

**BLUE, GOLD, AND GREEN: HOW DELAWARE
STATE AND LOCAL GOVERNMENTS ARE
CUTTING THEIR ENERGY COSTS**

HEARING

BEFORE THE

FEDERAL FINANCIAL MANAGEMENT, GOVERNMENT
INFORMATION, FEDERAL SERVICES, AND
INTERNATIONAL SECURITY SUBCOMMITTEE

OF THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

OF THE

ONE HUNDRED ELEVENTH CONGRESS
SECOND SESSION

FIELD HEARING IN WILMINGTON, DELAWARE

FEBRUARY 19, 2010

Available via <http://www.gpoaccess.gov/congress/index.html>

Printed for the use of the
Committee on Homeland Security and Governmental Affairs



U.S. GOVERNMENT PRINTING OFFICE

56-841 PDF

WASHINGTON : 2010

For sale by the Superintendent of Documents, U.S. Government Printing Office,
<http://bookstore.gpo.gov>. For more information, contact the GPO Customer Contact Center,
U.S. Government Printing Office. Phone 202-512-1800, or 866-512-1800 (toll-free). E-mail, gpo@custhelp.com.

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

JOSEPH I. LIEBERMAN, Connecticut, *Chairman*

CARL LEVIN, Michigan	SUSAN M. COLLINS, Maine
DANIEL K. AKAKA, Hawaii	TOM COBURN, Oklahoma
THOMAS R. CARPER, Delaware	JOHN McCAIN, Arizona
MARK L. PRYOR, Arkansas	GEORGE V. VOINOVICH, Ohio
MARY L. LANDRIEU, Louisiana	JOHN ENSIGN, Nevada
CLAIRE McCASKILL, Missouri	LINDSEY GRAHAM, South Carolina
JON TESTER, Montana	ROBERT F. BENNETT, Utah
ROLAND W. BURRIS, Illinois	
PAUL G. KIRK, JR., Massachusetts	

MICHAEL L. ALEXANDER, *Staff Director*
BRANDON L. MILHORN, *Minority Staff Director and Chief Counsel*
TRINA DRIESSNACK TYRER, *Chief Clerk*

SUBCOMMITTEE ON FEDERAL FINANCIAL MANAGEMENT, GOVERNMENT
INFORMATION, FEDERAL SERVICES, AND INTERNATIONAL SECURITY

THOMAS R. CARPER, Delaware, *Chairman*

CARL LEVIN, Michigan	JOHN McCAIN, Arizona
DANIEL K. AKAKA, Hawaii	TOM COBURN, Oklahoma
MARK L. PRYOR, Arkansas	GEORGE V. VOINOVICH, Ohio
CLAIRE McCASKILL, Missouri	JOHN ENSIGN, Nevada
ROLAND W. BURRIS, Illinois	

JOHN KILVINGTON, *Staff Director*
JOHN COLLINS, *Legislative Aide*
BRYAN PARKER, *Staff Director and General Counsel to the Minority*
DEIRDRE G. ARMSTRONG, *Chief Clerk*

CONTENTS

Opening statement:	Page
Senator Carper	1
Prepared statement:	
Senator Carper	31

WITNESSES

FRIDAY, FEBRUARY 19, 2010

Hon. Jack Markell, Governor, State of Delaware	5
Chris Coons, County Executive, New Castle County, Delaware	14
Roy Whitaker, Chief of Buildings and Grounds, Seaford School District, Delaware	19
James Baker, Mayor, City of Wilmington, Delaware	25

ALPHABETICAL LIST OF WITNESSES

Baker, James:	
Testimony	25
Prepared statement	46
Coons, Chris:	
Testimony	14
Prepared statement	39
Markell, Hon. Jack:	
Testimony	5
Prepared statement	34
Whitaker, Roy:	
Testimony	19
Prepared statement	44

APPENDIX

Charts referred to by Senator Carper	50
--	----

**BLUE, GOLD, AND GREEN: HOW DELAWARE
STATE AND LOCAL GOVERNMENTS ARE
CUTTING THEIR ENERGY COSTS**

FRIDAY, FEBRUARY 19, 2010

U.S. SENATE,
SUBCOMMITTEE ON FEDERAL FINANCIAL MANAGEMENT,
GOVERNMENT INFORMATION, FEDERAL SERVICES,
AND INTERNATIONAL SECURITY
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:35 a.m., at the Carvel State Office Building, 820 North French Street, Wilmington, Delaware, Hon. Thomas R. Carper, Chairman of the Subcommittee, presiding.

Present: Senator Carper.

OPENING STATEMENT OF SENATOR CARPER

Senator CARPER. Welcome, one and all, to our hearing. We will be joined by others as the day goes on. Governor Jack Markell is kind enough to be with us until about 11 or 11:15 a.m.. We will promise to have him out the door by then.

I remember some wonderful memories of being in this room and announcing some exciting initiatives in the past and to be able to be with our governor today and to hear what the State of Delaware is doing to lead the way in important areas, is a source of real joy.

The last few years have underscored the need for our Nation to rethink the way we use energy. Ever-changing energy costs and our Nation's severe economic problems have resulted in families, homeowners, and businesses all taking a very hard look at how they are spending their resources—and governments should be no different. In fact, they are no different.

Last month, I held a hearing of this Subcommittee in Washington to explore what the Federal Government is doing to save energy and money for our taxpayers. Late last year, President Obama issued an Executive Order calling for the Federal Government to step up its efforts to conserve energy by challenging agencies to meet a number of energy, water, and waste reduction targets. Each Federal agency is required under that Executive Order to develop plans to reach those targets, and we expect initial reports on the status of these plans later this year.

(1)

One of my former staff members used to say, the cleanest, most affordable form of energy is the energy we never use, and I fully subscribe to that and so does our President.

We learned in our hearing, though, that the Federal Government is the single largest energy user in the Nation. In fiscal year 2008, the total energy consumption of the Federal Government in all of our buildings and operations was roughly 1.5 percent of all energy consumption in the United States. The energy bill for the Federal Government that year was just under \$25 billion, or about one percent of total Federal expenditures. Of that roughly \$25 billion, over \$7 billion was spent on energy to operate Federal buildings alone, and with a price tag that large, there are significant opportunities for savings of taxpayers' dollars. Following our hearing, the White House announced that over \$10 billion would be saved over the next 10 years because of the Federal Executive Order, and that is real money that we are talking about.

While the President's Executive Order represents an important step forward, there is a lot more that we can do. Making better use of new financial tools is just one example. Energy savings performance contracts are a creative way to pay for energy efficiency projects, and these contracts work, as you may know, by having a company pay out of their own pocket to renovate a facility with energy-efficient retrofits. The company's contract is then paid back out of the energy savings generated from the renovations, which otherwise would not occur.

This means that governments can reduce their energy use, can help clean up the environment, can cut back on money that they have to spend for heating and lighting, and do it all on someone else's dime. To me, that seems like a very clear win for really just about everyone.

I believe that several of our witnesses today have experience with these types of contracts and I look forward to hearing their thoughts and suggestions on how those contracts can be used most effectively, not just in Delaware, but across the country.

There is an old saying that goes something like this: You can't manage what you can't measure, and that applies to energy use, as well. At a recent hearing, I learned that using technology such as advanced metering is one way we can save energy and money. By connecting facilities across an organization and monitoring buildings, or even parts of buildings, on their energy use in real time, managers can make more effective decisions. The best part about advanced metering is that it pays for itself in less than a year. Do we have a chart that shows that?

Mr. Collins, where are you from?

Mr. COLLINS. Townsend, Delaware.

Senator CARPER. Where did you go to school?

Mr. COLLINS. University of Delaware.

Senator CARPER. A Blue Hen?

Mr. COLLINS. Yes.

Senator CARPER. That is great. What kind of degrees do you have from there?

Mr. COLLINS. I have an international relations degree and a Master's in Public Administration.

Senator CARPER. All right. Well, we have a chart that shows what the pay-back periods are for a couple of different approaches for energy conservation, and the top one there says—renewable electricity, and it looks like the payback time there is how many years? Eighteen years.¹

Coming on down, what is the next one?

Mr. COLLINS. The building envelope.

Senator CARPER. Building E–N–V, building envelope. And it looks like the payback there is about 9½ years. What is the next one, HVACs. The payback is about 7 years. Lighting, payback is about six years. We spend a whole lot of money. A lot of our utility money just goes for lighting, and there is great stuff, as the governor knows, that is going on right here in Delaware by small companies and by big companies like DuPont to help us cut dramatically our lighting bills.

What is the next one, co-gen? Co-gen payback on co-gen is just under 5 years. And look at that last one, advanced metering. It is not 2 years, it is not 1 year, it looks like a couple of months. And so what we are talking about is a real return on investment, a wonderful return, and the kind of thing that we want to incentivize. But thank you for joining us.

Wal-Mart uses this technology, advanced metering technology, because they understand the financial savings that it brings. From their headquarters in Bentonville, Arkansas, they will know if a freezer door is left open for too long at their operations in Middletown, Delaware.

And it isn't just an idea for big businesses, either. Later this year, Delmarva Power will finish installing advanced metering systems for all of its approximately 300,000 customers across Delaware. This technology will provide greater transparency for energy users, allowing them to better manage their energy use to save money and help protect and preserve our environment.

As a recovering governor, I know that Washington doesn't have all the answers. In fact, we may not even have most of those answers. In my time as Chairman of the National Governors Association, I have seen the importance of sharing solutions and best practices, not just between the States, but between the Federal Government, our partners in State, and local government, and to learn from one another.

The challenges we face in Washington are often dealt with first in State capitals, cities, and small towns across our Nation. And today, perhaps no problem looms as large as the impact that the ongoing financial crisis has had on government budgets, both local, State, and at the national level. In the face of significant budget shortfalls, State and local governments are looking for ways to cut their operating expenses, just as we are in Washington.

Delaware is no different. In fact, from Woodburn to Wilmington to Wyoming, Delaware governments understand that saving energy isn't just good for the environment, it is good for the bottom line. And when I say Wyoming, I mean Camden, Wyoming, not the State.

¹The chart referenced by Senator Carper appears in the Appendix on page 50.

It is important to remember the cleanest, most efficient, and cheapest energy is the energy you never use, as said before. Governor Markell certainly understands this. The Executive Order will be introduced, I believe, this week, and which he will speak about, in a few minutes, creates clear, ambitious goals for making Delaware State Government leaner and more efficient, combining fiscal responsibility with environmental responsibility, while nurturing the State's burgeoning clean energy economy. It is a clear win for Delawareans.

Later this morning, Chris Coons, our Chief Executive or County Executive of our State's most populous county, will be with us. He also understands the link between energy efficiency and fiscal responsibility. Coming into office, he faced a budget swollen from the real estate bubble of the last decade and recognized the need to rein in spending. He has led an effort to not only save energy and money, but to improve the quality of service provided to the people of New Castle County.

As well, the City of Wilmington and the Seaford School District have both been nationally recognized for being energy pioneers. Seaford School District, which I visited myself many times, is a shining example for what dividends a commitment to energy efficiency can have not for just small towns, but for small school districts.

The City of Wilmington, too, has shown how government can successfully work together with businesses and developers to achieve these goals. It is clear we have a number of lessons to learn from our partners in the State and in our local government.

During these times of mind-boggling budget deficits, governments need to find every way that we can to better manage our operations and finances, and we also need to find ways to put Delawareans back to work.

In closing, let me just add, the scope of assets held by State and local governments is wide. By leveraging buying power, making wise and prudent use of taxpayers' dollars, governments can provide secure demand for sustainable small businesses and for entrepreneurs.

With that in mind, I want to thank our first witness especially, our governor, for really a superb job that he is doing as our Chief Executive. It has been a joy, as I said to him privately many times, to work with him and his administration. We are interested in learning how the rest of us, other States, but the Federal Government, as well, can learn and benefit from what we are doing in Delaware. So thank you for being with us today.

I was kidding earlier. I said, normally, we don't swear in our witnesses and ask them to take an oath that everything they say is the truth, and we are not going to do that today, either, because I believe it all.

Right behind him is our Secretary of the Department of Natural Resources and Environmental Control. I just want to say welcome to Mr. O'Marra and thank him for the great job that he is doing. Thank you.

Governor Markell, it is all yours.

TESTIMONY OF HON. JACK MARKELL,¹ GOVERNOR, STATE OF DELAWARE

Governor MARKELL. Well, thank you, Senator Carper, for holding this field hearing here in Delaware and inviting me to participate today.

We stand at a critical juncture. We are working hard to make our economy stronger, but we still have too many of our fellow residents out of work. State revenues are down significantly at a time when our citizens need government services the most. And this reality has really forced us to develop new and innovative approaches to stimulating economic growth and to making strategic investments that are going to produce long-term results.

Now, fortunately, Delaware's economy has some strengths that will help accelerate our recovery. We have a proud tradition of innovation. We have the four Cs—chemicals, cars, credit, and chickens—which have led the Nation for generations. But in the past year, we have had setbacks, like many parts of the country, with the closure of two automobile plants, layoffs in the financial services sector, and the shutdown of a large refinery. Yet despite this, we remain confident in our future.

We are seeing the emergence of a fifth C, clean energy or clean tech. In Delaware, when we talk about environmental sustainability, we are really talking about creating good-paying jobs, many of which cannot be outsourced. We are talking about the greening of the economy to make ourselves more economically competitive as we move toward a low-carbon future.

