

From: Hanger, John
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Subject: Thank you message

As I leave the Department of Environmental Protection, I want to thank the employees of the Department and all those who work to protect and restore Pennsylvania's environment; to wish Judge Krancer all the best as the new Secretary of DEP; and to provide you my contact information.

After January 18th, my immediate contact information will be: 717-412-8477 or 717-533-4081. My email will be john_hanger@hotmail.com I have been asked what am I going to do next? Immediately, I will be taking a few weeks off to think through what comes next, but I plan soon to be back to work.

It has been a privilege to lead DEP and to work with the talented, dedicated employees at DEP who have accomplished a great deal in sometimes difficult times. I thank Governor Rendell for providing me with the opportunity to be the Secretary, and I thank each of you for getting the job done and assisting me. After having served two Governors and worked at both the Public Utility Commission and DEP, I leave public office more convinced than ever that public service and effective government is essential to a successful society.

The rest of this message is a report to you about what has been accomplished and what more needs to be done. A partial cause for some of the verbal or worse attacks on public employees and government is a lack of information about what public employees and government gets done that makes the lives of all Americans richer and healthier. Leadership of agencies has a particular responsibility in my view to communicate and explain the work of public servants.

Thanks to the work of many in and out of government, Pennsylvania's air, land and water are considerably cleaner today than they were in 2003 when Governor Rendell took office and appointed the superbly effective Kathleen McGinty as his first Secretary of the Department of Environmental Protection. In addition, Pennsylvania's unemployment rate is more than 1% below the national average and has been below the national average for nearly the entire, last 8 years.

One reason for Pennsylvania's better economic performance than the nation as a whole and many sunbelt states is our growing green job sector. According to a Pew report, Pennsylvania is third in the nation in the total number of green jobs. Total jobs in this sector are 350,000 according to the Pennsylvania Department of Labor and Industry. Those jobs are diverse, including work to restore mine lands, water and sewer infrastructure, clean energy projects, green buildings, recycling, and installing scrubbers at power plants to clean our air.

Air

Since 2003, the improvement in air quality is considerable. Hazardous air pollutants are down 40% while emissions of sulfur dioxide and nitrogen dioxide, which contribute to smog, are down also about 40% with a great deal of these improvements taking place since 2007. The cause of this improvement is enforcement of the clean air laws, the deployment of pollution control equipment, the retirement of some old, polluting plants with more retirements ahead, the increased use of cleaner natural gas to make electricity, the construction of 1200 megawatts of new, zero pollution renewable energy just in Pennsylvania, substantially greater energy conservation, and increasing the number of much cleaner, fuel efficient vehicles.

Since 2003, DEP successfully promulgated numerous rules to enforce the Clean Air Act requiring reductions of pollution from various sources. In addition, important policies that provide additional reductions like the California Clean Car Rule were enacted here before President Obama made that rule the federal requirement. Another example would be the new statewide regulation strengthening regulation of Outdoor Wood Burning units that will insure that new units are the cleanest available. The OWB rule does not address already purchased and operating units, though existing units that cause pollution of neighbors' air and property can be addressed by other parts of Pennsylvania law.

Governor Rendell and Secretary McGinty also waged a huge battle to cut mercury pollution in Pennsylvania and successfully passed a state rule to cut mercury emissions. Many health, conservation and environmental organizations strongly supported this effort. It was a brave and important initiative that ended with an unfortunate state judicial reversal that had at its root the federal court order striking down an EPA regulation in the Bush Administration that permitted trading of toxic mercury.

Unfortunately lost in all those court proceedings is the reality that mercury coming from the burning of coal is now in our food chain and elevating the levels of mercury in tens of millions of Americans. This is critical work that remains.

Cleaner air saves and extends lives. Quite literally, getting soot out of the air is increasing average life expectancies by years in the Pittsburgh region and elsewhere. Cleaner air means our rain and snow is today much less acidic than it was in 2003, and that benefits our forests, waters (including the Chesapeake Bay), and historic sites. Cleaner air means that our economy is more efficient as the economic benefits in health care costs and productivity of cleaner air are many times greater than the costs required to clean the air.

