STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

IN RE: :
:
CLEAN AIR COUNCIL :
PUBLIC HEARING :

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TRANSCRIPT of the stenographic notes of the proceedings in the above-entitled matter, as taken by and before MARY G. VAN DINA, a Certified Court Reporter and Notary Public of the State of New Jersey, held at the New Jersey Department of Environmental Protection, 401 East State Street, Trenton, New Jersey, on Wednesday, April 14, 2010, commencing at 9:30 in the forenoon.

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JOYCE PAUL
NICKY SHEATS, ESQ., PhD.
JOSEPH SPATOLA, PhD.
KENNETH THOMAN
JUNFENG ZHANG, PhD.

MR. HANNA: We've got just about everybody in here. Good morning, everyone. Nice to see such a nice turnout here. My name is Toby Hanna, Vice-Chairman of the Clean Air Council, filling in

today for the Chairman's duties, our Chairman, Dr. Leonard Bielory, who tells us he's in China. I trust that. I was going to be in China also, but I'm here instead.

So we're going to do a couple of brief introductions. Let the council introduce themselves and talk a little bit about ground rules.

Everyone, I hope, knows and understands the role of the Clean Air Council in New Jersey.

In accordance to the New Jersey Air Pollution Control Act, there is to be a council as the advisors to the Commissioner and DEP of New Jersey to help advise on clean air policy matters and other clean air issues.

That's been long-standing, and we have esteemed council with representations across many associations and the public in New Jersey.

I'll let them introduce themselves one by one. I'll start. Toby Hanna. I represent the New Jersey Society of Professional Engineers, and the company I work for -- I'm an environmental consultant

working for Environmental Resources Management.

MR. BLANDO: My name is Jim Blando, and I represent the New Jersey Department of Health and Senior Services.

MR. LAUMBACH: Robert Laumbach, and I represent the New Jersey Industrial Hygiene Association.

MR. EGENTON: Good morning, Mike Egenton. I'm with the New Jersey State Chamber of Commerce.

I handle environment, energy and transportation issues for the association.

MR. BROGAN: David Brogan, representing the New Jersey Business and Industry Associates.

MR. SHEATS: Nicky Sheats. I'm the Director of Center for Urban Environment, and for Watson Institute for Public Policy, Thomas Edison State College, and I'm a member of the New Jersey Environmental Justice Alliance.

MS. MOUNT: Pam Mount, Councilwoman for Lawrence Township, representing the League of Municipalities.

MR. FUENTES: Manuel Fuentes, appearing on behalf of Probus Test Systems.

MR. THOMAN: My name is Kenneth Thoman. I represent New Jersey State AFL-CIO.

MR. ZHANG: Junfeng Zhang from UMDNJ, School of Public Health.

MR. GEDULDIG: Howard Geduldig, public member.

MR. ELSTON: And I'm John Elston, public member.

MR. CONSTANCE: Good morning, Joe Constance from the New Jersey Economic Development

Authority.

MS. PAUL: My name is Joyce Paul representing New Jersey Department of Community Affairs.

MR. SPATOLA: Good morning. My name is Joseph Spatola, and I represent the public.

MR. HANNA: Thanks very much. We have just about all of our members here, I guess, minus Dr. Bielory. I won't do a head count, but that's great. Thanks for coming.

This is our annual public hearing. We're obligated and it's our pleasure to present an annual public hearing every year, and this one was chaired and pulled together mostly by Jim Blando, who I am going to introduce now to introduce the session

today. Thanks very much.

MR. BLANDO: Thanks very much. Well, thank you all for coming today and thank you very much to the DEP for our advisory group here.

We have a long history. As Toby mentioned, the Clean Air Council actually started in 1968, I think it was. So we have quite a long history here.

New Jersey has a long history of being a very progressive state when it comes to environmental issues, and that's what made this topic for the public hearing so important and interesting.

The title of the public hearing is

Vision for the Next Decade: Air Quality and Air Pollution Control in New Jersey.

Our intention is to make this public hearing very informative about air quality in New Jersey, and we're particularly interested in quality, such as innovation and creativity, and we're looking forward to hearing from our invited speakers and from our public today.

Just a couple of things for the meeting. There will be a break for lunch. There is a cafeteria in this building, which is on the other side of the lobby, the bathrooms, you probably have

already found them, but they're right outside the doors here.