An important first step toward emerging as a clean energy economy is embracing energy efficiency and conservation in our homes and businesses and new buildings, and as you said, the best savings is the energy we don't use. And beyond that, investments in greater energy efficiency put people to work now and it pays dividends for the future.

Every dollar that is wasted from inefficient energy usage is a dollar that is not put to work getting our economy moving in the right direction. And for every million dollars we invest in energy efficiency, our economy can actually produce 15 to 25 jobs, in addition to substantial long-term savings.

And for this reason, a key focus of our energy agenda during my first year in office was, in fact, energy efficiency. So during 2009, we made numerous improvements to State law with respect to energy issues, including adopting progressive building codes. We also passed the Energy Efficiency and Conservation Act of 2009, and this legislation established Delaware's new Energy Efficiency Portfolio Standard, and that is a requirement that all electric and natural gas distributors in Delaware reduce consumption by 15 percent by 2015. That will save taxpayers money on their energy bills. And we are also working with our Public Service Commission to protect taxpayers and ensure that the savings are passed on through to the customers.

In addition, we worked to pave the way for more solar, photovoltaic, and wind systems in municipalities and subdivisions, and we adopted some needed changes to metering requirements, allow-

¹The prepared statement of Governor Markell appears in the Appendix on page 34.

ing people who invest in renewable technologies to reap more rewards for their foresight.

Now, these new improvements in public policy energy infrastructure were the principal drivers for Delaware being nationally recognized this past summer by the American Council on an Energy Efficient Economy (ACEEE). I had the pleasure of going to the National Press Club in Washington to speak on our State's behalf because Delaware was recognized as the most improved State in the Nation with respect to programs aimed at improving energy efficiency. And while we were recognized as the most improved, we also know that we have got a ways to go. And it is clear that in addition to making sure that we have got the right incentives, the right laws, and the right policies on the books, we have got to do more to walk the walk. And for this reason, putting our own house in order and leading by example is a top priority for us this year.

So just this past Wednesday, 2 days ago, I signed Executive Order Number 18, and we call it the Leading By Example Executive Order, which is exactly what we, in government, ought to be doing. So let me just talk about what the order does. It specifies that new State construction will be built to the Silver standard, or its equivalent established by the Leadership in Energy and Environmental Design (LEED) Council.

Second, it sets a target for State agencies to reduce their energy consumption by at least 10 percent by the end of fiscal year 2011, 20 percent by the end of fiscal year 2013, and 30 percent by the end of fiscal year 2015. It requires audits of State facilities for energy efficiency opportunities. We establish a system and procedures to benchmark, to monitor, and to track the energy use and carbon emissions of all State-owned and State-leased facilities.

It sets a goal for purchasing 30 percent of the State's electrical energy needs from renewable sources by the end of fiscal year 2013. It specifies a 75 percent diversion rate for solid waste leaving State facilities through reducing, reusing, and recycling waste products.

It sets a goal of reducing petroleum consumption by 25 percent, vehicle emissions by 25 percent, and vehicle miles traveled by 15 percent by the end of fiscal year 2012. It specifies green computing practices that will save both money and paper. And it requires more sustainable purchasing practices and policies.

Now, these actions are anticipated to save the State significant money in the coming years, but also to create jobs and significantly reduce the environmental footprint of State Government. And by being smarter about the way we use and buy energy, we can enjoy significant savings.

So as one example, the Division of Facilities Management in the Office of Management and Budget created what we call an Energy Aggregation Partnership. The partnership totaled the demand for electricity of many of the State's facilities and a reverse auction was conducted to purchase the electricity for these facilities. The end result was an estimated \$22 million in savings in electrical costs over the 3-year life of the contract compared to existing service provider rates. The aggregation partnership includes counties, municipalities, school districts, and is now beginning to plan its

second iteration of bidding, which will potentially save the State even more in energy costs in the future.

But government cannot do it all. We need to leverage private outside investment, and now with the American Recovery and Reinvestment Act, we have got substantial help coming from Washington, and I want to thank you specifically, Senator Carper, for doing everything you have done to advance our cause in Washington.

And while the Recovery Act was a blessing last year on a number of fronts, the assistance and focus on clean energy is especially appreciated. We need to use this opportunity to transform our economy and the focus in the Recovery Act on clean energy and jobs is just the sort of shot in the arm that we needed in Delaware.

Now, another key is allowing innovation to flourish. One of the truly innovative ideas coming out of Delaware is the concept of a Sustainable Energy Utility (SEU). Now, under the leadership of State Senator Harris McDowell, Delaware created this utility to provide energy efficiency and renewable energy services to Delawareans across the State.

SEU is an innovative means of providing energy services to residents and businesses alike and will be the principal distributor of Federal Recovery dollars which are dedicated to energy efficiency. Under its new banner, which is "Energize Delaware," the SEU is, in fact, a model for the Nation and we are proud to once again be leading in the provision of energy services.

Now, one significant task for the SEU will be to implement the results of the audits conducted under the Leading by Example Executive Order. Through use of the SEU's bonding authority, we can retrofit State buildings, some of which are over 30 years old, including this building, to update the systems that provide heat, air conditioning, electricity, and water. Now, these improvements are going to save taxpayers money. They will result in new jobs for Delawareans. And they are not going to require any up-front expenditure by State Government, thanks in part to the Recovery Act, which will be used to help pay for these improvements. And it will, in fact, bring jobs to Delaware.

Through innovative public-private partnerships, we hope to catalyze substantial private sector investment in the energy efficiency technologies and services. So today, in Delaware, we are seeing a lot, dozens of great building projects that demonstrate the opportunities to incorporate energy efficiency and sustainable elements into new construction. I have had the chance to attend several events dedicating LEED buildings, including multiple LEED Platinum projects.

Now, while some people have raised concerns about the increased costs of building green, some local builders have recouped the additional investment in less than a couple of years. But just as important as the savings is the fact that these construction jobs and construction projects produce good paying jobs. We are committed to finding creative ways to move beyond the handful of LEED projects and help ensure that we are greening more of our projects in the State, helping all of our residents benefit from sustainable design and construction and supporting good paying jobs for years to come, and that is really the final point that I want to make.

We should not think of our efforts to modernize facilities and adopt cleaner energy as simply an environmental initiative, although it is that. But it is also a jobs initiative. In Delaware alone, we are seeing some of the most exciting innovations in the State emerging in the fields of energy efficiency, renewable energy, building materials, alternative fuels, and advanced transportation. As you mentioned, lighting.

So we are seeing companies like White Optics—another is PTM, insulated ductwork, B.F. Rich, windows—all of them producing great technologies that reduce energy consumption and generate rapid savings. Another exciting company, Motech, recently purchased the former G.E. solar plant and is making photovoltaic panels here in Delaware. DuPont has a series of products that will make solar panels more efficient and dynamic, particularly as the next generation innovations in thin film come to the market. W.L. Gore, DuPont, and Ion Power are leaders in the fuel cell industry. Autoport is converting traditional vehicles to electric. And Blue Water Wind is planning the first offshore wind farm in the Nation off the coast of Rehoboth. The list goes on and on.

One of the best examples of our innovation economy is the repurposing of Delaware's two automobile plants. The Chrysler plant in Newark has been purchased by the University of Delaware and will be the home of groundbreaking research. And at the former GM plant, Fisker Automotive is going to manufacture their plug-in hybrid sedan with the help of a critical loan guarantee from the Department of Energy.

In each case our State's responsiveness and commitment to business success resulted in a positive outcome for Delaware workers and a growing innovation economy, and we are working hard to achieve a similarly successful outcome at the Valero facility in Delaware City.

So throughout Delaware, we are fostering a vibrant, functioning market for cutting-edge companies not only to succeed, but to put people to work making things in Delaware. It is not enough to create demand for energy efficiency and renewable energy technologies. We have also got to be thoughtful about maximizing the economic benefits from these initiatives. We cannot trade our dependence on foreign oil for a new dependence on Chinese-made solar panels, on Japanese electric vehicles, and on European wind turbines. We have got to work to seize these economic opportunities here at home.

And for this reason, I ask that the Congress continue to look at ways to help American companies succeed in serving these emerging markets. We need to create an innovation ecosystem where entrepreneurship can flourish. We need to use every ounce of American ingenuity to strengthen the economy for the next century, and it is not enough to just innovate, but we have got to scale up the production here at home and to deploy these technologies.

We, in government, have an opportunity to stimulate the market demand through thoughtful procurement goals. We need to expand the loan guarantee programs that are providing the critical access to capital to help companies grow. We need to allow companies to invest in the research and development that will drive future innovations. We need to support domestic manufacturing. We need to

help train the workforce so local residents are equipped to enter these new, exciting fields. We have made some progress in Delaware, but there is a lot more to be done.

And I do want to recognize the excellent efforts of New Castle County, Kent County, Sussex County, the City of Wilmington, our local governments, a number of school districts—Milford, Cape Henlopen, Smyrna, Brandywine, Appoquinimink, Caesar Rodney, Christina, Sussex Tech, Seaford—our local universities and colleges for all their notable actions to implement green technologies and improve energy efficiencies in the schools they are building or renovating.

And I would be remiss if I didn't publicly and proudly recognize the great efforts being led by my colleagues on the panel today, New Castle County Executive Chris Coons, Wilmington Mayor Jim Baker, and Roy Whitaker from the Seaford School District. They have been statewide leaders in these issues.

So I thank you for the opportunity to present this testimony. More importantly, I very much appreciate your very clear commitment, which has been demonstrated over a number of years. Before the title of green energy and green technology was really bandied about, you were not just talking about these things, you were doing something about them. And the fact that you continue to be a leader for us in the U.S. Senate is a big deal for the country, but it is also a very big deal for Delaware. We are very grateful to you for it.

Senator CARPER. Thank you for those kind words. Thanks very much for your testimony and thank you very much for walking the walk and providing the kind of leadership that you are and that Delaware is now providing.

I want to just go back and start off by asking you just to reiterate again the steps that the Federal Government can take to support and to be, if you will, part of the wind beneath the wings of the State in the State's efforts in these regards.

Governor MARKELL. Well, I think there are a few things. I mean, first of all, the loan guarantees can be very significant because when you think about these projects being built out, and particularly in the renewable arena, whether or not these projects get built out in this country is largely dependent upon two things. What is it that taxpayers pay? And the second is, what is it that—how much does it cost the companies to build?

So the cost of capital is just a critical component of whether or not the industry is going to take off here, and so I believe that the loan guarantees are a very significant component of that.

As you know, I was recently in Europe and it is just, frankly, amazing that in offshore wind, specifically, that industry is thriving. There are 800 offshore wind turbines in Europe today. There are zero in the United States. We are a decade behind.

And part of that is because the European governments, not at necessarily the European Union level, but the specific country governments recognized a decade ago what the opportunities would be from an economic development perspective. So in Germany, for instance, I understand that a decade ago there were 20,000 people working in the renewable energy sector. Today, there are 200,000.

And we have to recognize—I think it is sometimes a mistake when we talk about all of these initiatives just from the perspective of being the right thing to do on the environmental side. These are also, as you have been pointing out—I think you were talking about this as early as any public servant that I know of—you were also talking about this as an issue of national security in terms of reducing dependence upon foreign oil and sending money to folks who were going to use it against us, but also the economic development implications in terms of job creation are very significant.

So we believe the loan guarantees are important. Your efforts to continue to support research and development is also important because we want these technologies to be developed here as well as implemented. So those are just a couple of things.

Senator CARPER. Good. Thank you for those responses.

You have grappled as governor for over a year now with dwindling revenues and the need to cut spending in order to try to balance the State's books, and you have done, with the help of the legislature, a very commendable job.

I had the good fortune of being governor, at least for most of my 8 years, we had a time where it was a rising ship, rising tide that lifted a lot of boats, including our own. But you have really done well with the tough hand that has been given to you.

We are trying to grapple with deficit reduction in Washington. I am encouraged by some of the President's initiatives in freezing discretionary non-security spending, creating a bipartisan commission to come back to us later this year with ideas to reduce expenditures, to put everything on the table, the revenues, entitlement programs. Just the combination of the two, that is a very good start.

But rather than cut the services that citizens count on, I think it makes a lot more sense to cut out the waste and the services that we simply don't need. You have spoken to this, but I am going to ask you to come back to it again, if you will. How can energy efficiency work to stabilize and reduce operating expenses for the State? How can it help to ease pressure on the energy bottom line? You mentioned this. I just want you to come back and touch on it again.

Governor MARKELL. Yes. Well, first of all, it is a great opportunity for the State as a State Government. It is also a great opportunity for individuals. You talked about the difficult challenges facing the State Government in terms of our budget. Obviously, a huge number of people through the State and the country are facing the same things with their own budgets.

And so, for example, the weatherization programs that have existed for a while but have really received a boost through the stimulus program help a lot of people. Less energy escapes. It requires less hot air during the one season, less cool air during the other season escapes. It is good for our environment. It is good for our health. It is good for people's pocketbooks. So those weatherization programs make a big difference.

But similarly, within State Government, it is everything from smarter disposal of waste, because to the extent that we are recycling rather than paying significant tipping fees for the disposal of our garbage, I mean, it just makes sense. The great thing about all

of this area is these are win-win-wins. They are wins in the sense of when you dispose less and recycle more, it is good for our environment. It is good for our health. It is good for our pocketbook. But it is also good for creating jobs. So we are going to work hard to reduce how much we dispose of and how much we recycle.