While NOx emissions are now down to 180,000 tons annually, and sulfur dioxide emissions are down to 580,000 tons, the work of making sure that our air is safe, healthy to breathe every day of every year is not done. More reductions must be achieved to finish the job of cleaning our air. But over the next 8 years it should be possible to insure that air in Pennsylvania is safe, healthy to breathe all the time. That will be a major triumph and it is not in sight.

In order to achieve that triumph, we must continue what is now working to clean our air while making sure new challenges are met like insuring that emissions from the Marcellus gas industry do not cause dirty air. Wyoming failed to make sure its gas drilling industry used the cleanest technologies and experienced smog in its formerly clean air, wide open spaces. Technology exists to prevent such a blunder here. It must be deployed.

Water

Pennsylvania's waters are much improved since 2003. With the support of voter approved referendums and the General Assembly, Governor Rendell increased dramatically the amount of investment in water and sewer infrastructure as well as initiatives to reduce pollution run-off from agricultural lands. About \$4 billion--more than a typical 8 year period--has been invested in water infrastructure since 2003 in projects all across Pennsylvania. The funded projects include hundreds of traditional pipe, concrete and treatment systems that stop raw sewage from going into waters. But important innovation was fostered too.

Funding criteria were changed to enable funds to deal with run-off from agricultural lands. For example, one project funded with \$17 million of Recovery funds will help farmers in the Norther Tier will prevent 1 million pounds of nitrogen every year from going into our local waters and then into the Chesapeake Bay. Funds were directed to an innovative, Green infrastructure project to control stormwater in the City of Philadelphia that is already a national model for new, lower cost, greener methods.

The water and sewer infrastructure projects employed tens of thousands directly and many others indirectly. The projects will produce 40 years of economic and environmental value.

The value of the last 8 years to water improvement goes well beyond the new water and sewer infrastructure. Pennsylvania removed 146 dams, restored 700 miles of polluted streams to health--the second most of any state--and extended the Exceptional Value legal protection to another 1,433 miles of waters, ensuring that these natural jewels have the strongest safeguards. Few if any Governors have extended the exceptional value designation to more water than Governor Rendell and his Administration.

DEP also completed 16 new flood protection projects and 37 major rehabilitation projects of existing flood control systems. Another 262 flood control stream restoration or stream improvement projects were completed. \$111 million of state funds were invested in the flood control projects.

DEP also completed since 2003, 538 Emergency Action Plans for high hazard dams, increasing the compliance rate for high hazard dams from 18% in 2003 to 86% today.

Since 2003, DEP completed 63 projects at a cost of \$47 million to address acid mine pollution, a continuing serious legacy of mining, with still about 5,000 miles of streams remain destroyed by acid mine pollution.

Chesapeake Bay Watershed

DEP also has done critical work to clean up our local waters in the Chesapeake Bay watershed and the Bay itself. Forty six percent of the Chesapeake Bay watershed is in Pennsylvania and clean up efforts now have at least a 25 year history.

The history of cleaning up the Bay is not without its blemishes, to perhaps understate matters. The first deadline to clean up the Bay and its watershed was 2000. When that deadline was badly missed in 2000, the states and the federal government set a new deadline of 2010 for cleaning up our local waters and the Bay.

While the 2010 date was not met either, important work has been done that has led to real and meaningful reductions of nitrogen and phosphorus pollution of our waters. More riparian buffers were installed. More cover crops were planted. More land was put into no till. And many more good projects that benefit everyone were done. The work, however, was not always easy or free of controversy.

For example, the Department in 2008 completed the process of issuing new EPA approved permits to sewer plants in the Bay watershed that lowered the amount of pollution they could discharge. Most municipalities are now well into the process of reducing that pollution.

But despite such good work and real progress, it was apparent when I became Secretary that the 2010 Bay clean up deadline would not be met. As the next stage of clean up work was debated, there was considerable pressure or temptation

to do the same thing one more time: Just say the Bay would be cleaned up ten years later or 2020. Governor Rendell and DEP refused to do that.