Generally speaking, the format for the meeting is the Clean Air Council folks typically ask the questions of the speakers.

However, if you do have a burning question, you can hand that question in written form to Sonia Evans, who is the Clean Air Liaison. Please raise your hand.

If you have any questions, you can hand them to Sonia, and we'll certainly consider asking the question, and we'll certainly address that particular question in our annual report.

There are also public speakers at the end of the session today, and you can certainly sign up to speak at the end of the Clean Air Public

Council Public Hearing today.

Also, if you can silence your cellphones, that would be greatly appreciated.

Without further adeu, let me introduce our first invited speaker, Dr. Junfeng Zhang, who is a member of the council, who will be giving the first presentation.

Dr. Zhang is from Rutgers University, Piscataway/New Brunswick campus of UMDNJ and Global

Public Health Initiative and Professor and Chair of the Department of Environmental and Occupational Health at UMDNJ School of Public Health.

Dr. Zhang has been a member of the Clean Air Council since 2005 and represents the New Jersey Health Officers Association.

Dr. Zhang will give us a talk on the history of air quality control in New Jersey.

DR. ZHANG: Thank you, Jim, and good morning everyone.

So I was asked to give a history of air pollution in less than ten minutes or so, and I think that's a huge task, and, also, put that history of the air pollution into New Jersey perspective. So I will try to do that within the next ten minutes.

Next, please. Let me start with this very infamous event in London, 1952, December. This is what the sky looked like. This is midday picture and you can see that the bus, they have to turn on

the headlights because, otherwise, people won't say anything because the visibility is so poor, and you'll see those are people walking, and it will be very easy to bump into each other.

But here, you notice that this particle levels are about 3,000 micrograms per cubic meter.

Just to give you perspective, outside of this room, in Trenton, we probably talk, what about 15, 20. That's the level. This is 3,000.

Of course, the measurement was not as precise as what we do today, in terms of, you know, size or particle measures, that kind of thing. I tried to give you an idea about the levels back to that time.

Next, please. And what was remarkable about this, only the city or only an episode that occurred during that period of time in our history, around 1950s, there is numerous of this kind of air pollution episodes that occurred around the world, major and industrial centers, that this one became so sort of, you know, famous in the air pollution history is because, I think, only because of the data.

You can see, within a week here, because the poor weather condition in the air pollution got trapped, that it accumulated within about a week, and you can see when the smoke level, which is the -- whatever that looks to you. It looks different from

here.

And, also, sulphur dioxide, when those pollutant level go up, you can see the daily death

rate goes just as the trend, so remarkable kind of epidemiological findings, and because of that, before that, many people thinks air pollution is dirty. You look at it, and, you know, NOX, poor visibility. Looks oddly, but this is actually showing that not just look not nice, that it's actually killing people.

I think, really, this sort of steered the UK Parliament, you know, to talk about what we should do about air pollution.

Probably, this the opening of the new chapter for modern air pollution control legislation.

As I said, that's not the only place. This is Pittsburgh, which is not far from New Jersey on the left.

I don't know which year, but this is preindustrial period. This happens probably a couple of times a year during those severe episodes.

Next, please. Today, of course, you see there is a big difference. Right?

Next, please. So this is another photograph about the air pollution episode. This is New York City in November, Thanksgiving, and so this is probably 1960, '2 or -- next, please.

So now this one is showing that when

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coal was used in NYC, in New York City, before '65 or whatever, and you can see that for sulphur dioxide concentrations way up in the air, and once the coal burning was banned, there was a very sharp reduction of sulphur dioxide concentration, and this is when EPA was formed in 1971.

You can see sort of -- further SO2 coming down. Of course, if you put today's levels, they're probably close to zero, if you use the same scale.

Next, please. We have much better data, but this is showing the sulphur dioxide from 1952 to 2008.

This is a measure of the average for the whole of New Jersey, the highest concentrations measured in one site, and the lowest. You can see the trend is very clear. The concentrations are coming down steadily.

Next, please. And this is concentrations by PM10 -- must be -- I can't remember when the TSP measurements were switched to PM10. If historical, we have total suspended particles, and there must be some kind of conversion or whatever.

So, anyway, you can see when this is the time when EPA is formed and New Jersey shows the PM

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levels are again coming down. All good news.

Next. This is ozone. Ozone from 1990. This is more recent.

You can see, for the last two decades, you can see the ozone concentration looks like there is a decreased trend, but not that dramatic. Right?