We are, in this building and in other State buildings, capitalizing on a very creative program through the Sustainable Energy Utility (SEU) where we are taking advantage of financing that is not taxpayer financing. This is not against the general obligation. It is not a general obligation debt of the State. But the SEU is essentially going out to borrow. The money that is raised through the borrowing is going to be used to make buildings like this one much more energy efficient. We are going to be paying less for energy and that will be the source of the repayment of the bonds. So that is another example.

And so there are just lots of things like that, but we do think it is just incredibly important for us to get beyond the talk and the paperwork to real action.

Senator CARPER. Thank you. I am going to ask one more question. I think you need to be out the door in, I think, about 5 minutes, so we will be mindful of that, but just one more question, if I could. As our State and our Nation transition to a new economy, new ways of doing things, it is going to take new talents and skills for, as you said, for Delaware students and Delaware workers. The technology management of even 10 years ago just doesn't cut it when it comes to meeting those new demands. I think about all the folks that we represent who worked at the Boxwood Road plant, the Newark assembly plant for Chrysler, who have years of technical and mechanical expertise and are, as we know, waiting to get back to work.

How do we bring these workers into the fold and better ensure that they have the skills to thrive in a new economy, and what can we do to prepare our State and our Nation's students to make sure that they are better able to take advantage of the opportunities a green economy will bring?

Governor MARKELL. Well, this is a great question and it is an important question and it really speaks to the need to think holistically about these opportunities, because it all sounds good, but if you don't have the people to do the work, then it is really for naught.

And the other great thing about it is these projects, these jobs cannot be outsourced. I mean, we need people on the ground here who are doing all this work.

So we have already begun to form partnerships with our labor community, also with Delaware Tech, and so Delaware Tech has launched a series of courses, certificate programs in everything from energy auditing to building management to weatherization. They are working closely with the State. They are working closely with private industry to ensure that the programs that they are developing mirror the kinds of job opportunities that are available in the real marketplace.

So we have got to be mindful also of the timing. So, for example, we need people to do the energy auditing and the energy efficiency work today while at the same time we are getting people or pre-

paring people to begin the work that will be required at places like Fisker.

We have got a very interesting specific example that I want to mention. So right after I came into office, Alan Levin and I awarded a grant to Autoport, just down by the Port of Wilmington. The purpose of that grant, it was a training grant to have a few of their people learn how to do the retrofits to electric vehicles. So they did. They sent their folks, I think it was to California to get trained. They then came back and they started producing some of these—retrofitting some vehicles for electric usage. They actually had some paying customers.

Senator CARPER. I got to drive one of those.

Governor MARKELL. Yes.

Senator CARPER. That was so much fun.

Governor MARKELL. It is fun. I think they are one of five finalists to produce electric vehicles for the Postal Service. And so I don't know if they are going to get that contract or not. We are obviously very hopeful that they are. But that would not have been possible without their workers being trained.

And so we just think all of these things fit together, and it is certainly our view—when you talk to companies, as you know from your experience as governor and since then, when you talk to companies about why they would locate in Delaware versus some other place, there are lots of factors that they consider, many of which work to our advantage—our location, our transportation infrastructure, the port, the responsiveness of the government, and certainly in the case of Fisker that was big because we were so responsive to them.

But the quality of the workforce is very high on the list. Nobody wants to be here if there is not a great workforce, and we are fortunate. We do have a great workforce, in part because we have great schools. And so all of these things have to continue to fit together. So that is my perspective.

Senator CARPER. Well, great. I think you are the single best witness I have ever had for a field hearing in Delaware.

[Laughter.]

Governor MARKELL. Your second-best witness is about to come up on the stage. I mean, your new first-best is about to come up on the stage.

Senator CARPER. Well, he is going to have to work hard to top you. But I just want to say, I like the quote I once heard from a pastor of mine who used to say, people would rather see a sermon than hear one, and in what Delaware is doing under your leadership, we are actually getting to see the sermon rather than just to hear about it and we applaud you for that and want to be supportive of that. Thank you very much for sharing some of that with us this morning.

Governor MARKELL. Thank you.

Senator CARPER. And thanks for riding Amtrak, too. I understand you are going to catch a train here in just a minute.

[Pause.]

Senator CARPER. Well, I was kidding our County Executive, Chris Coons, saying that the governor, who has now left the building, what a low bar he set as our witness and how easy it will be

to exceed what the governor is proposing to do and leaving the State to do, but actually, I am kidding. It is actually exciting and inspiring to see what the governor is proposing in his new Executive Order and the commitment that he brings to actually implementing the words that are in that Executive Order and sharing with us at the Federal level what we can do, what we have done that is being helpful and supportive of those policies, but what we can do to be even more supportive.

Our first witness today is our County Executive, Chris Coons. He is a former member of the Governor's State Energy Task Force, which worked to address the State's short- and long-term energy goals and to bring clean energy technologies and businesses to Delaware, along with a whole lot of other accomplishments. He has worked tirelessly, and I think successfully, with partners in the Federal Government to bring energy efficiency grants and green energy jobs to Delaware and I thank him for being here today.

He and I both share a passion for creating a nurturing environment for job creation and job preservation. In a day and age when we have shed in the last year so many jobs in this country, really around the world, we need to do our very best in creating that kind of nurturing environment. I think we are doing that in Delaware and we thank you for your leadership in making that happen.

A couple of years ago, when I was, I think, in my first term as a Senator, I had the good fortune—I had heard about the remarkable work that was taking place in the School District of Seaford and how Seaford was serving as a model to other school districts, really to other States, to be able to conserve energy. And I was struck, but I learned that they have—I think Seaford has about a half-a-dozen school buildings, between your elementary schools and middle schools and high schools, and Seaford is one of the school districts where they have not just talked about extending the school year, but actually have done so in some cases.

Among the things that Seaford has done, and I have learned this in my visit there, that they have been able through all the conservation investments they have made in their schools, been able to provide air conditioned schools that can stay open during the summer and everybody can—students can learn, teachers can teach in an environment that is conducive to that. And by making all the savings in energy consumption in other ways, they have been able to not really use much more energy. It is a pretty remarkable accomplishment. I said, boy, they ought to be recognized nationally, and as it turns out, they have been.

One of the people who has been just a key part of all this is our witness here with our County Executive, Roy Whitaker, who is the Chief of Buildings and Grounds for the Seaford School District. I bet a lot of school districts around the country would like to get their hands on him, but we don't want to let you go, so thanks for being here and staying here. He has been with the school district since 1996 and has held a long-time interest, as we all do, in renewable energy.

In fact, he designed and fabricated a successful solar domestic water heater during the late 1970s energy shortage. I would just add to that, when I was a graduate student in the MBA program at Delaware, we had an operations research course that I took and

one of our responsibilities was to design a manufacturing operation for some kind of product. And in 1974, my project was a plant that created solar energy panels. So you and I are really in the same time frame, working in the same venues. It is kind of interesting that we have intersected again here.

During his 14 years' tenure in Seaford, Mr. Whitaker has been instrumental in Seaford becoming only the third school district in the Nation to receive the ENERGYSTAR Leader's Award for reduction of energy consumption, and we salute you for that. We applaud you for that. We are delighted to hear your testimony as to how we can learn, at the Federal level, and be better informed as we create national policy and fund those policies. We look forward to what we are going to learn from both of you today and from Mayor Baker when he joins us.

County Executive Coons, thank you, sir.

**TESTIMONY OF CHRIS COONS,¹ COUNTY EXECUTIVE, NEW
CASTLE COUNTY, DELAWARE**

Mr. COONS. Thank you, Senator, and thank you for an opportunity to testify at this Subcommittee field hearing on energy efficiency actions by State and local governments. I am grateful for your long and effective leadership on this issue, going back to your time as a governor and now as a Senator, and I am also grateful for the leadership we have seen from Governor Markell, as we heard in his testimony earlier today.

The conservation of energy and our natural resources is an important issue, not just for New Castle County and the State of Delaware, but for our Nation and world. As a County Executive who represents more than half-a-million people, every year, I have to produce a balanced budget, provide needed services, and serve as a wise steward of public funds. In tough economic times, people across the country are tightening their belts and making their dollars go further, and my government is called on to do the same.

Out of last year's operating budget of about \$228 million, we spend about \$10.4 million in total on energy of all kinds. That is from street lights and electricity—

Senator CARPER. Would you say those numbers again, please?

Mr. COONS. Out of a \$228 million operating budget, we spend about \$10.4 million on energy, all in. That is gasoline and diesel for our 1,600 vehicles, that is operating energy for roughly 50 buildings and facilities, and that is the street lights that we are responsible for in dozens of communities in the unincorporated county. So it is one of our largest and most unpredictable operating expenses for energy, both for fuel and for electricity, and one where we have made real, I think, strong and consistent efforts to be fiscally responsible.

As we know, about 40 percent of the energy consumed in our country goes into the operation, heating, and maintenance of buildings, and so conserving energy through the retrofit of our county buildings and by using more renewable sources is not only environmentally responsible, it is fiscally responsible and makes great economic sense in these difficult times.

¹The prepared statement of Mr. Coons appears in the Appendix on page 39.

As a society, all of us are called to be good stewards of natural resources, but as a public servant, I think energy efficiency also makes me a good steward of county dollars, helps create jobs, and makes the world a better place for our children. So New Castle County and my administration, in particular, is committed to fostering economic development, creating green jobs locally, and enhancing environmental protections.

Our county was an early adopter of local government sustainability practices, starting with waste reduction, increased recycling, and by empowering my staff to take on leadership in environmental initiatives. One of the first Executive Orders I issued was to mandate recycling in county buildings, something about which I know you are passionate. And in 2007, we became the first local government in Delaware to join the International Council for Local Environmental Initiatives, making a commitment to conduct a comprehensive inventory of our greenhouse gas emissions and working towards a holistic strategy to reduce those emissions.

The first and strongest prong of our efforts in that strategy is to tackle one of the county's greatest energy hogs, our buildings. As a pilot, we worked first on the City-County Building, the Louis L. Redding City-County Building, which is just immediately adjacent to this Carvel State Office Building, a 36-year-old building which was significantly inefficient, both because of when it was built and because of its operating history and the significant amount of deferred maintenance.

The City-County Building is a 10-story, 192,000-square-foot office building, and the energy conservation measures that we implemented were done in partnership with Ameresco, an energy services company. We have a 15-year agreement with Ameresco, which was made possible by a facilitating bill in State law that allowed a county procurement code to finance capital investments in energy efficiency retrofits off the future savings. The sorts of things that we entered into this partnership with Ameresco to deliver are upgraded lighting controls, new energy management systems, a replaced boiler, chiller, and cooling tower, variable volume hot and chilled water pumping systems, premium efficiency motors, water and gas conservation measures, and, of course, ENERGYSTAR certification.

Our annual operating savings projected through this investment are about \$355,000 a year. That is the equivalent in terms of reduced emissions, these energy savings, of taking 1,150 tons of carbon dioxide per year out of the environment and reducing the energy demand that New Castle County places on our local grid of about 1,890 kilowatts per year.

Another important point is that this roughly \$3.3 million capital project is something that, because of our own county's fiscal situation, we would not otherwise have been able to do. So we were faced with a common problem in local government, an aging building with aging critical infrastructure that we lacked the bonding capacity at the time to invest in.

The energy savings contracting system that we entered into with Ameresco made it possible to achieve three goals: To upgrade our systems so that, frankly, they operated better; to achieve energy savings; and to achieve over the long-term cost savings.

In 2007, New Castle County completed the construction of our largest and newest and in some ways most expensive building, the Corporal Paul J. Sweeney Public Safety Building. There is a small graphic of the Sweeney Building to my left. It is on Route 13 in Minquadales, just south of the City of Wilmington. This roughly \$48 million building is a state-of-the-art public safety building that integrates police, paramedics, and our 911 center, as well as several other public safety disciplines, under one roof. It received a Silver rating from the U.S. Green Building Council under its Leadership in Energy and Environmental Design (LEED), Green Building Rating System. And that took a great amount of work and design and investment by New Castle County.

There are many features of the building described in very small detail on the graphic that help it achieve that LEED Silver certification. Principal among them, a geothermal pump system consisting of 30 pumps that are buried underneath our parking lot that have 400-foot-long pipes that go up and down at various times using an alcohol-based liquid to either capture heat, subsurface geothermal heat during the winter, or relieve some of the heat from the building during the summer.

It also has a lot of features—electrical sensors for turning off lights in rooms that are unoccupied, using skylights to maximize natural light within the building, reusing gray roof water, rainwater, or gray water for all the bathrooms in the facility, and many other energy efficient aspects to its heating, air conditioning, and ventilation systems.

We also reused and recycled the site of the former county police headquarters and separated out and recycled most of those building materials, thus getting a Silver certification.

Due to the vital public safety activities that are housed in that building, it is not uncommon for a building such as this to be a very large consumer of energy. But through the use of these green technologies and the disciplines that the LEED Silver certification forced us to go through, we reduced both our environmental impact and the annual operating cost of the building.

Last, after these initial successes with the public safety building and the city-county building, we decided when the stimulus was enacted a year ago to jump with both feet into doing a countywide energy efficiency program. We again used Ameresco to do an energy performance audit of all of our facilities and to establish a baseline for setting and measuring progress over time. The purpose of that audit was to prioritize and rank our different infrastructure investments to find the best return on investment for reducing energy demand. We found 158 different conservation measures across more than 20 county facilities and nearly half-a-million square feet of building space, which includes two rooftop solar installations.