Instead, we insisted that the Bay could not be cleaned up by 2020 when the size of the job and the amount of resources available to do the job was understood. Pennsylvania won the debate and a realistic deadline of 2025 or 15 years from now was set. This was a vital recognition of reality that allows for the creation of a viable plan for clean up.

We also agreed that setting a distant date without milestones did not create transparency or accountability. As a result 2-year milestones are now part of the clean up process and there are detailed plans for meeting the goals established in the 2-year milestones.

Often forgotten is that EPA itself had been sued by environmental organizations, and EPA was required to file a Total Maximum Daily Load (TMDL) plan for cleaning up the Bay with a federal judge by May 2011.

DEP completed its Watershed Implementation Plan to meet this TMDL requirement and that plan reflects a huge amount of work by DEP and many diverse and interested groups in Pennsylvania. The WIP is a viable plan that can work. It will require changes as the years go forward, but it can clean our local waters and produce other benefits.

The final Pennsylvania WIP also reflects important concessions by EPA for Pennsylvania beyond the 2025 deadline. The EPA has agreed to not reopen the permits issued in 2008 to sewer plants and to require even more reductions and even more expense. EPA's agreement is very important to Pennsylvania, and Pennsylvanians should understand that sewer plants in Maryland and other parts of the Bay Watershed have been required to reduce their pollution by greater amounts than the sewer plants in Pennsylvania.

In addition, the EPA has agreed that a \$100 million per year Agricultural Technology fund (half coming from the federal government and half from the states) should be created to finance manure to energy and other projects on farms. Pennsylvania has promised \$15 million per year to this fund for that purpose and has already financed 2 major agricultural projects--the Energy Works project in Adams county and the Bionol project in Lancaster County--that broke ground in 2010 that will remove about 1.6 million pounds of nitrogen per year when operating. These projects can benefit agriculture and communities and clean water. They and the Agricultural Technology fund must go forward.

Land

On land, Governor Rendell, the former mayor of Philadelphia, proved a friend to agriculture, preserving 197,547 acres of farmland on 2,023 farms, or half of all the farms ever preserved.

Green space was protected by revitalizing 325 industrial sites in urban areas by investing \$415 million. At these sites, 76,000 jobs were created or retained.

Also, since 2003 \$145 million was invested in 229 mine reclamation projects that restored 6,905 acres that had been previously degraded and abandoned due to mining. The Governor and others successfully advocated changing federal law so Pennsylvania will receive \$1 billion for mine cleanups and signed a new mine safety law that helped to make 2010 the first year when no miners died in Pennsylvania.

We also cleaned up communities by removing 3,075 leaking underground tanks, plugging 1,600 oil and gas wells, removing an incredible 12.6 million waste tires--85% of the total--and increasing recycling 30%.

Much of this work was made possible because Governor Rendell kept his promise to pass Growing Greener II, a \$625 million voter-approved program.

Waste/Recycling

The details on recycling and waste are impressive. Tons per year recycled increased from 4.4 million in 2003 to 5.7 million now. Recycling employs 52,000 people. Residential access to recycling increased from 85% to 94%. 1,900 municipal recycling programs serve 11.7 million Pennsylvanians. Since 2003, the per capita disposal of municipal waste has declined 12% from 1640 pounds per year to 1444 pounds per year.

Governor Rendell also strongly supported and signed into law in 2010 an important 10 year extension of the recycling fee. The last 8 years saw more and better recycling.

Clean Energy

Given that most environmental problems are rooted in how energy is produced and consumed, the Governor's clean energy policies are essential to environmental protection and a powerful economic engine that now employs more than 225,000

people. In 2003, Pennsylvania was near the bottom of states developing clean energy, but now we are an internationally recognized leader.

Thanks to three major pieces of bipartisan legislation passed by the General Assembly since 2003, 1,200 megawatts of additional renewable energy (enough to power 500,000 homes) is operating or being built. Pennsylvania has 16 operating wind farms today and 4 more representing 200 megawatts will be completed in 2011. Wind energy alone will provide soon 950 megawatts of power in the Commonwealth. Companies like Gamesa, Ibedrola, Hodge Foundry, GE, and many, many more make wind equipment and employ thousands of Pennsylvanians.