Next. So just to have a very quick kind of look at the historical trend, we can see that New Jersey has substantially improved air quality and reduced unhealthy levels of air pollution.

It shows SO2 particles and didn't show NO2, but I know that you have a similar decreasing trend. So reductions to meet the standards, because, EPA kept revising these standards. You know, every time you have a revision, the standards get a little more stringent, but, you know, for most of the pollutants, actually, today, we actually have levels that are below for especially SO2 and carbon monoxide particles.

We still have a few days each year that are not meeting to the standard but, in general, that air quality, those criteria pollutants are getting better, and the other reasons, sound implementation plans and regional and local strategies because, as we know, that a lot of the New Jersey pollutants are

transported from other states, especially particles like sulfate, a major component for particles in New Jersey that actually was -- we got it from, you know,

power plants from the Ohio Valley, those kinds of things.

So it's not just New Jersey's effort. New Jersey did, you know, lots of work effort to improve air quality, but others throughout the United States did similar things in the last, what, 50 years or so.

Next. So now just think of really -- you know, sort of, you know, historical trend and before -- let me spend the next few minutes to talk about really what matters to health, which is contact with the pollutants, or what we call exposure, and we all know that famous toxicology principle, whatever, there's the dose that makes it poison. So it's the dose and the health effect.

So if I look at how people get in contact with air pollution, where the air pollutions are, and what means for the -- you know, if you look back to the history, you know, and look at today's situation, and what the future would look like, so to have some personal perspectives from this standpoint.

Next. So contact with air pollution,

historically, just about anywhere, because the major source are the outdoors, very high pollution levels, an important consideration.

So you saw the pictures I showed, Pittsburgh and NYC and London. That's what you worry about. You worry about -- you cannot see the sky.

That's still the situation in Beijing.

They judge the air quality based on blue sky days. In Beijing, they still calculate each year how many blue sky days.

Today, we probably don't have that kind of situation. Does that mean our air is perfectly safe? It's historical what we do. Houses were not well-insulated with a high air exchange rate, so pretty much, what do you breathe inside of a building is all sort of coming from outside, and very little air-conditioning used back to '50s and '60s and more urban living, people more living in, you know, cluster centers or cities or whatever, and less travel.

So those are all going to fact the actual pollutant people actually are inhaling.

So next. So, currently, outdoors is still a dominant for some pollutants but at much lower levels. We saw that SO2 is much lower, and

carbon monoxide is also much lower, but indoors, especially for some pollutants like volatile organic compounds and volatile organic compounds will be higher outdoors, even for carbon monoxide.

Many of the carbon monoxide problems are not from outdoor areas. If you have some incidents or whatever reporting because you have a function furtherance, and if you have a leaking pipe or that kind of thing or a stove that, you know, kept

leaking. So a major source switched for some compounds.

Transportation, more suburban living. We all -- all ho live in New Jersey know about that. That means more transit time. We're stuck in traffic more and we spend more time inside the vehicle and the ongoing exposure, that kind of thing happens.

Next. So what -- challenging issues now is to have healthy communities and environmental justice issues, because as I said, it's no longer like -- you know, if you look at London back in those days or Beijing, if you go -- if you are lucky, in the spring, you've got to see a sandstorm, or in the summer have a major for the chemical smoke episode.

You can smell ozone, and you can see the particles, but, you know, with this sort of under the

blue sky, but even in London today, you don't have that, but just the last week or so, London's mayor announced that air pollution in London causes 4,000 premature deaths a year in London. This is before Olympics, the 2012 Olympics, you know, environmental people are trying to make an effort to further improve the air pollution and air quality in London.

So we hear, we know that even with the blue sky in the whole United States -- I forgot the number from last night. It was late, but we talked about a substantial amount of people dying from the current levels of air pollution, of particulates.

Now, people talk about what is really -- what is really causing these problems. Is it SO2, less likely. CO? Some people say no, it's the particles, and the particles are very complex mixture. It's not a single solid ball. It's a mixture of hundreds other chemicals, maybe some biological agents sometimes attach to that.

So it's very complex. We don't really know which one is causing these problems and the air toxics, of course, you know, from an EPA standpoint, you have a criteria of air pollutants and EPA standard, you have so-called air toxics or hazardous air pollutant tests.