This will allow us to undertake a comprehensive countywide partnership with subcontractors in specific trades and local materials here in New Castle County. We have also partnered with DeAccess, which is an organization that helps in terms of outreach for small, minority, and women-owned businesses. We believe this project will ultimately create 156 green local jobs, and we are going to invest \$3.8 million in Federal stimulus funds which we are leveraging with \$4 million in county bond indebtedness, which we

will either finance through our traditional AAA general obligation county bonds or through a zero percent interest Renewable Energy Tax Credit Bond program that is currently being offered by the Department of Treasury.

We have a whole range of improvements that are being planned through this initiative, which will include lighting retrofits and new controls, energy management systems, premium efficiency motors, heat pumps, boilers, cooling towers, a whole range of different improvements that across all of New Castle County should allow us to reduce CO₂ emissions by 11.8 million pounds per year, equivalent to that amount of offset. That is the equivalent of taking 1,000 cars off the road or the power to heat 240 homes across Delaware.

We are also going to be working with Ameresco to educate the community about the benefits of renewable energy and energy efficiency projects, hoping to set an example, not just for our citizens but also for our private sector and general business community.

Our savings should be about \$450,000 a year in energy for New Castle County through this stimulus-funded countywide initiative, and in all, these initiatives should pay for themselves in 20 years or less. That was the benchmark we set. Some of them pay for themselves in just 3 or 4 years. Some of them take up to 20 years.

There is also intangible benefits to these investments—health benefits, for example, for our workers, by improving air flow, increasing natural lighting, or decreasing volatile organic compounds (VOCs), in their work spaces.

I, if you don't mind, Senator, will take this opportunity to make a few comments, as well, about how this experience was positive and more difficult for us. I strongly support the Obama Administration's initiative to invest in our Nation's energy infrastructure through the stimulus and we recognize the daunting task of rapidly ramping up such a large investment in energy infrastructure. But we also saw some real challenges for us.

Understandably, when you are trying to disburse this large an amount of taxpayer funds, you have to take strong efforts to maintain transparency and to ensure that they are appropriately accounted for. But in respect to the disbursement of funds from the Department of Energy (DOE) to New Castle County, they did not have sufficient staff, either career personnel, or contractors, to handle some of these initiatives. Our initial application for EECBG was filed in July 2009. The release of funds didn't occur until December 2009, and through that 6-month review, our application went through three different DOE staff and a contractor, each of which requested different information and we had different hurdles to get through. That has produced some significant frustration in our local contractor community just because of the delay.

Frankly, I think in New Castle County, we also have to own some of that delay due to our own internal purchasing and procurement process. Again, when using public funds, we recognize the importance of transparency. But we were somewhat frustrated by the timing that it has taken to get this money on the street.

A second comment, if I could. The Energy Efficiency and Conservation Block Grant (EECBG) program, allocates amounts to municipalities across this State and the country, in some cases in very

small amounts. Arden, Odessa, and Townsend, for example, got \$20,000. Newport and Bellefonte, \$30,000. Delaware City, \$35,000. So to try and help make that more efficient, make it go farther, we invited Ameresco to work with New Castle County and those municipalities to pull them together and allow them—which State code allows—to piggyback on New Castle County’s contract with Ameresco, so that instead of having these small municipalities spend that money on an RFP process or going through their own procurement process, they could piggyback on the work that we had already done and partner with us, hopefully, or with the State’s Sustainable Energy Utility, to achieve rapid investments that would actually see real results rather than just investing in a paper process.

At the end of the day, our partnership with Ameresco, our work in partnership with the city and with the State, with Honeywell and with the SEU have been very positive, and I would like to applaud the Administration and your leadership, Senator, in supporting energy efficiency investments at the State and local level. It is my real hope that we will learn from the experiences of this year and there will continue to be investments through EECBG, because it is my belief that it ultimately produces high-quality sustainable green jobs, a reduced operating cost for State and local governments, and significant benefits for our community, not just in environmental ways but in economic ways, as well.

Looking forward, some areas where we are hoping to continue to work together is, for example, in plug-in hybrid vehicles. It is my real hope that the Fisker automotive plant, which you played a role in helping get reopened, will be producing plug-in hybrid vehicles, and I think State and local fleets are a perfect place for them to begin. We have 1,600 vehicles in the New Castle County fleet and I am hopeful that some of them will be hybrids that are plug-in hybrids as that plant begins to ramp up.

Second, local governments can encourage or even mandate energy efficiency through the adoption of building codes that encourage conservation. New Castle County has adopted the 2006 International Energy Conservation Code, which sets standards for building efficiency and operation. And working in partnership with the U.S. Department of Energy’s ENERGYSTAR program, we have made real progress in measuring and delivering energy efficiency, not just in our buildings, but in the private sector here across New Castle County.

We have a number of buildings, as I mentioned, that have applied for and received LEED certification—our own Sweeney Public Safety Building, also showing some real leadership, I think, the State’s Blue Ball Barn, which got a Gold certification, recently the Girl Scouts had a LEED Platinum certified building out in Hockessin, but also our private sector, P&C Bank, AstraZeneca, the American Honda Financing Center have all achieved LEED Gold certification. It is our hope, working in partnership with the State and with them, to begin a Green Buildings Award Program annually that would recognize private sector partners, government partners who have made these investments.

There is a lot more that we can be doing together. I thank you for your leadership in holding this hearing today. I look forward to

the comments of both Roy Whitaker from the Seaford School District and the Mayor when he joins us. We can learn from each other, and working together, we can invest in making this not just a greener, more livable, more sustainable community, but in putting people back to work and making ours a more financially solvent and responsible community.

Thank you, Senator, for this chance to testify.

Senator CARPER. You are quite welcome. We thank you very much, not just for being here, but for the great leadership that you and the county are providing for a half-million of us who are privileged to live there and be your constituents. Thank you for all that.

I have a couple of questions I would like to ask, but we are going to turn to Mr. Whitaker next and thank him again for joining us. We welcome your testimony. Thanks so much.

**TESTIMONY OF ROY WHITAKER,¹ CHIEF OF BUILDINGS AND
GROUNDS, SEAFORD SCHOOL DISTRICT, DELAWARE**

Mr. WHITAKER. Good morning and thank you for inviting me to the hearing. There are three primary points of interest I would like to make to the attendees. The three points will describe our school district and our successes, the free and low-cost efforts resulting in huge financial savings, and how other school districts, government agencies, or businesses can duplicate the efforts.

The Seaford School District in Seaford, Delaware, is a national average school district with six schools. We have used the free web-based EPA ENERGYSTAR program, and particularly the Portfolio Manager software, to successfully benchmark all of our schools and manage them for superior energy efficiency, resulting in current annual savings of \$640,000 per year compared to national average schools. Another benefit includes a several-million-pound reduction in air pollution.

In summary, the Seaford School District's introduction to the ENERGYSTAR program and ensuing partnership has enabled us to fast track significant energy and pollution reduction measures that are having a real and immediate impact on the planet and budget. The quality ENERGYSTAR training program and resources showed us how and where to start with benchmarking and how to take our Portfolio Manager numbers into an effective action plan that made an immediate impact.

I note that the six schools have an average age of 61 years and our current average ENERGYSTAR rating for all six buildings is 96 out of 100, with the 1928 school building dragging us down just a few points. We are very proud to manage our schools with some of the best energy performance in the country, even when compared to the newest schools. The Seaford High School right now is rated at 38,000 BTUs per square foot per year, which is in the order of a brand new school with the best LEED design.

There are a multitude of free and low-cost items that can be implemented to initiate a path of significant energy savings like ours. There are also many items with quick payback that would be a part of any savings program.

¹The prepared statement of Mr. Whitaker appears in the Appendix on page 44.

One important aspect of any program would be to sweat the small details. The small details are what make a school environment healthy and effective for the students and staff. I note that we have made mistakes along the way and have learned and improved because of them. I would suggest that anyone interested in the steps we took please review the PowerPoint presentation on the Seaford School District website. It is available off of the Buildings and Grounds link, or contact us.

Although the list is long, a few of the details that you will find on the website presentation will include creating a formal energy policy, benchmarking building performance, managing the on-off times, and tuning the equipment. Also important is sealing up the building envelope, avoiding wasteful practices that consume significant energy, modifying or upgrading existing lighting, storm windows, which at one school saved 24 percent right off the bat, and specifying different or better equipment when repairing or building new facilities.

I also believe that some of the engineering practices in even the past 10 years are not suited for the facilities of today and every detail needs to be scrutinized. At one of our schools, we are considering upgrading the main electrical transformers, which are only 12 years old. The replacement will have 2-year payback with a savings of over \$1 million over the 30- to 40-year lifespan.

If suitable funding can be found, there are countless similar investment opportunities that will produce significant cost savings over the next few decades. To summarize this point, the goal is to maintain an excellent indoor environment while providing the taxpayer with substantial energy savings.

Although these tough economic times throw up roadblocks, it will take interested and dedicated people to plan, coordinate, and control the outlined steps to achieve significant and consistent energy savings. It will also take the financial partners to fund the projects that have significant payback for many years into the future.

To take this last point full circle, we just recently noted that the ENERGYSTAR rating was starting to drop at one of our buildings. The Seaford School District is one of the poorer school districts in the State and the phrase "shoestring budget" applies to all of our buildings and grounds operations. My two technicians and I are responsible for everything from maintaining the athletic fields to what has unfortunately been too much of lately, snow removal. Although everything seemed to be running very well at the school, the technicians—

Senator CARPER. Let me just interrupt you. Did you have a roof of one of your elementary schools collapse, or partially collapse?

Mr. WHITAKER. Yes. That was our West Seaford Elementary School. Ironically, we were watching the rainstorm come for almost 2 weeks. We saw that on AccuWeather on the long-range forecast. I did even note to the Superintendent that we had a blizzard coming, which we would deal with, and the rain that came on that Tuesday into Wednesday was a problem. Monday of that week, we actually took the ceiling tiles out of most of our schools in the corridors and the classrooms, cranked the heat up to 80 degrees in an effort to actually get some of the snow melted off the roof. Our staff was also up on the roofs Monday morning shoveling the drains, the

roof drains, to make sure as much water as we could, we could get off of them. Unfortunately, that roof is ballasted. It has large rocks all over the top of the roof. It is not very easy to walk on and we didn't deem it safe or wise to try to get up there and shovel it.

And about 4 a.m. on Wednesday morning, the nominal 100,000 pounds of extra weight of snow and rain did bring that roof to a very substantial and catastrophic collapse. It took out that area and the adjacent kitchen area and the perimeter. It was basically a gym/auditorium/cafeteria combination, multi-purpose room, and the entire second story, the masonry there was many tons and that all fell on the adjacent rooms, also.

So that has been cleaned up now. They have shored up the adjacent areas. We did have the serving line for the children back into the gym down at the other end of the building and that was up and operational for the return of school when we finally got the streets cleared in Seaford.

Senator CARPER. OK. What a challenge, on top of everything else. Thank you. Please proceed.

Mr. WHITAKER. You are welcome. Although everything seemed to be running at the school, the technicians discovered a glitch in the controls program, probably very similar to what we have in this building here, Johnson Controls. We use the Metasys, and it was keeping the main circulation pump running 24 hours a day, 7 days a week. Where the glitch came from, we never know, but as we are all very well aware, computers can have a glitch from time to time and you will never understand how or why it broke, but they do.

This single error was wasting electricity and a significant amount of heat. If we are not looking for these types of things, meaningful energy savings will not be maintained over time. In conjunction with ongoing upgrades to our ENERGYSTAR Portfolio Manager data in tracking the effectiveness of our newer mechanical improvements and engineering test applications, which we do from time to time, it is also very reassuring to observe the documented energy savings by using that free service.

I thank everyone for making it possible to share some of our successes with our energy program and invite anyone to tour our facilities or contact me with questions.

Senator CARPER. Thanks for a great story.

Each of you have talked a bit about the partnerships that you have entered into and the ability to use scarce county resources or school district resources in order to get a much bigger bang for your buck and to drive down your energy costs. Would you just come back and just talk with us a little bit. Our County Executive talked a good deal. He mentioned the firm Ameresco and a couple of others, as well, as private sector partners and all. But just talk with us about how you have explored the possibilities for partnerships, how you entered into these, how you feel about them, any points that you would suggest to other counties or States keep in mind as they look for those partnerships, as well.

One of the partners obviously is the Federal Government. You have referred to how we sought to be a good partner through some of the provisions of the stimulus package, but feel free to talk about that, as well.

Mr. COONS. We have benefited enormously from several different partnerships, as you heard from Mr. Whitaker. The Seaford District benefited a lot from what the Department of Energy put up in their ENERGYSTAR program, their online resources. We also relied on that and learned a great deal from it.

Previous to my service in the county, my work in the private sector with a local company, we also reached out to the Department of Energy and found that their resources, both in person and online, made an enormous difference in getting on top of our energy costs, the Portfolio Manager software, the ENERGYSTAR building ratings were very helpful.

The National Association of Counties, which I am also active with, has had a Green Government initiative that had a very energetic staff person, Kelly Zonderwick [ph.], who convened facilities managers and purchasing people to talk about green purchasing, energy initiatives, investments in facilities, and that has been quite a helpful learning opportunity for us.

We also, frankly, had to invest in upgrading the caliber and training of our staff. We have a new person, Barry Nane, who is running all of our facilities and is, himself, a master electrician and somebody who I am going to refer to Mr. Whitaker for some partnership and ongoing learning.

