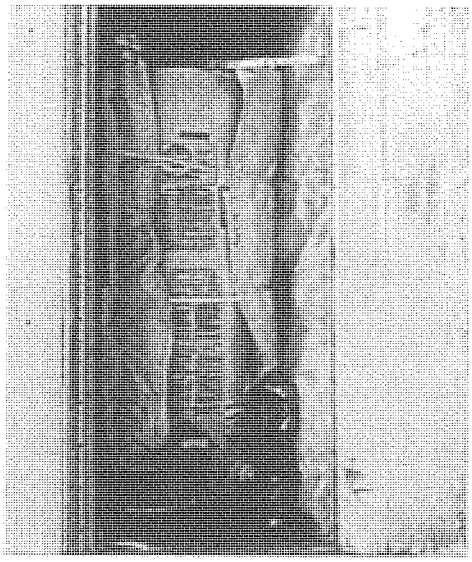
DWH installed in master bedroom closet by WX . Relief valve open near clothing, poor quality workmanship for this electrical and plumbing on this measure (above and below).



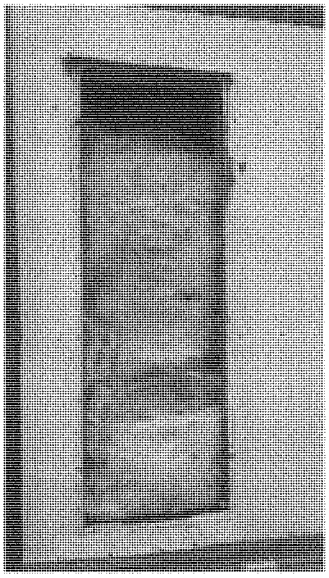
Tank wrap is unprofessionally installed.



Poor HVAC Installation



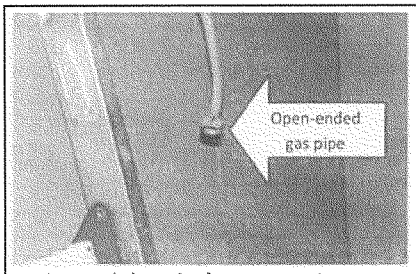
A hot water tank is observed to be poorly insulated once the exterior closet door was opened.



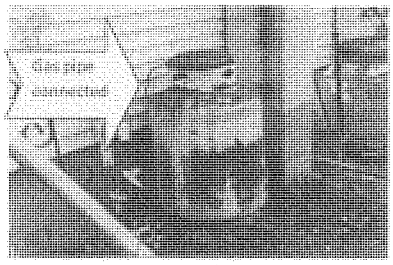
This is a picture of several batts of insulation jammed around the water heater.

*Open Ended Gas Lines*

The images below capture an open ended gas line attached to a propane tank outside the resident's home. There is no shut off valve visible on the interior end of the gas line. With no way of shutting off the flow of propane inside the home, a significant health hazard exists.



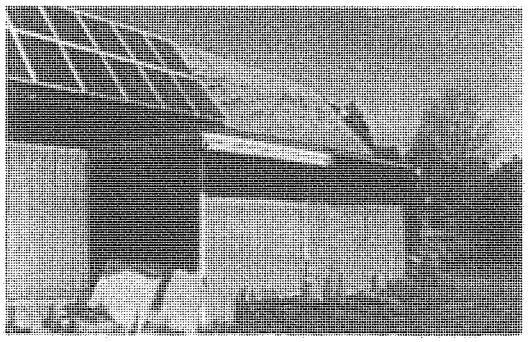

Open-ended gas pipe from gas space heater.



Propane tank connected to the open-ended gas pipe inside the home.

*Wasteful Expenditures*

Solar panels were installed on a resident's home in New York, costing $17,453. Technician noted the roof of the structure will need to be replaced during the lifetime of the solar panels. The house itself is also noted to need overall weatherization measures including the replacement of a shattered window. The estimated savings calculated by onsite staff is estimated at $80 per month for this application; it will take approximately 27 years before the cost of installation is recaptured.[81]



South pitch. Note how shingle damage aligns with slanted ceiling.

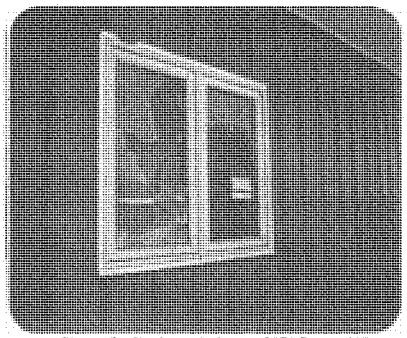
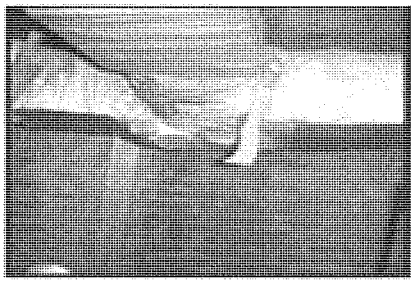
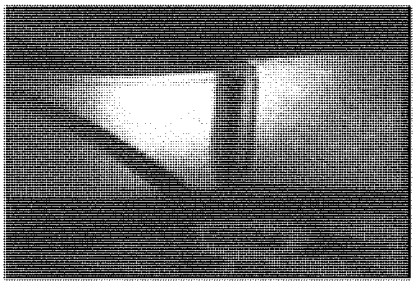


Figure 3 Broken window at 3971 Route 417

[81]The above calculation is based on a discounted cash flow model that assumes a 3% rate of inflation as the discount rate.