Those we've really have made very little effort to understand and to control them, and the pollution hotspots -- we know that within New Jersey, that different places have different levels of pollution, and we know that there's a huge disparity between and among the communities.

Some inner cities, we have asthma reads in children of 20 to 30 percent, and the average was below ten, so what's going on? You know, is air pollution really contributing to those increased health problems in those communities?

Now, you can get more complex -- you know, we're still trying to understand the twin community disparities. New studies, especially in Sullivan, California showing, within a community,

there is a small area, that if you live 50 meters or closer to a major highway or major roadway, the health outcomes, air pollution levels are much higher compared to, you know, just a little bit away from that major road, and now there is, you know, a health outcome differences, that sort of thing.

So it's really very complex from a scientific standpoint.

Of course, from a quality standpoint, how are you going to do this, you know, if you

require such a refined spacial resolution or spacial scale.

Next, please. So. Of course, you know, future is hard to predict for anything, and for air pollution, same. So types of sources outdoors for the foreseeable future most will be the same.

We're still going to be dealing with particulates. We're still going to be dealing with carbon monoxide and NOX, which is nitrogen oxide, but we know that -- we probably hope or we know that there will be energy structure changes, we hope so, in this country and globally, so this council have -- in the last couple of years, we've had a public hearing talk for energy conservation. Other topics is here, and that's what we all see as a potential to change.

The distribution of the energy sources, what does that mean to the contact air pollution,

sources of air pollution, and so those are the things that are going to get the picture very complex.

I think we require people to do some policy analysis, to set up hypothetical scenarios about all of those changes to come up with a prediction of air pollution pictures, and -- and what kind of policies should be designed to accommodate

the changes in these major issues.

Of course, I think the key is we need a good science. We need a good technology and public awareness. We did this a couple of times.

Many things that the public knows about the issue, if you wanted to do something, like, you know, energy efficiency, you try to do small things to help this and, of course, if you have all of those things, if you don't have a sound policy, then I don't think -- you can look back to the history. If we've got air pollution regulations without policies to desire that, specifically to improve air quality, we probably still seeing the skies like in the '50s in Pittsburgh or New York City.

With that, I conclude.

MR. BLANDO: Thank you, Jim. Do we have any questions from council members.

Jim, I just have one question. Typically over time, we often see that, as we develop more sensitive epidemiological methods, we often find that we see health effects at lower and lower levels.

When you look to the future, and you look at things like the ambient air quality standards, do you think that trend will continue or do you think we'll of ever reach a level where we see

de minimis adverse health impacts at the levels that were set?

DR. ZHANG: I think that's a good question.

You know, true, the techniques, the statistical methods are getting more and more sophisticated, more sensitive. So that allows you to detect the fact that cannot be detected, you know, 20 years ago or whatever years ago, but on the other hand, the question is whether we are really find that smoking gun. That's what I was saying.

For example, particles, we know if you measure TM10 or TSP -- or no one measures TSP now -- TM10, TM2.5, that you have a clear reduction, but whether that's the real -- real, you know, smoking gun, because we see that people says ultrafine particles.

You know, in London, my own work and some others are reporting, with the diesel control, new diesel controlled technology, the particle PM10, PM2.5 emissions got reduced, but at the same time, the ultrafine particles, there are some a couple of hundred nanometers, those particles actually got increased, and our NOX got increased because of those

things.

So I think it's those multiple factors that are really hard to sort out.

MR. BLANDO: Thank you, Jim. That was an excellent presentation.

Without further delay, I want to introduce to you the Commissioner from the Department of Environmental Protection, who has agreed to come and speak to us today, Bob Martin.

Thank you very much for supporting the Clean Air Council. Without further adeu, please.

MR. MARTIN: Thank you all very much, and I want to thank the Council very much for the work they do.

My first dealings with the Council, and I want to thank all of you for what you do to be part and part of this Department.

My understanding is, kind of looking into the history of this Council, that it's been in place since 1954, which is incredible in itself, kind of well before Earth Day of 1970.

As you know, we're coming up to our 40th birthday, and it's amazing that, you know, well before then, almost 20 years before, about 1970, we had an organization in place that started looking at the air issues in the state and started looking at

how we're going to address the environment of this state going forward.

So I thank you for it, and I thank your for your contributions.

Again, we have so many different boards and councils in this state that provide us with an incredible amount of information that we need to have and that we must have.