Ameresco, we entered into a long-term work relationship with through a RFP process. Honeywell is also a great company that we have worked with in the past. Honeywell has had and continues to have some of the operating responsibilities for the City-County Building, a building that was jointly built, owned, and still operated by the city and county governments, and Honeywell has played a central role in trying to manage it more efficiently, and I know the Mayor, when he comes, will talk about Honeywell's role in helping the city score and manage their investments.

We have also done a fair amount of outreach to the local contractor community. There are local businesses, PTM Manufacturing, for example, is one that just opened in the Newark area that is making products that are energy efficient. These are insulated HVAC ductwork. Where we are trying to create business opportunities for them and jobs in our county, by introducing them back, by getting them familiar with Honeywell and Ameresco as companies that have billions of dollars in contracting opportunities at the State and county level regionally.

We also have, in the University of Delaware, a great resource for all of us. They are a national leader in solar energy, both in research and in implementation, and we have got some strong local companies that have innovative installation and servicing systems. I was just talking to Scott Johnson of SolarDock earlier today about their rooftop solar mounting systems. So I think as long as we continue to work together, with your leadership, we will be able to learn from each other and do a better job at energy efficient installations.

Senator CARPER. Thank you. And, Mr. Whitaker, do you want to talk a little bit about the partnerships that Seaford has had with the State or with the private sector, the Federal Government, and with a mind on what could we do better. Particularly at the Federal level, what can we do better to enable you to do more.

Mr. WHITAKER. One of the most interesting things from the chart you showed earlier was cogeneration or combined heat and power. The Seaford School District is very actively looking at a possible combined heat and power project.

Senator CARPER. Who would the project be with?

Mr. WHITAKER. With multiple players. The City of Seaford actually has their own power company, one of the nine in Delaware that are part of DMEC. So the municipal company has rates that are maybe not as competitive with some other areas and our costs are very high for the electric for the taxpayers. In conjunction with that, the electricity use profile of a high school, middle school, elementary school is completely opposite of the average home. So when the folks at home are going to work, our schools are just starting to turn and use electricity. As the school shuts down in the afternoon, everyone is now starting to come home. The air conditioning goes on. People are cooking dinner and electric usage goes up. So our load profile matches very good with the average residence.

The City of Seaford has six megawatts of generating capacity that are called antique design, old diesel reciprocating engines receps, that are very, probably, inefficient and also high-pollution factors. They have shut those down due to the pollution concerns. But those generators, one of the things they also do is produce excess heat. If we had excess heat in our school buildings, in the wintertime, instead of maybe keeping a classroom at 70 degree, maybe we could keep it at 72, 73, if it is waste heat.

So we are looking to actually form a partnership with an investment company maybe to own the turbines, maybe even the City of Seaford could own them or run them through a third party. The school district could do a power purchase agreement. We could buy the electricity off of those turbines at a discount.

One of the biggest things with electrical consumption was this electricity had to be made at a power plant somewhere and half of the power that these lights are burning right now is lost just getting here. So the distribution loss, the pollution due to that is very problematic and that is what makes cogeneration so good.

So we have a very good fit there, very quick payback, and we could take the waste heat and put it into the classroom or run air conditioning off the waste heat. So it is a very large win-win. Efficiencies are very large. Cogeneration saves approximately 25 to 30 percent. It is more efficient than having it shipped in over the wires.

So we are trying to put a large amalgamation together now. This is rather difficult for a school district with six schools, myself responsible for so many areas. So if there is any kind of a pilot project, we are looking for it. I know the Federal Government had some combined heat and power (CHP) cogen projects that were in the stimulus package. We have not actually figured out a way to get access to any of those funds, but with some proper hard-core engineering, there is a tremendous win-win that could be put in place at the Seaford District and could be a model for the State, maybe for the country, and would work very effectively, saving the taxpayer money, reducing pollution, and being a good fit with the grid overall.

Senator CARPER. I am going to ask, when the hearing is over, if you would just spend a few minutes with members of my staff who are right behind me and talk with them about how we can help you better access some of those monies in the stimulus package. That would be good.

Mr. WHITAKER. Thank you.

Senator CARPER. I know there are national organizations in which school districts participate and superintendents of school districts participate. I am not sure what opportunities there are for someone who has learned so much, done so much in the school district, provided great leadership, for you to infuse your experience on to your counterparts in other schools, other school districts across the State and across America.

But with that in mind, let me just ask each of you, what lessons could you pass on, or what lessons are you passing on to other government leaders or to other school leaders to motivate them on how to follow up, really, on your successes?

Mr. COONS. More than anything, what I tried to convey, in partnership with several members of the County Council, one who has now gone on to serve in Governor Markell's domestic team—

Senator CARPER. I saw her just this morning.

Mr. COONS. You may have seen her. Stephanie McClellan now is a policy advisor to the governor and took a real lead role in County Council on the building codes and energy, also, in partnership with other county executives. It is to just try and convey the message that investments in energy efficiency are the most productive investments we can make. The most efficient energy we generate is the energy we save, that we don't ever have to generate.

And so, frankly, it is both good environmental stewardship, good economic stewardship, and good politics to invest in energy efficiency. So if there is one simple message I have tried to convey through organizations of county-elected officials, it is that.

Senator CARPER. We have been joined by Mayor Jim Baker. I am going to ask you, Mayor, if you will, just come on up and join Mr. Whitaker, from the Seaford School District, where they have done great things in energy conservation. Welcome. We are delighted that you are here.

I am going to ask Mr. Whitaker to respond to one more question. He has given inspiring testimony as to what is being done in the Seaford School District to reduce energy consumption, to save money, and to improve the environment for employees and for constituents and for students and teachers.

What lessons can you pass on to other folks, other school districts across Delaware and across America? How do you go about doing that?

Mr. WHITAKER. The message has gotten out. Due to our participation with the ENERGYSTAR program, we were also the 2007 ENERGYSTAR partner of the year. I have spoken both in Washington, DC several times and throughout the State. As a matter of fact, next Saturday, I will be at the Blue Ball Barn giving a brief presentation, much more detailed than what I am doing here.

The third point, though, in my presentation was that it really takes the oversight and dedication of people who are interested in the topic to bring it to fruit. I don't believe myself showing up on

anyone's doorstep would be effective. They really have to want it from within.

So it was reassuring last December, I was in Washington, DC for the EPA Tools for Schools Symposium on the indoor air quality. We have practiced the EPA Tools for Schools for about 8 years now and I spoke on another topic on air quality there just briefly, and one of the fellows came up to me afterwards, "Oh, I am from Pennsylvania, a school district there. We actually went to your website. We copied your energy policy and we are doing the things that you are doing." And they were having great success with it.

So the sharp young people, or sharp old people, were picking up on those things. They are going to have success.

Senator CARPER. Thank you.

We are going to wrap up in about 10 minutes or so. I want to spend most of that time just hearing from our Mayor. I enjoyed so much over the years as governor, now as a Senator, having a chance to work with the Mayor, to work with the City of Wilmington. We appreciate his testimony before a field hearing in Philadelphia a year or so ago on the census, as we are gearing up for the Decennial, and we thank you for that input.

We just welcome your comments here today. The County Executive has talked a little bit about the challenges that you faced in the City-County Building and how to take a very old building and try to turn a sow's ear into a silk purse. But thank you for joining us and please proceed.

**TESTIMONY OF JAMES BAKER,¹ MAYOR, CITY OF
WILMINGTON, DELAWARE**

Mr. BAKER. Thank you very much, Senator. It is good to be here. Sorry to be late, but I was talking to a bunch of kids, and when they start grabbing you, you can't get out.

But I think that we have worked with the county on the whole issue of the Louis Redding City/County building and how to make it a LEED-type building eventually, but we can't do the whole thing all at once so we have to do it piece by piece, which takes forever, but we are doing it, and we have had this cooperation.

I think the other thing is joint cooperations between the governments from the Federal, State, and local level makes a lot of difference in what happens. Educating the public, I think, is critical. We signed onto the registry, the Climate Registry, some time ago. We also signed onto the U.S. Conference of Mayors Climate Protection Agreement where we pledge to beat the Kyoto Protocols target of a 7 percent reduction in greenhouse gas emissions, and we are trying to reduce ours accordingly by 20 percent instead of 7 percent by 2020. I think it is 2020. It is hard for me to talk. I am still in the 1900s.

[Laughter.]

But anyway, we have done a lot of things and I think you have our statement as to the various programs that we have already set in place in terms of the Executive Order which I issued and the things we are trying to do with our fleet and with all our facilities,

¹The prepared statement of Mr. Baker appears in the Appendix on page 46.

and thanks to the money from the stimulus package, we were able to do a major program with Honeywell and—

Senator CARPER. Would you talk just a little bit about that, please?

Mr. BAKER. Yes. It is such a great project because it has so many great elements to it. One, it obviously got us some money to be able to do that. But it will save us, like, 25 percent of our costs at our Porter Water Filter Plant. The solar panels that were put up will help us do that. But we needed help from the State. We got the stimulus package money. Honeywell did certain things with us. There were actually people from the neighborhoods that got hired to City Council Member Hanifa Shabazz's program. I think there were six that got hired out of that program to work in this project.

We are also going to do our new municipal complex where the public works and parks departments operate. We are going to do solar there. We are doing LEDs for all our traffic lights. We are changing our fleet where we are going to use hybrids. I am actually driving a hybrid right now because we are trying to make sure that we do everything possible. We have the business community in a roundtable talking about what they are doing, what we are doing, what we can do to change our building codes and things like that. DuPont Company has been very helpful. They have a lot of great products that could save us. We are doing about 1,000 units of weatherization through the stimulus package in our city, which will be great once we really get the thing full roll, and a lot of people are going to get employed and companies are going to be working.

So I think that the obvious answer from me is that the cooperation and education are—and, of course, the finances to do a lot of this makes so much difference. We are doing a reverse osmosis system on our water system to clean our water to where we will have one of the best water systems in the country. We are also improving our combined sewer overflows (CSOs), to prevent contamination. We are using a Real Time Control System which only three cities in North America are using—I think one in Kentucky, and one in Quebec, are using the system, but it controls the water, not letting the bad stuff go back into our waterways.

So we are going to do a major thing to make this a real interesting place. We can't save the world, but we are really going to do the best we can. I think you realize, too, the jobs that can be connected to the whole issue of the environment. We call it greening, but it is really way beyond just "greening."

I think the most important thing was that you saved, by the Congress acting on the stimulus package, you saved a total collapse, I think, economically of the country. I know all the arguing and the gridlock and the stuff in Washington, DC, but those of us that have to put up with that understand what you have done, which is great for the country and its future. And looking at education and putting the money there for our children is just critical.

So I think in the long run, we are going to come out a stronger Nation. Yes, we are going to go through the bad times. I mean, our money is just as bad as New Castle County's money and the State's money. I mean, we have deficits we have to work with and all the pain of that. But if we really teach our children why this is so im-

portant and what they can do for their future, we have a greater Nation and we will be greater than we have ever been if we really have the faith and the belief.

And all the politics of conservatism, liberalism; I don't care about that. It doesn't matter to me. What are the best ideas for the country? Because when we pass away, I would hope we are leaving a better Nation to our children than what we have right now and that we are not able to stand before God and they say, well, why in the world didn't you guys take care of your country when you had it? I wouldn't want to be in that position.

So I thank you for what you have done and also this hearing of just discussing how we can work together. But we have done, I think, pretty good on—

Senator CARPER. I am struck in your testimony and also what we heard from our County Executive and from Mr. Whitaker of the value of partnerships, enabling you to leverage relatively scarce public resources through working with the Federal Government, through working with private companies. A number of you mentioned Honeywell, for example. It is just very encouraging to me to hear that.

I would like to spend the next 4 hours, frankly, just having a conversation. Unfortunately, we can't. Our First Lady, Michelle Obama, is going to be up the road in a suburb of Wilmington that is Philadelphia.

[Laughter.]

As I am sure you know, she is leading a national effort to combat childhood obesity.

Mr. BAKER. This is great.

Senator CARPER. I am going to go up and be with her for that, so I need to—

Mr. BAKER. Well, you are luckier than we are.

Senator CARPER. I feel very lucky to have been with you and to have heard all the wonderful, encouraging things that you are doing.

Let me just ask from each of you maybe a final take-away. Again, just to reiterate, for me, maybe the greatest value of this hearing is to hear what is working in terms of what we have done at the Federal level with the stimulus package, with the other pieces that we have done. But let me just ask for you again, what do you see from our perspective, the work that you are doing with the Federal Government, what seems to be working and what could we do differently or better to enable you to be more effective as we try to conserve energy and save money?

Mr. COONS. On the energy efficiency side, I mean, the EECSBG program was actually enacted several years prior to the stimulus. It was the stimulus that made it possible for funding and flowing those funds down in a way that allows municipalities and counties and school districts to directly benefit, but to partner with each other, is something I would encourage you to continue to do.

Finding ways to release the funds and share learnings from the use of those funds more quickly is something I would support. And ensuring that we are spending those funds locally and giving us some support in disbursing them locally in a way that creates and sustains green jobs, training for green jobs, the infrastructure for

green jobs locally would also be helpful, because, frankly, our own procurement codes sometimes get in the way of that. So those are three things I would suggest.

Senator CARPER. All right.

Mayor, do you want to add to that, please?