In the example below, DOE contractors spent $1,200 to weatherize a basement, but SMS personnel noted that they had not done the work that they had billed for and claimed to have done.





Basement ductwork remains uninsulated and in need of repair and sealing, though work was charged ($1,200). (2 pics above)

SMS0

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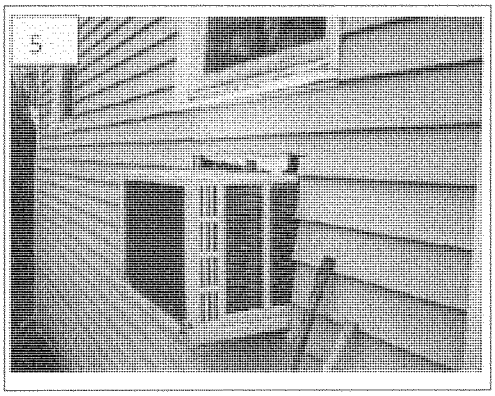
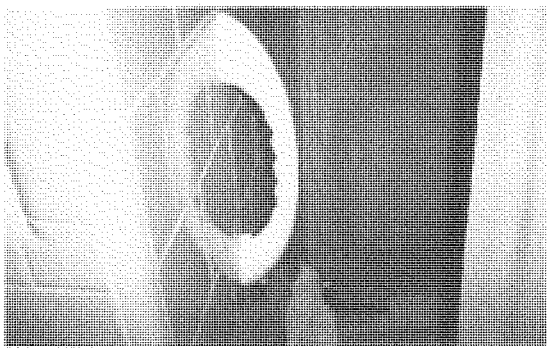
An example of a poorly installed air conditioner unit. The contractor did not seal the gaps around the unit and therefore failed to provide a barier to the outside elements.

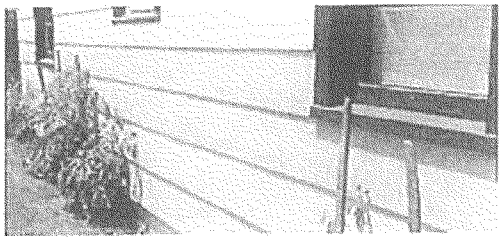


*Non-Weatherization Expenditures that Misuse Taxpayer Money*

DOE had guidelines for work that contractors could do with Weatherization Program funding. Weatherization Program funding could only be used for work that actually improved the energy efficiency of a home. Unfortunately, due to poor management of the program, many contractors did work using Weatherization Program money that did not improve energy efficiency and violated DOE rules. In this Rhode Island example, DOE contractors installed a grab bar in a shower that does not improve the energy efficiency of the home and violates DOE rules. Also in Kentucky the contractor installed siding on the residence with no justification.



Grab bar funded by WAP but is not an allowed cost.



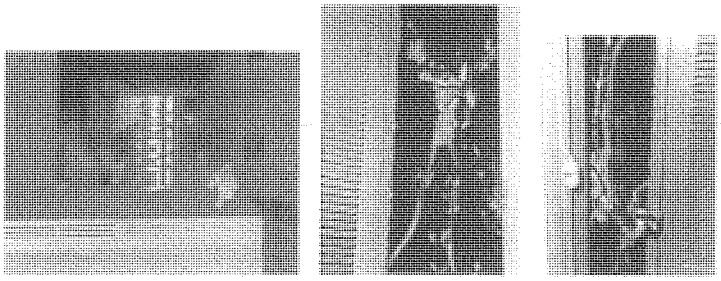
Unit 3 – No file justification for replacing siding on home

*Poor Craftsmanship and Shoddy Worksmanship*

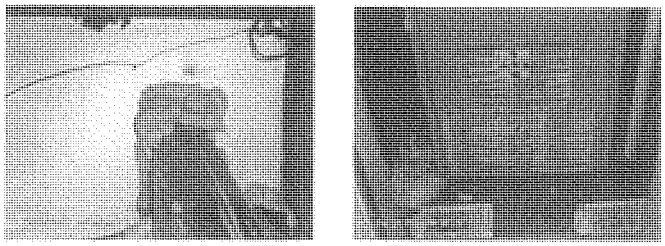
The next series of images demonstrate a variety of examples of poor craftsmanship or shoddy work. These examples range from work that endangered lives of inhabitants, work that damaged homes, and work that simply left a mess in the person's house.