In addition to wind, Pennsylvania now has 43 landfills that are capturing gas and making electricity or pipeline quality natural gas; 50 farms with digesters operating or in development; sewer plants in York, Derry Township, Dauphin county that received stimulus funds and many other places using biogas to make power; mines capturing methane to make electricity; the 125 mw expansion of the Holtwood hydro facility owned by PPL on the Susquehanna that will make more zero pollution power with new turbines made by Voith Hydro in York and also improve fish passage; hospitals like Geisinger and Abington deploying combined heat power systems partially financed by Stimulus energy funds; and 4,000 solar projects operating with another 3,000 in the construction phase.

Pennsylvania now ranks second in solar jobs with more than 6,000 in companies like Komax of York that makes equipment used in solar manufacturing, Solar Power Industries that makes solar panels in Westmoreland, Flabeg that makes solar mirrors in Allegheny County, and the more than 600 companies that do solar installation work. Pennsylvania also ranks third in the nation in solar projects and fourth in solar capacity.

Most importantly, the cost of solar has been falling like a stone in Pennsylvania as the market size increases and competition for business intensifies. Prices have declined approximately 50% in 2 years. Today, solar projects of 1 megawatt and up are being done in the \$4 to \$4.50 per watt range. Some of the larger solar projects in Pennsylvania are even now below \$4 per watt. Smaller residential projects have a median price of \$6 per watt, with projects common in the \$5 per watt range.

Lifetime electricity prices from solar projects in Pennsylvania now can be about 12 cents per kilowatt-hour. And the price trends are still decreasing.

The solar industry, renewable energy business, smart grid deployment, and energy efficiency are already substantial global businesses with major environmental and economic opportunities for Pennsylvania. In just 2010 more than 16,000 megawatts of solar will be installed around the world and the growth rates remain startling (in 1997 less than 200 megawatts of solar were installed in that year around the world).

Pennsylvania also enacted Act 129 in 2008, a landmark energy conservation law that puts Pennsylvania in the top five nationally for energy conservation and smart grid development. Between Act 129, the weatherization program for low-income families, and the stimulus funded Conservation Works program administered by the Department, Pennsylvania has tens of thousands of energy conservation projects completed or underway. More than 200,000 Pennsylvanians are employed doing energy efficiency work.

Pennsylvania is also now the leading producer of biodiesel in America and biodiesel production is an enormous opportunity for Pennsylvania to further improve our environment and economy. Biodiesel has a large positive energy balance, while gasoline for example has a negative energy balance. Pennsylvania in 2008 passed an important law requiring increasing percentages of biodiesel be mixed with diesel as production ramps up. In 2009, Pennsylvania became the third state to require that 2% of diesel come from biodiesel and soon the law will require 5%.

American Recovery and Reinvestment Act/Stimulus

Given the collapse of the American economy following the Lehman Brothers bankruptcy on September 15, 2008, consumer demand plummeted and massive job losses began in October 2008. DEP was called on to do major, new work administering the Stimulus or American Recovery and Reinvestment Act. Our work was to administer directly \$137 million of energy funds and over \$200 million of water infrastructure funds. DEP also has assisted companies and universities win in competitive grant processes another \$1 billion of energy awards that went directly to companies and other institutions.

It must be remembered how dire circumstances were in the fall of 2008. For example USX was in June 2008 at 100% of capacity and by December 2008 was at about 50% of capacity. US car sales fell from 16 million per year in 2007 to a rate of 9 million per year by December of 2009. Housing prices fell dramatically. Americans faced a depression.

Supported by the US Chamber of Commerce, the AFL-CIO, and many other organizations, the Congress passed in February 2009 the Stimulus program. That program included a major new tax cut that commenced in April 2009 and accounted for one-third of the stimulus costs; it included substantial support for state governments to limit job losses for teachers, police, and other public employees; and it included money for roads, bridges, water and sewer projects and energy projects. All told Pennsylvania has received \$31 billion in stimulus funding, with \$11 billion going to Pennsylvanians and companies here in tax cuts and credits.