Mr. BAKER. I agree with what Mr. Coons has said, but I think the other thing that would really help, I know there has been money put aside to help companies and colleges with research and to produce. I think we really have to save the small business community and also increase the small business community and increase new industries. We have people here who have come up with a great idea about putting the emergency lights at the lower level instead of the upper levels like they are today, and it is a big potential industry where we have it right here in Delaware. We have the people who now can change all of our street lights to solar rather than what they are today.

So, I mean, there are businesses out there that have great ideas and capability, but may not have access to the money or the necessary research to bring it to fruition because we can't depend on the old industries to pull our economy up.

The other thing I would say is, get the banks to loan more money, because if the money doesn't circulate in our economy, what do we think is going to happen? I know a lot of people who have great projects and they can't get loans. Of course, if the credit card companies want to give me more money, I will take that, too.

Senator CARPER. As it turns out, as you know, a lot of small businesses, especially entrepreneurs who are just getting started, use those credit cards to help get their funding.

Mr. BAKER. Bills.

Senator CARPER. That is their source of working capital, at least initially.

Mr. Whitaker, do you want to close us out, please?

Mr. WHITAKER. When I worked at Siemens Telecommunications, I was a mechanical engineer in a firm that did electronics, full of electrical engineers. Right now, I am a facilities man and now responsible for public education. We are kind of the odd man out.

The importance of that is, if we can't get the outside resources that the Federal Government or other agencies can provide, public education can't move forward because we are probably the exceptional facility group. So it is just important, I guess, to continue to spread the word, continue to raise the bar for efficiency, raise the bar on the engineers, hold them to the highest standards, and make them think out of the box, but thinking has to change.

Senator CARPER. Well, great. I am going to ask you, Mr. Whitaker, if you can stay around for a few minutes. I am going to ask you to spend a few minutes with our staff, who are behind me. I want to thank them for their work. They are doing great work on these fronts, not just here in Delaware, but really for our Nation through the work we do in the Senate and I am grateful to them for their support and energy that they bring to these tasks.

Thank you for being the sermon, not just talking about what you are doing but actually showing us all what can be done and accomplished through collaboration and a lot of creativity. So we thank you for that.

I appreciate especially the points that you have made here at the end as how we can be more effective going forward and how the Federal Government can be an even better partner as we go down the road.

With that, I bid you hasta luego until the next time we get together. Thank you again for joining us today.

I have a closing statement here. Given the time constraints, I don't think I am going to use it. We will just enter it for the record.¹

Thank you very much, and with that, this hearing is adjourned. [Whereupon, at 12:02 p.m., the Subcommittee was adjourned.]

¹The prepared statement of Senator Carper appears in the Appendix on page 31.

APPENDIX

FOR IMMEDIATE RELEASE



TOM CARPER
UNITED STATES SENATOR · DELAWARE



FOR RELEASE: Jan. 27, 2010
CONTACT: Katinka Podmaniczky (202) 224-2441

**SUBCOMMITTEE ON FEDERAL FINANCIAL MANAGEMENT, GOVERNMENT
INFORMATION, FEDERAL SERVICES, AND INTERNATIONAL SECURITY**

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

**HEARING: "Blue, Gold, and Green: How Delaware State and Local Governments Are
Cutting Their Energy Costs"**

Opening Statement of Senator Thomas R. Carper, Chairman

The last few years have underscored the need for our nation to rethink its energy use. Ever changing energy costs and our nation's severe economic problems have resulted in families, homeowners, and businesses, all taking a hard look at how much they are spending. Governments should be no different.

Last month I held a hearing of this subcommittee in Washington, to explore what the Federal government is doing to save energy and money for taxpayers.

Late last year, President Obama issued an Executive Order calling for the Federal Government to step up its efforts to conserve energy by challenging agencies to meet a number of energy, water and waste reduction targets. Each federal agency is required to develop plans to reach those targets and we expect initial reports on the status of these plans, later this year.

We learned that the Federal Government is the single largest energy user in the nation. In fiscal year 2008, the total energy consumption of Federal Government buildings and operations was roughly 1.5 percent of all energy consumption in the U.S. The energy bill for the Federal Government that year was \$24.5 billion or about 0.8 percent of total Federal expenditures. Of that \$24.5 billion, over \$7 billion was spent on energy to operate Federal buildings alone.

With a price tag that large, there are significant opportunities for savings of taxpayer dollars. Following our hearing, the White House announced that over \$10 billion would be saved over the next 10 years because of the Executive Order's efforts. That's real money we're talking about.

While the President's Executive Order represents an important step forward - there is more we can do. Making better use of new financial tools is just one example. Energy Savings Performance Contracts are a creative way to pay for energy efficiency projects.

(31)

These contracts work by having a company pay out of their own pocket to renovate a facility with energy efficient retrofits. The company's contract is then paid back out of the energy savings generated from the renovation.

This means that governments can reduce energy use, help clean up the environment, cut back on the money they have to spend for heating and lighting, and all on someone else's dime - it seems like a clear win to me.

I believe several of our witnesses today have experience with these types of contracts and I look forward to hearing their thoughts and suggestions on how they can be used most effectively.

You know, there's an old saying, "You can't manage, what you can't measure." It applies to energy use too. At our recent hearing I learned that using technology such as Advanced Metering is one way we can save energy and money. By connecting facilities across an organization, and monitoring buildings - and even parts of buildings - on their energy use in real-time, managers can make more effective decisions. The best part about advanced metering is that it pays for itself in less than a year.

Wal-Mart uses this technology because they understand the financial savings it brings. From their headquarters in Bentonville, Arkansas, they will know if a freezer door has been left open for too long at their store in Middletown, Delaware.

This isn't just an idea for large businesses either. Later this year, Delmarva Power will finish installing advanced metering systems for all of its approximately 300,000 customers across Delaware. This technology will provide greater transparency for energy users, allowing them to better manage their energy use, save money and help protect and preserve the environment.

As a "recovering Governor", I know that Washington doesn't have all the answers. In fact, they might not even have most of them. From my time as Chairman of the National Governors Association, I've seen the importance of sharing solutions and best practices between the federal government and our partners in state and local government. The challenges we face in Washington are often dealt with first in state capitals, cities and small towns across our nation.

And today, perhaps no problem looms as large as the impact the ongoing fiscal crisis has had on governments' budgets. In the face of significant budget shortfalls, State and local governments are looking for ways to cut their operating expenses. Delaware is no different. In fact, from Woodburn, to Wilmington, to Wyoming - Delaware governments understand that saving energy isn't just good for the environment; it's good for the bottom-line.

It's important to remember, the cleanest, most efficient – and cheapest energy - is the energy we don't use.

Governor Markell understands this. The Executive Order he introduced this week, and which he will speak about in a few minutes, creates clear, ambitious goals for making Delaware State Government leaner and more efficient. Combining fiscal responsibility, with environmental responsibility, while nurturing the State's burgeoning clean energy economy – it's a clear win for Delawareans.

Chris Coons, as the Chief Executive of the State's most populous county, also understands the link between energy efficiency and fiscal responsibility. Coming into office, he faced a budget swollen from the real estate bubble of the last decade. Recognizing the need to rein in spending, Mr. Coons led an effort to not only save energy and money, but to improve the quality of service provided to the people of New Castle County.

As well, the City of Wilmington and Seaford School District have both been nationally recognized for being energy pioneers. Seaford School District, which I've visited myself many times, is a shining example for what dividends a commitment to energy efficiency can bring small towns. The City of Wilmington too, has shown how government can successfully work together with businesses and developers to achieve these goals. It is clear that we have a number of lessons to learn from our partners in state and local government.

During these times of mindboggling budget deficits, governments need to find every way they can to better manage their operations and finances. We also need to find ways to put Delawareans back to work again.

The scope of assets held by state and local governments is wide. By leveraging buying power, and making wise and prudent use of taxpayers' dollars, governments can provide secure demand for sustainable small businesses and entrepreneurs.

With that, I'd like to thank our witnesses for joining us today, and just say how happy I am to be in Delaware with you all today.

###

Testimony of Delaware Governor Jack A. Markell
U.S. Senate Field Hearing
Wilmington, Delaware
February 19, 2010

Thank you, Senator Carper, for holding this Field Hearing in the State of Delaware and inviting me to participate today. Delaware stands at a critical juncture. Our economy is getting stronger, but we still have too many of our fellow residents out of work and our state revenues are down significantly at a time when our citizens need government services the most. This reality has forced us to develop new and innovative approaches to stimulating economic growth and making strategic investments that will produce long-term results.

Fortunately, Delaware's economy has strengths that will help accelerate our recovery. We have a proud tradition of innovation. Delaware's Four Cs (chemicals, cars, credit and chickens) have led the nation for generations, but in the past year we have had setbacks like many parts of the nation with the closure of two automobile plants, layoffs in the financial services sector and the shutdown of a large refinery. Yet despite this, we remain confident in our long-term future.

We are seeing the emergence of a fifth C: clean energy or clean tech. In Delaware when we talk about environmental sustainability, we're really talking about creating well-paying jobs, many of which cannot be outsourced. We're talking about the greening of the economy to make ourselves more economically competitive as we move towards a lower-carbon future.

An important first step towards emerging as a clean energy economy is embracing energy efficiency and conservation in our homes, businesses, and in new buildings.

Investments in greater energy efficiency put people to work now and pay dividends for the future. Every dollar wasted from inefficient energy usage is a dollar that is not put to work getting our economy moving in the right direction. And for every million we invest in energy efficiency, our economy will produce 15-25 jobs, in addition to substantial long-term savings.

For this reason, a key focus of our energy agenda during my first year in office was energy efficiency. In 2009, Delaware made numerous improvements to state law with respect to energy issues, including adopting progressive building codes.

We also passed the Energy Efficiency and Conservation Act of 2009. This legislation established Delaware's new Energy Efficiency Portfolio Standard – a requirement that all electric and natural gas distributors in Delaware reduce consumption 15% by 2015 – saving ratepayers money on their energy bills. We're also working with the Public Service Commission to protect ratepayers and ensure the savings are passed through to the customers. In addition, we worked to pave the way for more solar photo-voltaic and wind systems in municipalities and subdivisions and adopted some needed changes to metering requirements – allowing folks who invest in renewable technology to reap more rewards for their foresight.

These new improvements in public policy energy "infrastructure" were the principal drivers for Delaware being nationally-recognized this past summer by the American Council for an Energy Efficiency Economy, "A C triple E". I had the pleasure of going to the National Press Club in Washington to speak on our State's behalf, as Delaware was recognized as the most improved state in the nation with respect to programs aimed at improving energy efficiency. While we were recognized as most improved, we also saw that we have a ways to go.

It is clear that, in addition to making sure we have the right incentives, laws, and policies on the books, we have to do much more to "walk the walk." For this reason, putting our own house in order and "leading by example" is a top priority for this year

Just this past Wednesday, I signed Executive Order #18 -- otherwise known as the "Leading by Example" order -- which is exactly what we in government ought to be doing.

The new Order:

- Specifies that new state construction be built to the Silver standard, or its equivalent, established by the U.S. Green Building Council's Leadership in Energy and Environmental Design ("LEED");
- Sets a target for state agencies to reduce their energy consumption by at least 10% by the end of fiscal year 2011, 20% by the end of fiscal year 2013, and 30% by the end of fiscal year 2015;
- Requires audits of state facilities for energy efficiency opportunities;
- Establishes a system and procedures to benchmark, monitor and track the energy use and carbon emissions of all state-owned and state-leased facilities;
- Sets a goal for purchasing 30% of the state's electrical energy needs from renewable sources by the end of FY 2013;
- Specifies a 75% diversion rate for solid waste leaving state facilities through reducing, reusing and recycling waste products;
- Sets a goal of reducing petroleum consumption by 25%, vehicle emissions by 25%, and vehicle miles traveled by 15% by the end of fiscal year 2012;
- Specifies green computing practices that will save both money and paper; and
- Requires more sustainable purchasing practices and policies.

These actions are anticipated to save the state significant money in the coming years, create jobs and significantly reduce the environmental footprint of state government. By being smarter about the way we use and buy energy, we can enjoy significant savings. Just as one

example, the Division of Facilities Management in the Office of Management and Budget created an energy aggregation partnership. The partnership totaled the demand for electricity of many of the state's facilities, and a "reverse auction" was conducted to purchase the electricity for these facilities. The end result was an estimated \$22 million savings in electrical costs over the 3 year life of the contract over existing service provider rates. The aggregation partnership includes counties, municipalities and school districts, and is now beginning to plan its second iteration of bidding – potentially saving the state even more in energy costs in the future.

But government cannot do it all. We need to leverage private outside investment. And now, with the American Recovery and Reinvestment Act, we've got substantial help coming from Washington. Let me take this opportunity to thank you, Senator Carper, for all you've done to advance our cause in Washington. While the Recovery Act was a blessing last year on a number of fronts, the assistance and focus on clean energy is most appreciated. We need to use the opportunity to transform our economy, and the focus in the Recovery Act on clean energy and jobs is just the sort of shot in the arm we needed in Delaware.

Another key is allowing innovation to flourish. One of the truly innovative ideas coming out of Delaware is the concept of a Sustainable Energy Utility. Under the leadership of State Senator Harris McDowell, Delaware created the Sustainable Energy Utility – or SEU – to provide energy efficiency and renewable energy services to Delawareans across the state. The SEU is an innovative means of providing energy services to residents and businesses alike, and will be the principal distributor of federal recovery dollars dedicated to energy efficiency. Under its new banner "Energize Delaware", the SEU is a model for the nation, and we're proud to once again be leading in the provision of energy services.