A big piece of the administration that both the governor and myself are committed to, that this department, and many of you who already know me, have heard this many times, but we're going to be committed very much to science, to data, to facts, to cost/benefit analysis, to make sure that whatever we do is based upon science, and as we continue, we're go to be setting up a science advisory board over the next few weeks.

I've talked to Rutgers -- representatives from Rutgers University and talked to several professors, and many of the esteemed colleagues in this group have the background that I need in both the science part of it and, honestly, real world experience that we need to bring to the table.

So for me, for having this group -- and

that's why I chose to come down here today. I really

wanted to both thank you, but also look forward to working with you in the future.

I know you're talking about your theme for this upcoming year, and the major issue you're going to focus on is the vision for the next decade in clean air.

To me, that's extremely important. We're going to be looking forward.

One of the things that I look forward to in the vision of the governor is to start to address the kinds of clean air concerns that we have.

As you know, about a month or so ago, I was up at the Port Authority, where we've gone forward with working with EPA and the Port Authority for all the diesel retrofit work for all of vehicles up there, which is actually amazing.

Besides the pollution that blows towards New York City, the amount of air pollution that we have in New Jersey is just immense, and to see those kinds of projects coming forward with us is extremely important. That we're getting organizations, large organizations to work with us on diesel retrofits and other types of air pollution systems, to me, is extremely important, and we're going to continue to

focus on that and we want other organizations to come forward.

Another key component to it is going be all the green energy part. We're going to push very

hard and very quickly ahead on all the offshore wind, and that's going to be a major push from the governor's side of it. Everything we do on building those offshore, putting up 3,000 megawatts long-term or at least, medium term, if you will. Long-term will be more than that, but also, all the manufacturing and assembly of all of those wind turbines here in New Jersey and leveraging the ports that we have here in New Jersey.

So, to me, as you start looking at, you know, pollution and moving off of coal and moving to -- at least natural gas to us at least gives us the least carbon footprint and kind of the lower levels of NOX and SOX coming out.

I think it's extremely important that we continue to build green energy. Solar is going continue going forward.

Another major initiative that I'm working with now and trying to frame out for the governor is the electric vehicles and an electric vehicle infrastructure.

That, to me, given the fact that we have so many cars on the road, both in the inner cities and on our highways and all the ones that come through this state, we know that's a major portion of the pollution in this state.

We need to address that going forward. So we are now starting to frame a long-term plan that

looks at both the building of the automobiles, which I know a lot of companies have stepped up to start doing that, but probably even more importantly, what we want is the infrastructure.

Just having the vehicles is one thing, but we can't move forward without having the infrastructure built, and that's a part of the big plan, and we have several people in our organization that are already looking at that, but that's a commitment that I want to make and the governor wants to make to make sure we're moving forward on that front.

Another commitment the governor has made and I made also is that we are going to say no to coal in New Jersey going forward.

We've gotten a lot of companies to be very cooperative with us, working in companies such as -- you know, PPL is amenable to either closed

power plants, and the ones they do have operating, they've been able to put the filters on those, but there's still some power plants in Pennsylvania that we need to go after, the Portland plant. We're in litigation over that.

We're going to continue to go after that. We're not going to back off on those kinds of litigation, where pollution is coming to New Jersey. So from a commitment from my side, from my department, from this department, and I thank my

employees because there are several of them in here that are incredibly important to that.

Air pollution will be a priority for us going forward. It's a priority for the governor. I look forward to working with all of you.

I look forward to having you provide us the recommendations that we need, and my understanding is, from the past, and from what I've seen, what you've given us in the past is some commonsense recommendations on how to solve problems going forward, but bringing the science with us and looking forward to how we do that.

We're going to transform DEP. We're making a lot of changes here with our organization. We've got an incredible group of people at DEP, and I

want to tap into those resources to help us on all fronts and all the priorities that we have at DEP, but, again, one of those few priorities will be air, and we'll continue focusing on that.

In closing, you know, the most -- again, I'm only here 12 weeks. I'm still learning. It's an important job to me.

I'm very committed to the environment of this state. The governor is very committed to the environment of this state.

We're going to push initiatives that protect the environment first, and will always be number one priority for me, and is priority for the

governor. He understands that, and the governor knew me well before he appointed me to this job and knew my priorities in the state, but at the same time, we need to grow the economy of the state at the same time, and that's where I think the balance comes in from both the employees, from helping me think that through, from all those in the community to help me think that through, and most especially from the Council, how do we find that balance of being able to protect the environment, you know, cut air pollution in this state, because we know we have air pollution issues in this state, and we know we're below

standard on that.