*Creating a Fire Hazard in a Blind Woman's House*

The images below document poor craftmanship weatherizing the home of a legally blind Alabama resident. The auditor notes sealing materials used by the contractor dirtying the food and canned goods in close proximity to weatherization measures. The technician also notes liberal use of foam sealer, used to insulate holes and piping. The foam is observed on wires in the resident's furnace room creating the potential for the wires to overheat and become a fire hazard.



Unit # 6, Job # ACHR-064-A-09 When the kitchen cabinets above the cook stove were opened to check the range hood venting, fiberglass was observed in the cabinet, on food and can goods as well as the range hood itself. Foam insulation was observed on wires connecting to the furnace and, in the furnace compartment. This could cause the wires to overheat and catch fire.



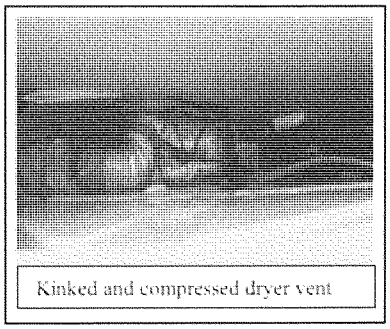
Unit # 6, Job # ACHR-064-A-09, Foam was observed around the vent pipe at the ceiling level and it had drip down onto the floor of the furnace compartment during "curing."

- It should be noted that the client is legally blind and is unaware of these conditions.

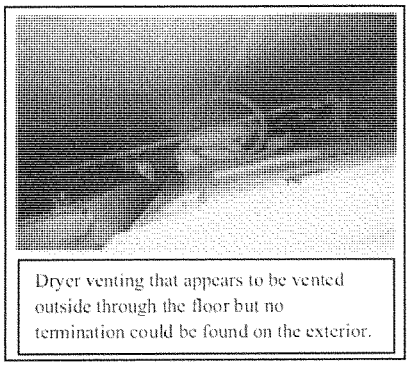
*Not Venting Clothes Dryers Properly*

The following images illustrate improper dryer venting. Dryers vented to locations inside the home cause interior moisture build up and dangerous conditions[82]. All mobile homes require dryer venting to extend outside the perimeter of the structure.[83] Examples of improper dryer venting include crushed dryer vents and dryer vents with no clear end destination.

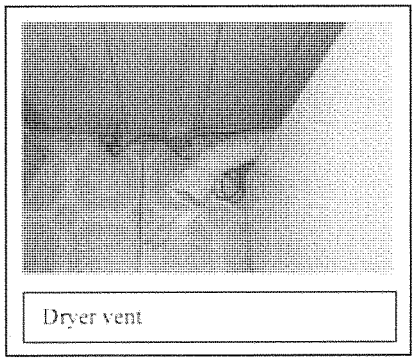
Badly crushed drier vent.



Kinked and compressed dryer vent



Dryer venting that appears to be vented outside through the floor but no termination could be found on the exterior.



Dryer vent

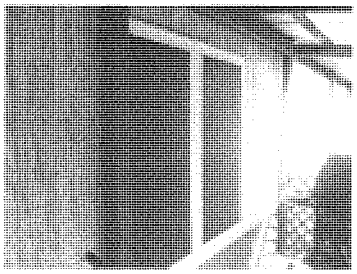
[82]Nick Gromicko, Rob London and Kenton Shepard, *Dryer Vent Safety*, INT'L ASS'N OF CERTIFIED HOME INSPECTION, http://www.nachi.org/dryer-vent-safety.htm (last visited Mar. 16, 2012).

[83] Oregon Energy Coordinators Ass'n, *Site Built Housing and Mobile Home Weatherization Specifications for the State of Oregon Weatherization Assistance Program* (2011), http://www.ohcs.oregon.gov/OHCS/CRD/SOS/docs/WX_Specs_2011_State_of_Oregon_Final.pdf?ga=t.

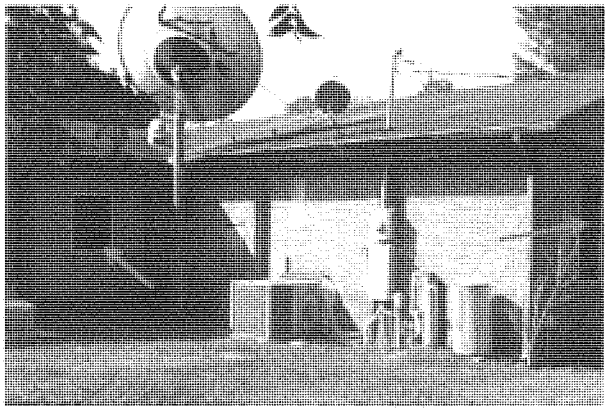
*Installing Solar Screens in Places that Do Not Have Direct Sunlight*

The following images are examples of installed solar screens. The screens are designed to reduce heat created by direct sunlight contacting windows. Heat is reduced by reflecting direct sunlight, and dispersing heat between the window and screen. The screens are only effective in direct sunlight applications. The images below show solar screens installed under a shaded porch and on shaded sides of Florida homes rendering the screens ineffective.