The DEP staff was asked to play an important role in insuring that the water and sewer funds and the energy funds were distributed effectively. This was substantial new, unplanned for work for DEP and its employees at a time when state general funds for the agency were being cut significantly due to the collapse of state tax revenues.

DEP staff has performed its stimulus duties brilliantly. Pennsylvania is second and third for administration of the two major energy stimulus programs. The Department scored hundreds of water and sewer projects as well as non-point source projects, making sure the best projects received stimulus dollars. Stimulus financed more than 20,000 energy projects (including furnace replacement work) in Pennsylvania, and DEP administered most of it. A total of \$137 million of Stimulus energy dollars were overseen by DEP and that precious taxpayer money was matched by \$726 million of private investment.

Most importantly the water and sewer projects and energy projects financed by stimulus will provide economic, environmental benefits for 10 to 40 years. We have invested in long-term assets that will keep on working long after the horrendous economic collapse of 2008 is a distant memory.

Job losses that were more than 700,000 just in January 2009 were reduced to zero by January 2010. GDP that had been collapsing by about 6% per quarter in the 4th quarter of 2008 and first quarter of 2009 resumed growth in the third quarter of 2009. Our economy has now grown for 6 quarters in a row through the 4th quarter of 2010. DEP met the call of our country when in distress and I thank all our public employees for their important work in doing so.

Budget

The DEP budget is very complex with many funding sources. To simplify greatly, DEP gets now about 22% of its total revenues from the General Fund with most coming from two other categories: the Federal Government to run federal programs like air permitting and then fees, fines, and other grants.

I began work as Secretary on September 2, 2008, and the economy had been in recession since December 2007. But following the Lehman Bankruptcy and the economic collapse that then happened, state tax revenues also collapsed. Immediately cuts were made to reduce spending across state government and at DEP. The budget that ran from July 1, 2009 to June 30 2010, saw significant cuts to the state general fund portion of DEP's budget and about a 9% overall reduction in total revenues to DEP. Most unfortunately and only after doing all that could be done to reduce layoffs, it was necessary to layoff 97 employees out of a total of about 2800 were required in December 2009.

When making choices about what cuts to make, we had three categories: Inspections, Permitting, and everything else. We were able to have no cuts made to inspection work; limited cuts to permitting; and most cuts taking place in the many other important things that DEP does.

Unfortunately a further round of budget cutting to the state general funding for DEP then took place in the current budget that began July 1, 2010. The general fund appropriation to DEP was cut by about another 10% and that amounted to about a further 3% reduction in total funding to DEP. Again at this point state taxpayers contribute about 22% of the total revenues to fund DEP. In both the 2009-2010 budget and the current budget, the Governor did propose reductions for DEP and other agencies. And in both years, the General Assembly then passed deeper budget cuts to DEP than the Governor had proposed.

To compensate for cuts and insure vital services, Governor Rendell and I approved increasing fees for a variety of services provided by DEP. As I leave office, including the Marcellus Drilling fee, about \$30 million per year in new fee revenues have been finalized for DEP, with another approximately \$20 million in the proposed stage.

DEP's total budget from all sources (but not counting stimulus funds) is now about equal to the 2002 budget. In 2002, the DEP budget was \$511 million and the DEP 2010 budget was about \$525 million. That is an increase well below the rate of inflation or wage increases required by contract. Important savings and efficiencies were made. Administrative costs in particular were sharply reduced. But further cuts will inevitably impact services like permitting and will put public safety at risk.

Marcellus Gas

And to some extent like the American Recovery and Reinvestment Act, the Marcellus Gas resource was another major piece of unexpected work for the Department. While Pennsylvania has had gas drilling for many decades, the very first Marcellus gas well was drilled just in 2005. By 2008 it was apparent that the gas drilling industry in Pennsylvania was going to increase enormously. Pennsylvania was going to go from a low-producing gas state to a top-five gas production state. Soon Pennsylvania will produce 2 trillion cubic feet of natural gas or close to 10% of all the gas produced in America.