Unfortunately, we're dealing with a lot of pollutants within our state, but we're still dealing with pollutants that come from other states than New Jersey, and we're going to continue to fight that.

So I thank all of you have for your help on that front.

Also, we've been tapping into the Environmental Justice Council here, and that's a point we need to address from a New Jersey point of view.

We have many communities in New Jersey where environmental justice, you know, is not working.

We need to look at the communities that

have, you know, all types of pollution, but a major piece of that pollution is air pollution in a lot of those communities, and so, as the Council looks about where they're going for the future, and what we'll be addressing for the future, I would ask you to help meld in a lot of the issues around environmental justice, because there are communities within this state that have been burdened and overburdened with a disproportionate amount of pollution that we need to

address and especially air pollution.

So, in closing, I thank all of you. I look forward to working with all of you. I thank my employees from DEP for your involvement, and I thank the community for your involvement and your concern with the Clean Air Council, and I look forward to working with you in the future.

Thank you very much.

MR. BLANDO: Thank you. Well, thank you, Commissioner Martin, for coming and participating in this meeting. We greatly appreciate it.

Our next speaker is William Baker. Bill is the EPA, Air Quality and Air Senior Policy Advisor with over 40 years of experience in the field of air pollution control.

He has served in both managerial and technical positions in the USEPA regional office in New York City and elsewhere within the Federal

Government, and he will be speaking about the future of EPA air quality programs for the next ten years.

Bill?

MR. BAKER: Thank you. Good morning. I've been asked to talk about the future EPA air pollution program for the next ten years, and to

think about what I was going to say, I realized that I was given 15 minutes to do so, which comes to about one and a half minutes per year.

I'm only going to be able to hit the highlights of what's occurring, quite honestly, though I was encouraged, when I looked at agenda and saw that there were other speakers who will be elaborating on some of the things that I'm going to just touch upon.

Let me start with talking about the past rather than the future, and the Commissioner mentioned that it's going to be the 40th anniversary of Earth Day on next Thursday, the 22nd, and I was actually in Region 2 EPA. Well, I wasn't in Region 2 EPA.

I was working for the Federal Government in air pollution control in New York City in 1970. The EPA had not been formed yet.

It was with the federal agency that dealt with air pollution. The environment was new. Everybody was excited about doing something about pollution.

23 At that time, even the states liked us
24 and, obviously, we got a lot of requests for speakers
25 because there weren't that many people that could

1 talk about the environment or that knew about it, and
2 I found myself in a middle school on Staten Island
3 talking about air pollution, and I got my material
4 from North Carolina, where we still have our
5 technical headquarters, and it was a slide
6 presentation. That was back in the days when we used
7 slides, and it dealt with what were the sources of
8 air pollution. Where did air pollution come from,
9 and the whole thrust of my speeches was to get across
10 to these middle school kids that air pollution comes
11 from us. It comes from our activities, from human
12 activities.
13 So in my best new speaking way, I got up
14 before this auditorium, and I said to these kids, who
15 causes air pollution, and almost a single voice that
16 yelled "New Jersey."
17 And if you think about it, this was on
18 Staten Island, right across the Arthur Kill, from the
19 refineries and all the heavy industry in New Jersey,
20 and we saw some slides about what it was like 40
21 years ago, and I'm happy to say that things have
22 improved significantly.
23 Maybe I'll try to get a speaking
24 engagement in New Jersey and see what the answer to
25 that question would be 40 years later.

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On January 12 of this year, Administrator Lisa Jackson, who I think people in this room know her, came out with a memo to all of EPA's employees, where she laid out seven key themes, which, in her words, were to be used to focus the work of EPA for the future, and these are the themes that she outlined.

The first two things, taking action on climate change and improving air quality, are obviously extremely pertinent to what we're going to talk about today, and I'm going to elaborate on these two.

However, I don't want to lose sight of the fact that the other five themes also have an air quality component to them, and I may have some time to touch on these, but if I don't, like I said, I think some of these will be talked about by other speakers.

Let me just mention them: Assuring the safety of chemicals, cleaning up our communities, protecting America's waters, expanding the conversation on environmentalism and working for environmental justice and building strong state and tribal partnerships.