Solar screens installed on shaded West wall



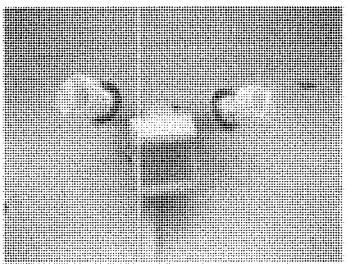
Solar screens installed shaded porch



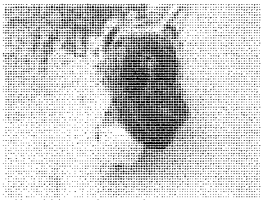
Solar Screens on North Side

*Creating an Electrical Shock Hazard by Using Indoor Light Bulbs Outside*

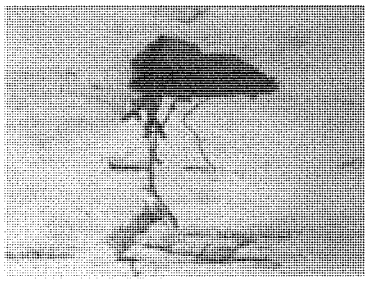
The following series of images document the improper use of Compact Fluorescent Bulbs (CFL). CFL that were not rated for wet locations were installed in exterior locations and increased the risk of electrical shock. In addition, the light fixture wiring is unsafe. Simonson Management Service developed a lighting training reference guide, shown below, because of the number of CFL violations observed.

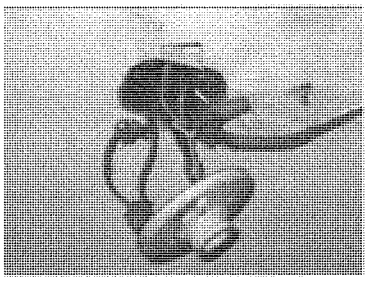


Exterior light fixture with wrong CFL's installed and non-functional sensor control.

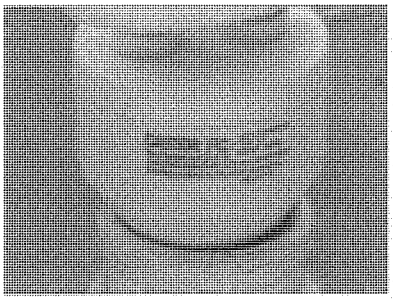


Unsafe wiring connections are cause for deferral of lighting retrofit.





- **Lighting training**: (At the request of NETL, SMS will develop a lighting training reference guide as a starting point)
  - Several applications were observed where spiral CFL's not rated for wet locations were installed in exterior, non-enclosed fixtures. Such installations may reduce the useful life of the bulb, cause malfunction, or create a safety issue.

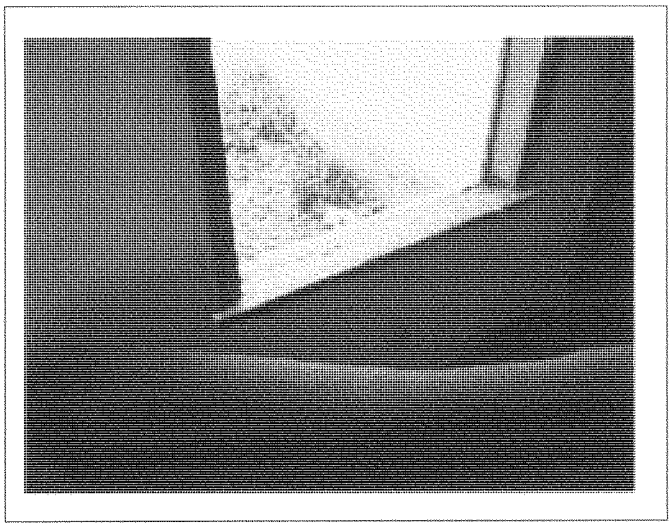


**Wording on bulb reads**:
"CAUTION: Risk of electrical shock. Do not use where directly exposed to water. Not for use in luminaries fixtures controlled by a dimmer or in totally enclosed recessed fixtures".

  - More than one Auditor recommendation suggested removal of the dimming capability of a lighting fixture. Installing dimmable CFL's might be a more appropriate solution. Suggest recommending that contractors install dimmable CFL's instead of removing dimmer switch.

*Endangering Children's Lives While Installing a Window*

In the following image, a Simonson on site technician observed a second story window removed from the frame but not installed by on-site crew. The Simonson technician also observed small children playing in close proximity to open window frame without supervision. The contractor created a dangerous environment at the residence.