At this time, DEP has permitted more than 5,800 Marcellus gas wells and more than 2500 have been drilled. Our work has been to produce the gas and protect our natural resources.

The Marcellus gas production has benefits. Natural gas prices are low and not increasing, unlike oil and coal prices that have increased sharply as the global economy recovers. Shale production is lowering heating bills that as recently as 2008 were devastating to even middle income families who faced gas costs of \$13 for a thousand cubic feet as opposed to the current \$4 to \$5 for a thousand cubic feet. Gas leases on private lands and royalty payments have enabled farmers to keep farms; homeowners to keep homes; and more good things. New jobs have been created. All these benefits are real and important.

But Marcellus gas production is both an environmental threat and opportunity. Marcellus gas drilling is an industrial activity. It cannot be done without any impact on the environment. Gas drilling must be regulated by professional, independent regulators or cops who reasonably enforce strong rules, and there must be enough regulators to provide real oversight for even strong rules make no difference if they are not enforced. Good gas drilling companies welcome this approach, because they recognize the vital role of oversight and accountability to safe operations and environmental protection as well as maintaining critical public confidence.

Pennsylvania is the only state to take seriously the need to have adequate staffing of gas oversight by hiring large numbers of new employees to increase compliance with vital rules. Since 2008, Pennsylvania more than doubled its drilling oversight staff, increasing the number of state employees from 88 to 202, hiring in both 2009 and 2010.

The new employees were paid for by raising the fee charged drillers for a drilling permit in 2008. The fee had been \$100 and never raised since first adopted in 1984. Now the fee is based on how deep a well goes and Marcellus wells pay typically \$5,000 to \$10,000 per application for a drilling permit. All the fees have been invested in hiring, training, and equipping the DEP gas oversight staff.

Additionally starting in 2008, DEP completely reviewed and strengthened all regulations governing drilling. We required as of 2008 that a water plan regulating water withdrawals be filed with each application for a permit to drill.

We put in place a tough, new regulation as of August 2010 that protects all our watersheds from Total Dissolved Solids (TDS), insuring that our drinking waters meet the Safe Drinking Water act standards. The new drilling wastewater rule is vital to protecting our drinking water from gas drilling wastewater and other sources of total dissolved solids (TDS). It is a strong rule and must be followed and enforced.

We strengthened the rules governing the design and construction of gas wells and this rule became effective in January 2011 and will soon be published in the *Pennsylvania Bulletin*. The standards are much stronger than the pre-existing rules and are now state of the art. Gas migration from poorly constructed gas wells is not a new problem in Pennsylvania and was and is now a serious public safety threat. To date too many Marcellus wells also have had gas migrate. Gas migration is preventable but contaminates water wells with methane when it is not prevented. The new gas drilling rules are essential to public safety, and they must be rigorously followed and enforced.

The content of rules and staffing levels make a difference but the direction to staff from leadership makes or breaks effectiveness. Governor Rendell and I have been clear that DEP must professionally, independently enforce the laws regulating the Marcellus industry.

From January 2008 to June 2010, DEP issued 1400 violations to the industry. Some companies had few violations per well drilled while others had too many for every well they drilled. DEP further made the companies themselves pay to clean up spills and leaks. We issued and collected fines. DEP issued orders to stop drilling and stop fracking where necessary. We required substantial compensation be paid to families whose water had been contaminated with methane.

DEP has been working to foster a culture of safety in every company that drills in Pennsylvania. Some progress has been made but it is not uniform. Some companies are constantly seeking to monitor and improve safety, understanding that the job of safety is never done. Yet, over the last 2 years, DEP emergency response teams have responded to nearly 50 emergencies associated with drilling. Clearly DEP and the industry have more work to do.