Lisa Jackson's number one theme is

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taking action on climate change, and as you know, up until recently, the Federal Government has not been very aggressive in addressing the climate change problem.

Hopefully, this is changing, but this is the question that we have, and it's probably the number one question for the future.

How are we -- and we can be defined in a lot of different ways. It can be defined as EPA. It can be defined as Congress. It can be defined as the entire United States, the developed world or the globe, but how do we deal with this, the biggest problem, the biggest challenge that we've seen to date and, again, when you talk about biggest, you can find this as the most widespread, the one affecting the greatest number of people, and the problem that's going to have the greatest impact on the global economy, and that can be both a positive impact, which we don't tend to think of, as well as a negative impact.

Now, I'm not going to, obviously, attempt to answer this question, but I do have an answer as it applies to the United States, and that is, it depends, and if -- there are two legislative options or tracks that are currently on the table,

and one of them, and the one you probably have heard the most about is enactment of new clean energy or climate legislation, and I should say, and/or climate

legislation.

The other one is the one that is probably less efficient and may be less effective, but the one that Administrator Jackson is committed to, and that's to implement the current 1990 Clean Air Act, to get those or get us down the road to starting to control greenhouse gas emissions.

Let me provide a little detail on these two.

As far as the legislation, I think most people know that, back in June of last year, there was a climate change bill that passed the house, the Waxman-Markey bill.

It was a close vote, 219 to 212. This is what we call a cap and trade bill. It sets a limit on the amount of carbon dioxide that can be emitted to the atmosphere, with a target for 2020 and 2050, a 17 percent reduction by 2020, an 83 percent by 2050, and this is looking at the 2005 base, and it has the features of a cap and trade system in that it gives allowances to the states, and then these allowances are traded among the sewer system

emissions.

There is not a senate bill as of yet, and there have been several bills that have been floated and several ideas that are floating around.

Right at the moments, probably the most viable is a bill that was developed by Senators

Curry, Graham and Lieberman.

This is a bi or tri partisan bill, depending on how you want to define it.

This was interesting. It was not developed at a committee. It was developed through closed door sessions with the various stakeholders and discussions that took place, and it's been sort of leaked out due to the ideas behind it, but it still needs a lot of development.

What we do know, at least for the moment, that the targets are very similar to the house bill, 17 percent by 2020. This has 80 percent by 2050.

It has features where there are allowances that are sold and traded, but it also has a carbon tax in it, where there would be a fee or tax paid by consumers at the pump on transportation fuels, and then this money would go back to the consumers from the -- this and the sale of the

permits.

So this is being called a cap and trade bill and a cap and dividend bill. This is another title. We'll see where these go.

If we don't get a bill, and maybe even if we do, but we don't get it in the near term, we're going to be moving ahead at the EPA, unless we're stopped, in implementing the 1990 Clean Air Act, and this is an outline of various aspects of that

strategy, of implementing the act, and each one of these represents a part of the strategy and, actually, one feeds into the other.

I'm going to try to go through this very quickly, but, actually, this is somewhat complex.

The start is this Massachusetts vs. EPA, which was a Supreme Court decision from April 2, 2007 and, basically, EPA was sued because we would not acknowledge that greenhouse gasses were a pollutant and, basically, what the Supreme Court said to us is make a decision. We're not telling you what that decision is, but you have to make a decision as to whether greenhouse gasses are a pollutant that endangers health, and that comes from a -- actually, a couple of provisions under the Clean Air Act that says that when there is a determination that a

pollutant causes or contributes to air pollution, which may be reasonably anticipated to endanger public health or welfare, that EPA has to do something about it.

So the first thing is making this endangerment finding, and the Supreme Court says, EPA, you have to make the finding. You have to say or no. You can't keep straddling the defense.

On December 7, we proposed an endangerment finding, with was finalized April 24, 2009, and, basically, we found that a mix of six key greenhouse gasses threatened the public health and

welfare and deregulated it.

So that sort of kicks things off, this finding. Now, as you probably know, there are efforts in Congress and in the courts to reverse this finding.

EPA is of the position that this finding was a scientific technical finding. Others believe it was more of a regulatory finding, maybe even a political finding, and that they're attempting to reverse it, and there's some very strong efforts to do that.

Anyway, once this finding was made, then we had to do something under the Clean Air Act about

the emissions of greenhouse gasses, and the next thing listed up here is greenhouse gas emission standards for light-duty vehicles.