One significant task for the SEU will be to implement the results of the audits conducted under the Leading by Example Executive Order. Through use of the SEU's bonding authority, we can retrofit state buildings, some of which are over 30 years old, to update the systems that provide heat, air conditioning, electricity and water. These improvements will save taxpayer dollars and result in new jobs for Delawareans, without requiring any up-front expenses by state government – thanks in part to the Recovery Act, which will be used to help pay for these improvements – and bringing jobs to Delaware.

Through innovative public-private public partnerships, we hope to catalyze substantial private sector investment in the energy efficiency technologies and services. Today in Delaware, we're seeing dozens of great building projects that demonstrate the opportunities to incorporate energy efficiency and sustainable elements into new construction. I've had the chance to attend several events dedicating LEED buildings, including multiple LEED Platinum projects. While some people have raised concerns about the increased cost of building green, some local builders have recouped the additional investment in less than a couple of years. But just as important as the savings is the well-paying jobs that these construction projects support. And we are committed to finding creative ways to move beyond a handful of LEED projects and help

ensure that we're greening more of our projects in the state, helping all of our residents benefit from sustainable design and construction, and supporting well-paying jobs for years to come.

And that's the final point I want to make. We should not think of our efforts to modernize facilities and adopt cleaner energy as simply an environmental initiative. This is a jobs initiative. In Delaware alone, we are seeing some of the most exciting innovations in the state emerging in the fields of energy efficiency, renewable energy, building materials, alternative fuels and advanced transportation. We are seeing companies like White Optics, PTM, and BF Rich produce great technologies that reduce energy consumption and generate rapid savings. An exciting company, Motech, recently purchased the former GE solar plant and is making PV panels here in Delaware. DuPont has a series of products that will make solar panels more efficient and dynamic, particularly as next generation thin-film innovations come to market. W.L. Gore, Dupont and Ion Power are leaders in the fuel cell industry. Autoport is converting traditional vehicles to all-electric, and Blue Water Wind is planning the first offshore wind farm in the nation off the coast of Rehoboth... the list goes on and on.

One of best examples of our innovation economy is the re-purposing of Delaware's two automobile plants. The Chrysler plant in Newark has been purchased by the University of Delaware, and will be the home of ground-breaking research. At the former GM plant, Fisker Automotive will manufacture their plug-in hybrid sedan with the help of a critical loan guarantee through the Department of Energy. In each case, our state's responsiveness and commitment to business success resulted in a positive outcome for Delaware workers and a growing innovation economy. We are working hard to achieve a similarly successful outcome at the Valero facility in Delaware City.

Throughout Delaware, we are fostering a vibrant, functioning market for cutting-edge companies to not only succeed, but to put people to work making things in Delaware. It's not enough to create demand for energy efficiency and renewable energy technologies; we also have to be thoughtful in maximizing the economic benefits from these initiatives. We cannot afford to trade our dependence on foreign oil for a new dependence on Chinese-made solar panels, Japanese electric vehicles and European wind turbines. We must work to seize these economic opportunities here at home.

For this reason, I ask that the Congress continue to look at ways to help American companies serving these emerging markets to succeed. We need to create an innovation ecosystem where entrepreneurship can flourish. We need to use every ounce of American ingenuity to strengthen the economy for the next century—and it's not enough to just innovate, but we must scale up production here at home and deploy technology.

We in government have an opportunity to stimulate market demand through thoughtful procurement goals. We need to expand the loan guarantee programs that are providing the critical access to capital to help companies grow. We need to allow companies to invest in the R&D that will drive future innovations. We need to support domestic manufacturing. We need to help train the workforce so local residents are equipped to enter these new exciting fields.

We have made some progress in Delaware, but there is much more work to be done. I want to recognize the excellent efforts of the New Castle, Kent and Sussex counties, the City of Wilmington, our local governments, the school districts of Milford, Cape Henlopen, Smyrna, Brandywine, Appoquinimink, Caesar Rodney, Christina and Sussex Tech, and our local universities and colleges for all their notable actions to implement green technologies and improve energy efficiencies in the schools they are either building or renovating. And I would be remiss if I didn't publicly and proudly recognize the great efforts being led by my colleagues on this panel today, New Castle Country Executive Coons, Wilmington Mayor Baker and Roy Whitaker from the Seaford School District, who is a statewide leader in these issues.

Thank you for the opportunity to present this testimony to your Committee.

I would be happy to take any questions.

2/16/2010

Chris Coons Remarks for Senate Subcommittee Hearing 2/19/10

“Blue, Gold, and Green: How Delaware State and Local Governments are Cutting Their Energy Costs”

Senate Homeland Security and Government Affairs, Subcommittee on Federal Financial Management, Government Information, Federal Services and International Security

Thank you for inviting me to offer testimony to this subcommittee hearing on state and local efforts to improve energy efficiency. The conservation of energy and our natural resources is an important issue for New Castle County. As a County Executive to 530,000 residents I must produce a balance a budget, provide needed services, and wisely manage and invest taxpayer funds. In tough economic times, people across the country are tightening their belts and making their dollars go further, and my government is called on to do the same. Conserving energy through the retrofit of buildings and using renewable sources is not only environmentally responsible- it is fiscally responsible, and makes perfect economic sense. As a society, we all must be good stewards of our natural resources. As a public servant, I believe energy efficiency also makes us good stewards of federal dollars, creates jobs and makes the world a better place for our children.

New Castle County is committed to creating a carbon neutral community by fostering economic development, creating green job opportunities, and enhancing environmental protections. The county was an early adopter of local government sustainability practices, starting with waste reduction, increased recycling, and empowering staff to take leadership on environmental initiatives.

In 2007, New Castle County became the first government in Delaware to join the International Council for Local Environmental Initiatives (ICLEI), making the commitment to conduct a comprehensive inventory of greenhouse gas emissions and working towards a holistic strategy for reducing emissions. The first prong of this strategy is to tackle one the County's biggest energy hogs: county-owned buildings.

As a pilot, New Castle County successfully evaluated, benchmarked, and implemented energy efficiency improvements in the City/County Building, a 10-story, 192,902-square-foot office building. The energy conservation measures (ECMs) implemented under a 15-year agreement with Ameresco, an energy service company, included lighting upgrades and controls; new energy management system; boiler, chiller, and cooling tower replacement; variable volume hot and chilled water pumping, premium efficiency motors, water and natural gas conservation, and EnergyStar Certification. Our annual savings of \$355,376 is equivalent to reducing emissions of over 1,150 tons of CO2 per year, and reducing energy demand by 1,889 kilowatts annually.

In July 2007, New Castle County completed construction on the Paul J. Sweeney Public Safety Building. This facility received a silver rating by the U.S. Green Building Council under its Leadership in Energy and Environmental Design (LEED) Green Building Rating System™. The facility contains many features to help maximize efficiency. Heating and cooling assistance is provided by a geothermal pump system, consisting of 30 pumps beneath the parking lot, which circulates an alcohol-based liquid through pipes that reach a depth of nearly 400 feet. In addition, the building makes use of electrical sensors for turning off lights in unoccupied rooms, skylights that maximize natural light within the building, and an energy-efficient heating, air conditioning and ventilation systems.

Due to the vital services that are housed within the public safety building, it is not uncommon for a building such as this to be a large consumer of energy. But through the use of green technology, we are reducing our environmental impact and saving money.

After these initial successes, the County decided to leverage stimulus funds to implement efficiency and renewable energy projects across all county owned facilities. We had an audit performed to assess the current energy performance of our facilities and establish a baseline for setting and measuring progress over time. The purpose of the audit was to identify opportunities to renew facility infrastructure and reduce energy demand and costs. From the audit, 158 conservation measures and two solar installations were identified. This project will impact over 20 facilities and 461,643 sq. ft. of building space.

New Castle County is again working with Ameresco to implement the identified energy efficiency and renewable energy upgrades to the County's facilities. This endeavor is allowing the County to undertake a more comprehensive project that will create jobs and greater economic opportunity in the region. In particular, this project depends on subcontractors, specified trades, and local materials. Ameresco is committed to working with the County and DelAccess, an organization committed to ensuring local participation of small, minority, and women-owned business. A project of this magnitude has the potential to create more than 156 local, green jobs.

This project is "shovel ready." Ameresco, New Castle County, and other partners are moving forward with implementation. The project is expected to be completed within 18 to 24 months. As a reference point, the project at the City/County building took exactly 12 months to complete. New Castle County intends to leverage the \$3.8 million in stimulus funds into a \$7.8 million project by either financing \$4.1 through a county bond or one of two forms of 0% interest renewable energy tax credit bond programs offered by the U.S. Department of the Treasury.

In addition to the two solar projects totaling over 120 kilowatts, Ameresco will be implementing upgrades across the county, including light retrofits and controls; energy management systems; premium efficiency motors; heat pumps, boilers, and cooling towers; ventilation and HVAC improvements; and many other innovative ECMs such as green roofs. In total, the ECMS and renewable energy installations promise to reduce emissions by 11,823,706 pounds of CO₂ per year. This is equivalent to reducing the emissions from 1,031 polluting cars and enough power to heat 244 homes in Delaware. Ameresco will work with New Castle County to educate the community about the benefits of the renewable energy and energy efficiency projects. The County hopes to serve as an example to its citizens, and to inspire them to reduce energy demand and costs in their own homes and businesses.

This project will provide over \$450,000 in savings annually, pay for itself in less than 20 years, and provide upgrades for many buildings and pieces of equipment that badly needed repair or replacement. These upgrades also provide intangible health benefits for workers by improving indoor air flow, natural lighting, and decreasing volatile organic compounds (VOCs).

New Castle County strongly supports the Obama Administration's energy efficiency initiatives. We also recognize the daunting task of rapidly ramping up a nationwide energy efficiency grant program while also maintaining quality controls on the use of funds. In some cases, these objectives can run counter to each other and have led to delays in the distribution of funds to state and local governments.

With respect to project implementation delays, it appears that the U.S. Department Of Energy did not have sufficient personnel/contractor support in order to expedite review of EECBG applications. By way of example, New Castle County's EECBG application was filed in July 2009, but we did not receive approval until December 2009. During the course of the six-month DOE review, our application was handed off to three DOE personnel and a contractor. Each time the file was handed off, we received different instructions for amending our application, or were asked to provide new information that had not been required as part of the original application.

A second concern that both New Castle County and other local area jurisdictions have experienced is the burdensome administrative reporting requirements. This is of particular concern to small municipalities that received EECBG pass-through grants of sums less than \$100K. While we recognize the value of maintaining a consistent approach in the administration of funding, the burden placed on our cities to report on a myriad of terms and conditions creates a significant impediment to their participation. We would suggest that the DOE consider other approaches to managing small grant recipient projects that reduces reporting requirements and either delegates federal reviews to state governments, or allows local governments to self-certify compliance with reporting metrics such as NEPA, waste stream disposal, SHPO, and the like.

One area DOE should have emphasized early in the educational process to towns and cities receiving stimulus grants is how to leverage that money, as we did in New Castle County. Many of the grants to municipalities were not large enough for those jurisdictions to take on major energy projects, but grants of a few thousand dollars were enough to have an impact if city leaders knew how to make use of energy service programs. These programs, such as the one we entered into with Ameresco to retrofit the city/county building, are unique in that they do not cost governments money up front. Companies such as Ameresco conduct an energy audit to determine what upgrades or renovations would produce the greatest energy savings, then they implement those changes. Governments pay for the work by allowing the companies to capture the difference in the lower energy costs. In New Castle County, we held a forum with Ameresco and invited our municipalities to participate so city managers and town leaders could learn about this option. From that experience, we realized that many smaller jurisdictions had no idea how to go forward using their federal grants to maximize energy efficiency and cost savings.

Despite the impediments, we believe in the value and importance of the federal program. I want to thank you for providing me this opportunity to share information on New Castle County's energy conservation programs. Our county is a good case study for other state and local governments to evaluate as they consider energy efficiency programs. Because we own many large properties and can achieve economies of scale that result in real savings, we are well-suited for many of these projects, including solar and geothermal. I am optimistic that more progress can be made, and our energy consumption will continue to decrease.

One area of energy efficiency that I see significant growth potential for is the use of plug-in hybrid cars. These vehicles are a perfect fit for local government, police, and schools – agencies that typically have large fleets. Governments also have the capacity to build the needed infrastructure to charge cars that will be driven for short trips. We hope to take advantage of this technology with the transformation of the former General Motors plant in Newport, Del., which will be outfitted by the Fisker Corporation to produce its Nina hybrid sedan. The plant is expected to be operational in 2011 and produce as many as 100,000 electric hybrids annually.

Local governments also can encourage or mandate energy efficiency through adoption of building codes that favor conservation. New Castle County has adopted the 2006 International Energy Conservation Code (IECC) standards for building energy code. Local jurisdictions interested in pursuing this course of action can rely upon the U.S. Department of Energy to provide practical information on required code changes. The Department's Building Energy Codes Program is an information resource on national model energy codes. DOE works with other government agencies, state and local jurisdictions, national code organizations, and industry to promote stronger building energy codes and help states adopt, implement, and enforce those codes.