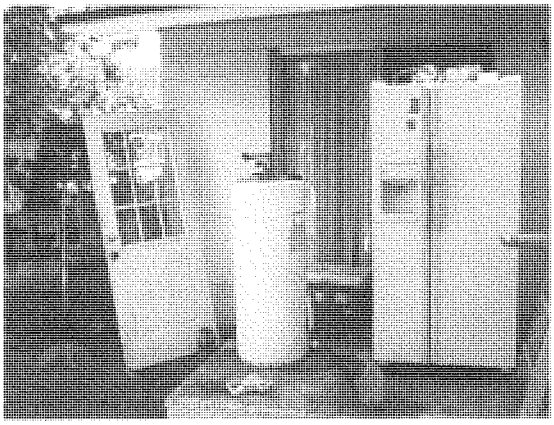


*Leaving Appliances in the Homeowner's Backyard*

The onsite contractor did not remove the old water heater and refrigerator from this Florida resident's property. Both items are left on residents back patio documented below.

Florida QA Visit (NFCAA)

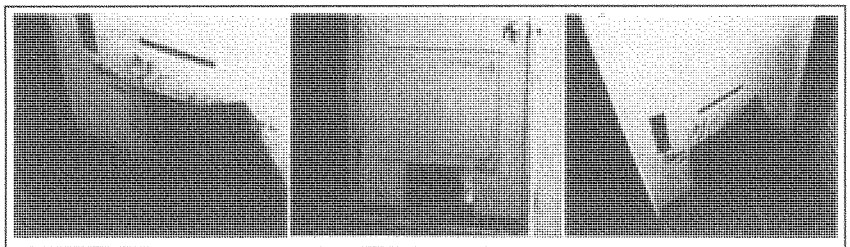
Week of October 18, 2010



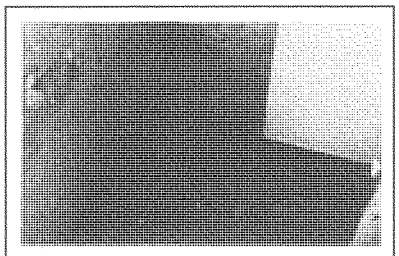
Old door, HWT and Refrigerator left at client's home

*Creating a Hazardous Situation with Cat Feces*

In the images below, the contractor installed weatherstripping used to create a barrier to the elements when door is shut. However, the resident had cut a hole in the door for a cat to enter. The large hole rendures the installed weatherstripping usless. Additionally, the contractor left a large amount of cat feces, leaving a potentially hazardous situation in the house.



New weatherstrip installed on door with "cat-port" hole partially covered with house hanging piece of old carpet.



Open basement sump filled with cat feces.

*Replacing a Window with Plywood and Foam*

The following images document a resident's windows replaced with plywood and foam board.

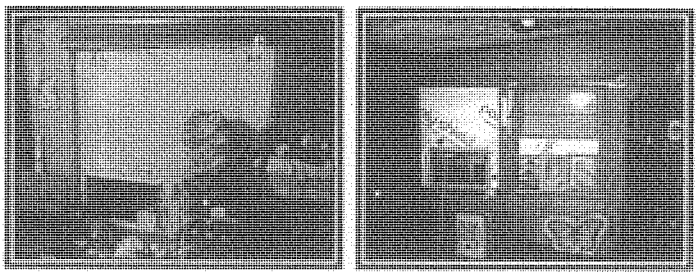
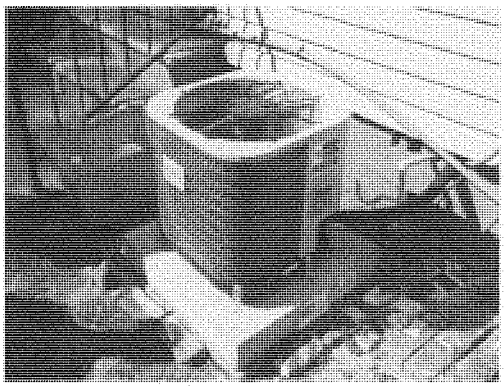


Figure 4: Windows Replaced with Plywood and Foam Board

*Installing a Faulty Air Conditioning Unit*

Contractor installed new air conditioning unit incorrectly at this Florida residence causing the unit to malfunction and continue to cycle wasting electricity.



Newly installed air conditioning unit. Unit was malfunctioning upon arrival at dwelling. Unit was cycling on/off every 5 seconds. Agency staff contacted contractor.

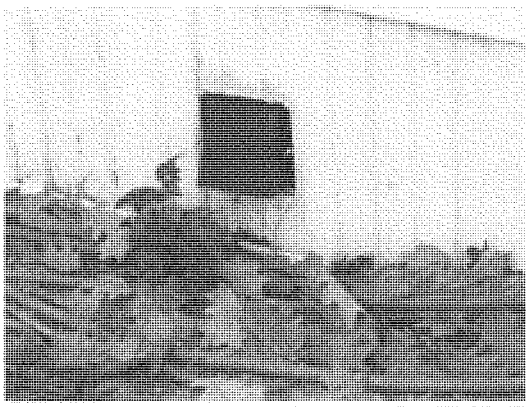
*Covering a Broken Window with Plastic*

A broken window is overlooked in the image below. A replacement window should have been installed in this New Jersy residence.