Environmental Opportunities Presented by Gas

Taxing gas drilling offers an enormous opportunity to pay for a decades long environmental clean up of our watersheds, our lands, and our air. A drilling tax could easily raise \$200 million per year to pay for restoring streams destroyed by coal mining and to finance open space purchases and much more environmental improvement. Governor Ridge enacted Growing Greener. Governor Rendell won passage of Growing Greener 2 but its funds have now been well invested and are exhausted. Pennsylvania has much more clean up to do and needs Growing Greener 3. A drilling tax that is supported by at least 63% of Pennsylvanians could finance for decades environmental clean up that could do enormous good for our environment. This is a major opportunity presented by the Marcellus gas reserve.

Failing to tax the Marcellus makes no sense and is a major piece of undone business. The Marcellus gas industry is now huge, with billions of foreign investment pouring into Pennsylvania and with tax free profits going back to China, Norway, India, and Great Britain. Every state has a drilling tax and none of those states has killed their golden goose. And the Marcellus goose is the most golden of all because the gas here is comparatively low cost to produce, low-cost to deliver to

markets in New York and Boston, and high profit. We must tax it and use at least one-third of the revenues to fund Growing Greener 3 and other environmental programs.

Natural gas is a cleaner burning fuel and so using more natural gas and renewable energy sources and less coal and oil will save lives and protect the environment. Natural gas emits no soot or mercury, unlike coal. It emits less heat trapping pollution than coal or oil (a paper that some of you may have seen authored by a professor professing to show carbon emissions are greater from gas is riddled with errors). Seventy percent of America's coal-fired power plants have few environmental controls and essentially 100% of them have no controls for heat trapping pollution. Tens of thousands of Americans each year are sickened and killed by soot from diesel trucks and coal plants. Mercury from coal burning contaminates fish, and now one out of six American women has elevated mercury levels because they eat fish.

Gas is also cleaner than oil. Just one oil well out of control devastated the Gulf. Had the BP Gulf well been a gas well eleven workers would have lost their lives but the damage done to the environment would have been much less.

Currently gas provides 24% of our electricity and heats 51% of our homes. If we were not using gas for those purposes, we would be using much more coal and oil and the impact on the environment would be very negative.

Renewable energy and energy efficiency are growing rapidly and should be accelerated further. Counting all forms of renewable energy, including ethanol, renewable energy provides about 10% of our total energy needs. In the next decade renewable energy will do well to provide 100% of just the growth in our energy demand which will likely be about 10%.

Renewable energy cannot replace coal and oil in the next decade but gas can reduce substantially both coal and oil use. We should be accelerating energy efficiency and renewable energy and increasing the use of gas throughout our economy. Doing so will substantially reduce pollution to our air, land and water.

Climate

At the direction of Act, 70 DEP worked with an advisory group to write a Climate Change Action Plan for the state. The plan contains 52 recommendations and means to reduce heat trapping pollution and would cut Pennsylvania's global warming emissions from 300 million tons per year to 120 million tons if all 52 measures were implemented. In other words the Climate Change Action Plan would cut emissions by 180 million tons. Impressively, policies already adopted like the 2004 Alternative Energy Portfolio Standards and the 2008 Act 129 cut carbon emissions by 25 million tons.

Each of the 52 plans was also subjected to an economic analysis as was the whole plan done by the best economic modeling software and a top economist. Some of the individual plans did reduce net jobs but most of the individual plans increased net jobs. How is that possible? Many of the plans reduced costs through more energy efficiency, better buildings and the like. Others increased production in agriculture or forestry. Overall the plan would create a net increase of about 60,000 jobs.

A great deal of work remains to be done in climate.

Conclusion:

Pennsylvania is cleaner thanks to Governor Rendell, the Department of Environmental Protection and its public servants, and those who toil to protect our environment. Thank you again.

Carved into the Capitol are these words: "Do the right thing and trust the consequences to infinite wisdom." We have tried to do the right thing and now is the time to transfer these responsibilities.

For sure, more work remains and the responsibility of protecting and restoring the state's environment passes to Governor-elect Corbett and soon to be Secretary Krancer, from whom we will need leadership and to whom we must offer our help.

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