It is clear to me that green practices such as green buildings, fleet efficiency and taking inventory of greenhouse gas emissions are essential in light of the pressing

environmental problems we face today. We are proud of the example we are setting, for protecting the environment, and for reducing our energy and fuel costs. And whether you believe in the dangers of climate change or not, there should be no debate on need to focus on how we can we become more energy independent and, at the same time, conserve resources and money. And most importantly, by promoting energy conservation and renewable energy, we foster green industries that are locally-based, and avoid sending money overseas to pay for our energy.

Thank you.

SEAFORD SCHOOL DISTRICT

Roy Whitaker, Chief of Buildings and Grounds

Seaford Delaware 19973

February 19, 2010

Good morning and thank you for inviting me to this hearing. There are three primary points of interest that I would like to make to the attendees. The three points will describe: our school district and our successes; the free and low cost efforts resulting in huge financial savings; and how other school districts, governmental agencies, or businesses can duplicate these efforts.

- 1 Seaford School District in Seaford Delaware is a national average school district with 6 schools. We have used the free web based EPA ENERGY STAR Portfolio Manager software to successfully BENCHMARK all of our schools and manage them for superior energy efficiency resulting in current annual savings of \$640,000 per year. Another benefit includes a several million pound reduction in air pollution. In summary, the Seaford School District's introduction to the ENERGY STAR Program and ensuing partnership has enabled us to fast-track significant energy and pollution reduction measures that are having a real and immediate impact on the planet and budget. The quality ENERGY STAR training, program, and resources showed us how and where to start with benchmarking and how to take our Portfolio Manager numbers into an effective action plan that made immediate impact. I note that the six schools have an average age of 61 years and our current average ENERGY STAR rating for all six buildings is 96 (out of 100) with the 1928 school building dragging us down just a few points! We are very proud to manage our schools with some of the best energy performance in the country even when compared to the newest schools.

- 2 There are a multitude of free and low cost items that can be implemented to initiate a path of significant energy savings like ours. There are also many items with quick payback that would be a part of any savings program. One important aspect of any program should be to "sweat the small details". The small details are what make a school environment healthy and effective for the students and staff. I note that we have made mistakes along the way and have learned and improved because of them. I would suggest that anyone interested in the steps we took please review the PowerPoint presentation on the Seaford School District website <http://agi.seaford.k12.de.us/sites/bg/Pages/default.aspx> or contact me royw@seaford.k12.de.us Although the list is long, a few of the details that you will find on the website presentation will include: creating a formal energy policy; benchmarking building performance; managing the on/off times and tuning the equipment; sealing up

the building envelope; avoiding wasteful practices that can consume significant energy; modifying or upgrading existing lighting; storm windows which saved 24% at one school; and specifying different or better equipment when repairing or building new facilities. I believe that some of the engineering practices in even the past ten years are not suited for the facilities of today and every detail needs to be scrutinized. At one of our schools we are considering upgrading the main electrical transformers which are only 12 years old. Their replacement will have two year payback and a savings of over a million dollars during their thirty to forty year life span. If suitable funding can be found there are countless similar investment opportunities that will produce significant cost savings over the next few decades. To summarize on this point, the goal is to maintain an excellent indoor environment while providing the taxpayer with substantial energy savings.

- 3 Although these tough economic times throw up roadblocks, it will take interested and dedicated people to plan, coordinate and control the outlined steps to achieve significant and consistent energy savings. It will also take the financial partners to fund the projects to have significant payback for many years into the future. To take this last point full circle, just recently we noted the ENERGY STAR rating was starting to drop at one of our buildings. The Seaford School District is one of the poorest school districts in the state and the phrase "shoestring budget" applies to all of our Buildings and Grounds operations. My two technicians and I are responsible for everything from maintaining the athletic fields to what has unfortunately been too much of lately: snow removal! Although everything seemed to be running very well at the school the technicians discovered a glitch in the controls program that kept a main circulation pump running 24 hours a day 7 days a week. As we all are very well aware, computers can have these glitches sometimes! This error was wasting electricity and a significant amount of heat. If we're not looking for these types of things, meaningful energy savings will not be maintained over time. In conjunction with ongoing upgrades our ENERGY STAR Portfolio Manager data is tracking the effectiveness of our newer mechanical improvements and engineering test applications. It is very reassuring to observe documented energy improvements for the projects.

I thank everyone for making it possible to share some of our successes with our energy program and invite anyone to tour our facilities or contact me with questions.

Roy Whitaker
Chief of Buildings and Grounds

Buildings & Grounds Division 302-629-6507
royw@seaford.k12.de.us



CITY OF WILMINGTON, DELAWARE
MAYOR JAMES M. BAKER

CLIMATE SUSTAINABILITY PLAN

Initiatives underway to reduce the City's Energy Footprint (February 2010)

In August 2008, Mayor James M. Baker issued an Executive Order outlining steps the City of Wilmington is taking to reduce greenhouse gas emissions and preserve a respectable quality of life for our residents and visitors. One of the primary goals of Wilmington's new sustainability initiative is to achieve a meaningful reduction in the City's overall energy footprint – a 20% reduction in greenhouse gas emissions by the year 2020. While City government is mandated to follow new procedures designed to reduce energy consumption and costs, Mayor Baker has also asked for broad participation and cooperation from City residents and Wilmington's business and development community.

The full Executive Order is available online at:
<http://www.wilmingtonde.gov/greencity/executiveorder.htm>

In 2008, Wilmington was among the first cities in the United States to join The Climate Registry—a non-profit organization that measures and publicly reports greenhouse gas emissions (GHG) in a common, accurate and transparent manner consistent across industry sectors and borders. By joining the Climate Registry, the City agreed to voluntarily measure, independently verify, and publicly report greenhouse gas (GHG) emissions on an annual basis. The reporting is done utilizing The Climate Registry General Reporting Protocol which is based on the internationally recognized GHG measurement standards of the World Resources Institute and World Business Council on Sustainability.

Additionally, in 2006, Mayor Baker signed onto the U.S. Conference of Mayors Climate Protection Agreement through which Wilmington has committed to take actions that meet or beat the Kyoto Protocol target of a 7% reduction in greenhouse gas emissions from 1990 levels by 2012.

CITY GOVERNMENT OPERATIONS

- City Buildings and Facilities:
 - The City entered into a Guaranteed Energy Performance Contract with a reputable energy services company, Honeywell, to identify and implement energy efficiency projects in the City's water and wastewater operations and City buildings, including the public safety building, emergency operations center, fire stations and the Municipal Complex. The contract is designed to help the City reduce energy consumption, explore the generation of renewable energy and reduce greenhouse gas emissions.

1 | Page



- The City is preparing to install an array of photovoltaic cells (solar panels) at the Porter Water Filtration Plant, a facility which produces 75% of the City's drinking water. The solar panels alone will save the City an estimated \$60,000 a year in electricity costs, cover nearly 25% of the electric load of the plant, and generate an estimated \$120,000 a year in annual revenue through the sale of renewable energy credits. The City is also planning to install solar panels at its Municipal Complex in the near future.
 - A booster pump station at the Porter Water Filtration Plant will control what time the water pumps operate, reducing peak electric load, and increasing usable volume. The increased capacity allows the pumps to operate at off-peak electric rate hours, creating energy cost savings, and enabling investment in renewable energy (solar) components.
 - At the Porter and Brandywine Water Filtration Plants, the City has begun to eliminate steam loss by replacing leaking steam traps. This enables both plants to reduce their fuel oil consumption.
 - HVAC upgrades to the Public Safety Building have reduced electric consumption through lowering the speed of supply and exhaust fans.
 - Restrooms within the Redding City/County Building have been equipped with motion detector lights which turn themselves off when the restrooms are vacant as well as low-flush toilets which use considerably less water to operate.
 - The City earned a LEED Silver designation on its newest facility, Prices Run Pool House, located within historic Brown Burton Winchester Park. The new facility features an environmentally friendly and energy-saving design (e.g. windows for natural lighting, water efficient restroom facilities, improved ventilation system).
 - All City employees are currently being educated about climate change, greenhouse gas emissions and energy efficiency as it relates to their work and the City's Climate Change Strategy. Helpful tips such as teleconferencing, walking or car-pooling to meetings when possible are emphasized. Additionally, employees are also urged to make double-sided copies, print emails only when necessary and to participate in the office recycling program.
- The City continuously seeks to reduce the size of its vehicle fleet and to encourage the use of biofuels (E-85). Many vehicles that had a dire need to be replaced are being replaced by hybrids or the most fuel-efficient, low-emission vehicles available that will meet the business needs of the City.
 - The City is in the process of upgrading its building code to raise the bar for energy efficiency in all new buildings and renovations.



- Wilmington introduced the State's first single-stream, city-wide curbside recycling program which reduces the overall energy use in manufacturing the products used by government, residents and businesses.
- The City converted all City-owned traffic signal lamps to LED lighting. Over 5,000 lights were changed to LED lamps, allowing for reduced electric consumption and increased saving based on lower wattage. The LED lamps also have reduced maintenance costs because they have a longer life, allowing the City will spend less on new parts and equipment needed for lamp replacement.
- The Climate Change Strategy has been incorporated into the City's Comprehensive Plan.

Other Initiatives:

Engaging Our Residents and Communities

- Currently, the City's website is being redesigned to include a new section on climate sustainability. Included on the new site will be sections on "what citizens can do to reduce their carbon footprint," "green driving tips" as well as other helpful information.
- The City provides a speaker's bureau to come to community groups and civic associations to talk about the city's efforts and what residents can do to reduce their personal energy footprint.
- The City has established an Energy Champion category within the annual Wilmington Awards to honor those residents, community groups and businesses that significantly reduce greenhouse gas emissions. Winners are recognized each October.
- The Healthy Wilmington 2010 (Health Planning Council) continues to promote the benefits of health/physical fitness and disease prevention through individual, organizational and community involvement.

City Environment

- Wilmington is the second City in the United States to adopt the new Real Time Control technology to mitigate the flow of wastewater from the City's combined sewer overflows into area waterways.
- The City has been honored with a Tree City USA designation for the last 16 years. Plans for reforestation activities around the Hoopes Reservoir for source water quality protection are underway.

3 | Page

*Office of the Mayor
800 N. French Street, Wilmington, DE 19801
(302) 576-2100 Telephone (302) 571-4102 Fax
www.wilmingtonde.gov/greencity*



- The City's Wilmington Beautification Commission has developed a campaign entitled "Think Green for a Change". This initiative encourages City residents, employees and businesses to be more conscious of their impact on the environment and to make more environmentally friendly lifestyle and development choices.
- An Urban Forest Canopy study, tree plantings and coordinated monitoring program in conjunction with the Delaware Center for Horticulture has been developed.
- The Lush Color Project, developed to enhance our parks and open spaces with colorful flowers and shrubs, is ongoing. Streetscape enhancements and the management of plantings also continue.
- The Cool Spring Reservoir has been recently converted from an open water storage reservoir into a newly covered reservoir complete with ample open green space. [An open basin is subject to contamination from atmospheric pollutants, such as bird droppings and debris. Water quality also degrades in an open basin due to low chlorine levels, algae, and aging water (exposure to sunlight diminishes water quality). An open basin is also vulnerable to acts of terrorism.]
- Significant investments were made in the City-owned Rock Manor Golf course to assure open space preservation.

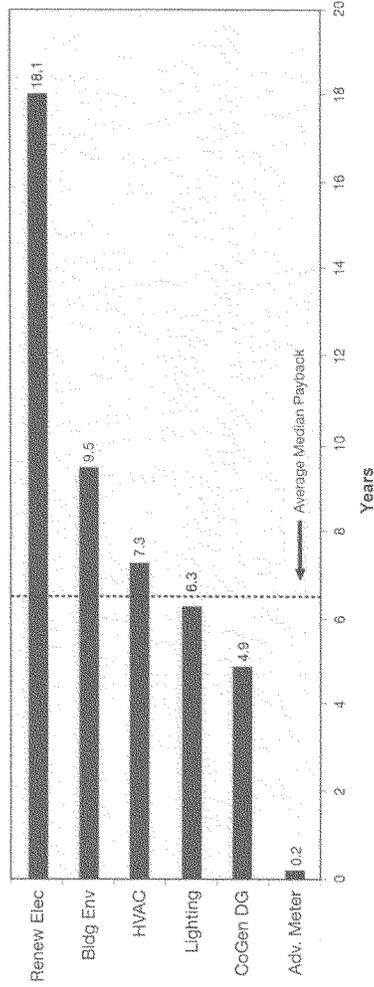
Engaging Our Business and Corporate Community

- The Wilmington Energy Leaders Roundtable has been meeting quarterly since January 2009. The Roundtable is comprised of businesses that have made significant commitments to addressing climate change. Members of the Roundtable share information with each other on their energy efficiency and related efforts. Over the first year, the Roundtable has grown to nearly 50 members.

Membership includes: Christiana Care, DuPont, Bank of America, Delmarva Power, Buccini Pollin Group, Preservation Initiatives, Barclays Bank, EDIS, AAA Mid-Atlantic, Brightfields, Riverfront Development Corporation, Solar Dock, The Nature Conservancy, New Castle County, Delaware Government, Bernardon Haber Holloway Architects, the Riverfront Development Corporation and Shoprite Supermarkets.

- The City is in the process of developing a Wilmington Green Buildings program, which is a voluntary program designed to minimize environmental impact during new commercial construction as well as reducing energy consumption once occupied.





Renew Elec – Renewable Electricity

Bldg Env – Building Envelope

HVAC – Heating, Ventilating, and Air Conditioning

Co-Gen DG – Co-Generation and Distributed Generation Systems

Adv. Meter – Advanced Metering