A broken basement window which someone tried to cover with plastic. Note the large holes by the lower left corner of the window where bricks were crumbling. This window represents a large area of air infiltration which should have been addressed as part of weatherization.

*Installing a Dryer Vent that Allows Critters to Enter the House*

The image below documents a dryer vent installed inches from the ground making it vulnerable to being covered with snow or allowing an animal to enter the house.



Installed dryer vent kit installed very close to the ground in the skirting of the mobile home. This lends itself susceptible to critter access as well as being covered up by snow in the winter months.

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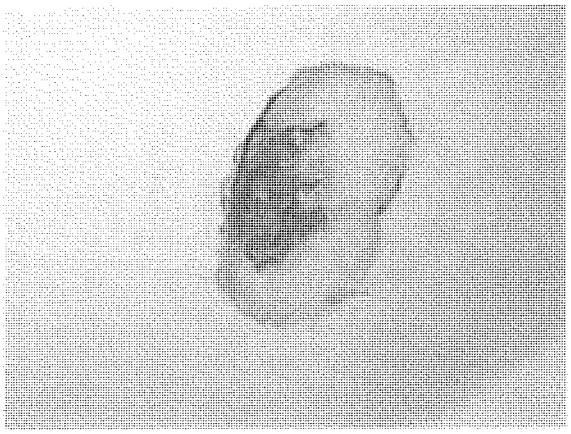
*Drilling a Hole in the Wall and Leaving it Untreated*

Contractors made a hole in this Massachusetts resident's wall when installing insulation. The contractor made no attempt to repair the hole.



Hole made in interior wall to blow insulation.....left unrepaired.

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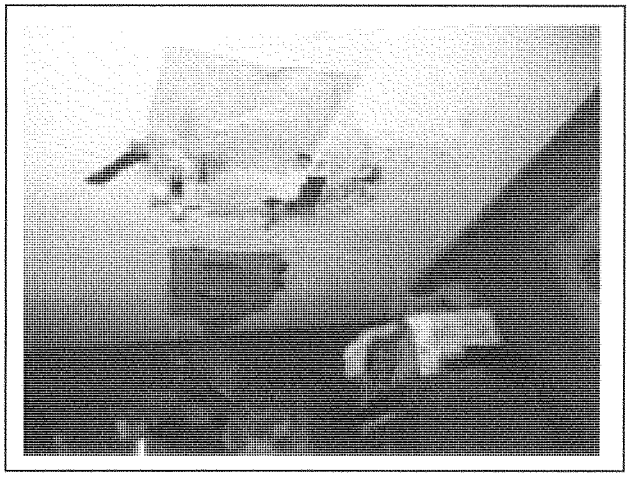
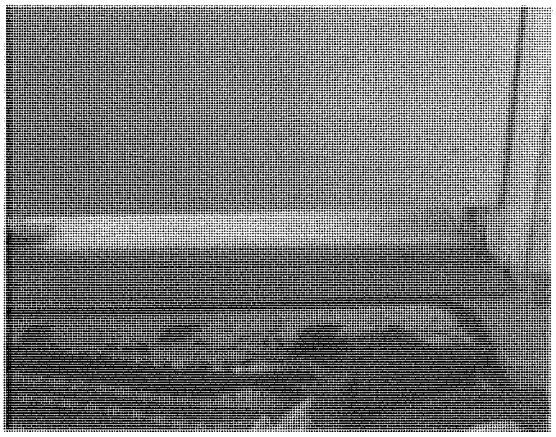
*Creating a Water Leak Inside a Home*

This image captures poor craftsmanship repairing the ceiling damaged by a water leak from when the contractor pumped insulation into the ceiling.



*Leaving a Large Gap Under the Door*

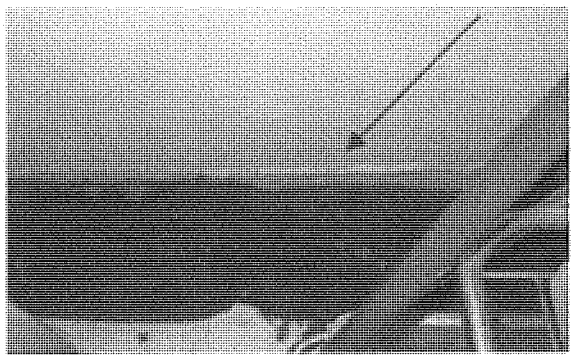
A noticeable gap below a door is observed in the image below. The gap allows for significant outside air infiltration and caused the home owner to attempt to use rags to fix the draft problem.



A 3" gap is visible at the bottom of this door. This major source of air infiltration was not solved as part of the weatherization work performed. Rags that the client was continuing to use to block the draft are visible in the forefront.

*Allowing Ice to Form Inside a Home*

A line of ice formed on the interior wall of a residence in the image below. Weatherization measures did not fix this problem and demonstrate a missed opportunity for effective weatheirzation.



A line of ice is observed on the interior side near the bottom of this door. Towels used by the client to prevent drafts are observed on the floor by the door.

*Not Fixing a Rickety Window*

In this picture, a window in a weatherized home is falling apart, demonstrating shoddy worksmanship.

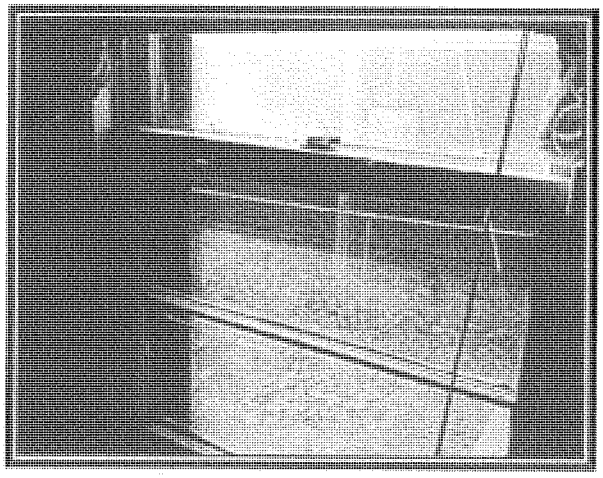


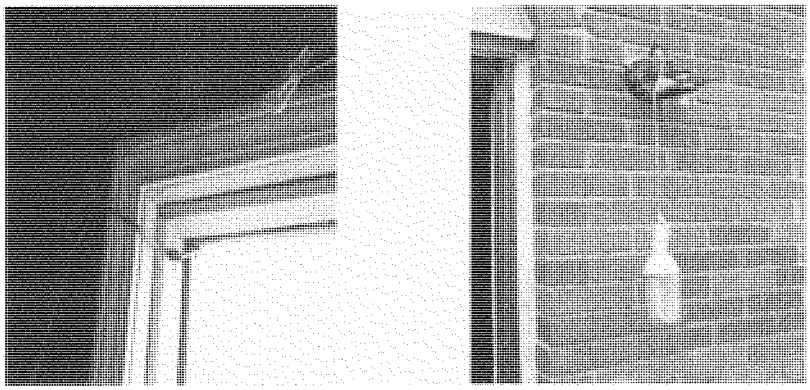
Figure 2: Double Hung Window Falling Apart

*Allowing Water to Pool Under a Home*

In this example, DOE contractors installed a new ground cover for a home but their shoddy work allowed a large puddle to develop on top of it.

*Installing an Outdoor Light that Prevents the Front Door From Shutting*

In this example of shoddy work, DOE contractors did not replace an outdoor light fixture leaving a power cord running from inside the house to outside, preventing the front door from closing properly.



This exterior light fixture should have been replaced as part of weatherization. The cord was preventing the front door from properly closing.

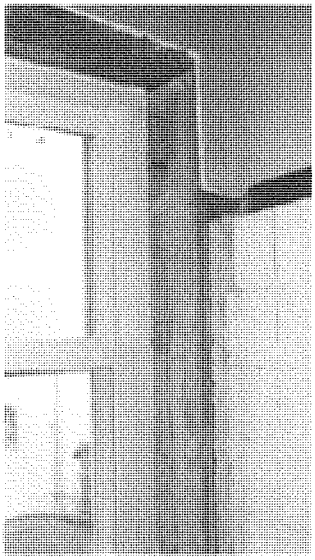
*Leaving an Interior Water Leak Untreated*

In this example, water stains and a hole in the ceiling indicate this weatherized home has a significant water leak in the main part of the house.

Water stains and a small hole in the ceiling are indicative of a water leak. This is a H&S issue that remains unresolved for this client.

*Installing a New Window but Not Sealing it Properly*

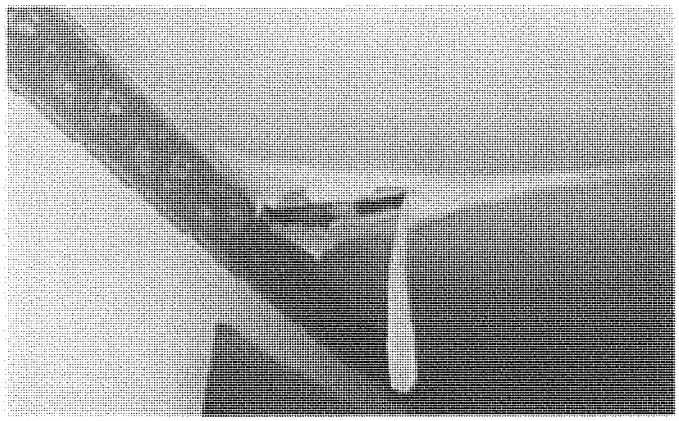
In this example, DOE contractors installed a new window in this home but did not properly seal it, and air continues to leak into the house, partially negating the energy efficiency improvements.



New window not trimmed out – Severe air leaks into cement block wall.

*Leaving a Hole in the Ceiling*

In this example below, DOE contractors did not repair a hole in the ceiling.



One of two holes in rear BR ceiling both ignored.

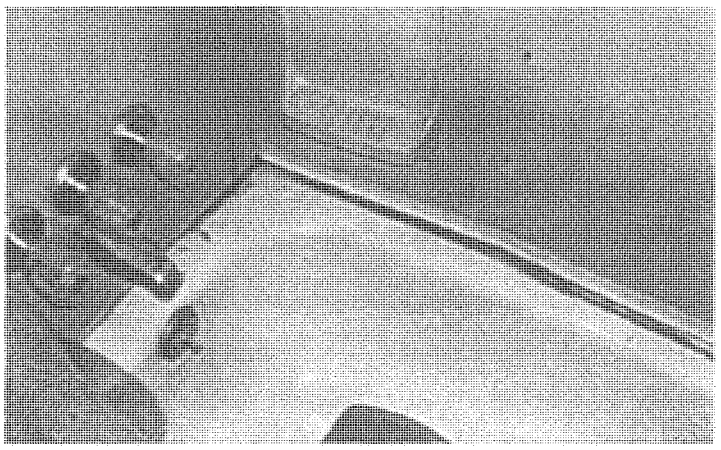
*Caulking a Sink that Falls Apart*

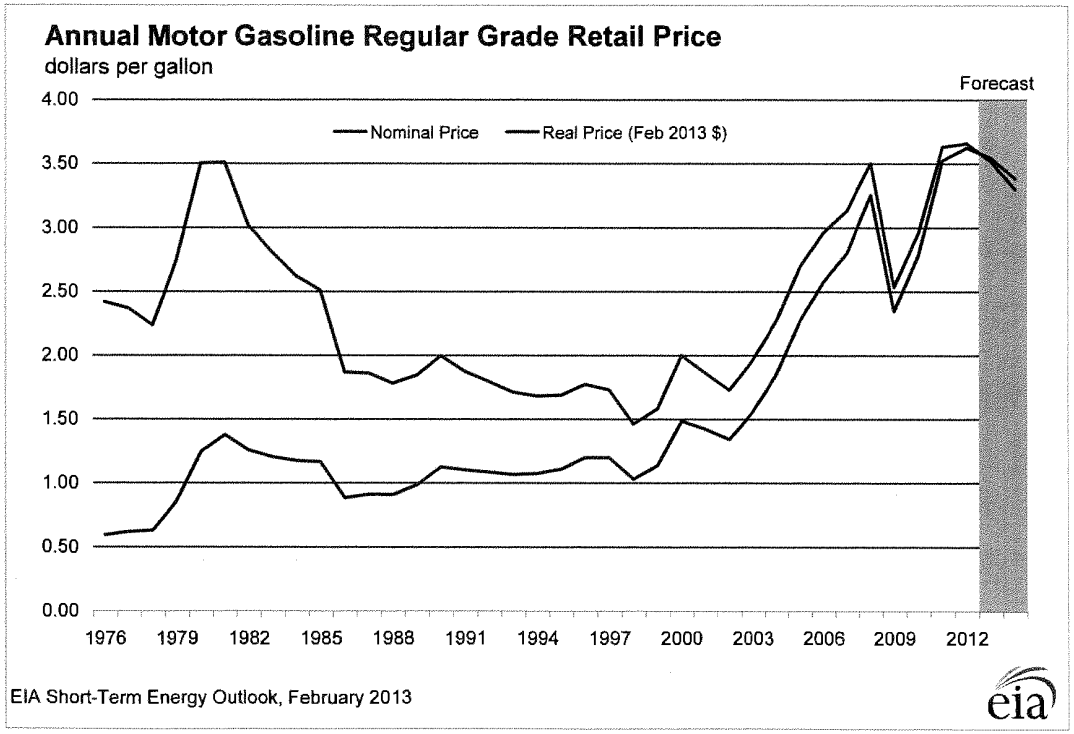
In this example, DOE contractors caulked an area under the sink to weatherize it but did such a shoddy job that the caulk fell through, minimizing the energy efficiency improvements of the work.

Air sealing around plumbing penetrations will not be effective without patching damaged areas like this under the sink. Was caulked but caulk fell through the large hole.

*Causing Someone's Bathtub to Fall*

In this example, it is not clear exactly how it happened, but the TARS report notes that the homeowner's bathtub dropped after weatherization work was done.



Tub dropped after Wx – new opening.

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