The final law here was signed on April 1, just a little while ago, and why this is important, this is a rule that came out of EPA and National Highway Transportation Administration under CAFE, the program that sets the vehicle mileage standards, and why this is important is because this actually triggers the greenhouse gas controls that we are proposing under the Clean Air Act.

Once we regulate something, then it triggers other parts of the act. Then that's defined as a pollutant, that needs to be regulated and requires the regulation of the pollutant under other

parts of the Act.

So this will be the trigger. Skipping for a second, the tailoring rule, the Johnson memo reconsideration is actually what will determine when the regulation of greenhouse gas starts, and basically, what was said under this reconsideration, is when the rule actually takes effect, the triggering rule takes effect, then you have to start doing stuff about these other pollutants that are affected by that rule, if that makes some sense.

The triggering rule was the motor vehicle standards these take in effect in January of 2011. So that's the date the greenhouse rule will go into effect, according to this memo. You see how the two relate.

Now, what is going into effect on that date is this thing called the tailoring rule, and what the tailoring rule is it takes the existing permitting requirements under the Clean Air Act and applies them to greenhouse gasses, but those of you that know about carbon monoxide and where it comes from and some of its properties know that if you took a straight reading of the Clean Air Act as to what sources of carbon monoxide require a permit, probably, if you have a gas stove in your house, you would probably have to get a permit from EPA to operate that gas stove.

So something had to be done to avoid

being totally overwhelmed by small sources of carbon dioxide, and that's what this tailoring rule does.

It makes a legal interpretation that the permitting requirements only apply to very large sources of carbon monoxide, and the other greenhouse gasses, and instead of a hundred to 250 ton per year trigger, it raises this to sources that are 25,000

tons per year and so, come January 2011, the sources will begin to be permanent.

The lat thing I want to talk about is this greenhouse gas reporting rule. This is a little different than the other things that I talked about because, first of all, this actually was not triggered by EPA under the Clean Air Act.

It was triggered by Congress under an appropriation bill. This, basically, as the name implies, is a rule that requires large sources of greenhouse gasses to report their emissions, so we have that information and can use that in planning.

The next slide deals with another key thing. This is improving air quality.

This basically relates to continuing implementation of those other provisions of the Clean Air Act, the more conventional parts of the Clean Air Act, and I should point out, these are the parts that have brought us those air quality improvements that I referred to and were referred to by our first speaker and those things that we've seen in the last 40

years.

A couple of things that are covered under this are the program that deals with national ambient air quality standards, the Air Toxics Program

under the Clean Air Act, something called the Clean Air Act Interstate Rule, +which deals with a topic that was mentioned by the Commissioner, and this is the interstate transport of pollution and, of course, the permitting programs, the New Source Review and Prevention of Significant Deterioration Planning Program under the Clean Air Act and the enforcement program there, which is somewhat carried out by the EPA but of course, mainly being carried out by the states.

I want to elaborate a little bit on the National Ambient Air Quality Standards, because this keeps the states very busy, and I think you'll hear from some other speakers about how busy the states are in dealing with this.

This is the program where EPA sets these health-related ambient air quality standards, and these become goals for the state program.

The state has to develop a controlled program to meet the standards.

There are not that many ambient air quality standards because these standards deal with the ubiquitous pollutant problems around the country, but what has happened over time, and these have been

around for a long time, they even predate the Clean

Air Act, but what has happened is, as we look at the health effects of pollution, we have found that we require greater and greater control in order to meet the standards, and so we've tightened the standards based on that, as we're required to do under the Clean Air Act, and the states have had to revise their plans.

These are the things that are currently active in 2010, and as you see, there's a lot of them. We've just have finalized a new nitrogen dioxide standard, and, here what we did is we added a one-hour standard to the annual standard that previously existed.

Under the annual standard, I think there was one area in the country that was exceeding it. It wasn't a problem, but we controlled nitrogen oxide as it related to the ozone problem.

Now we have a one-hour standard, and there's going to be required monitoring near roadways, and I think when we do this, there may be some problems that might be uncovered.

The sulphur dioxide standard will be finalized in June. Here, again, we're replacing the 24-hour annual standard with a one-hour sulphur dioxide standards.

Right now, there are no violating areas in New Jersey of the sulphur dioxide standard. There is one area in New Jersey that's designated non-attainment in Warren County, but that's based on modelling, not actual monitoring.

We'll have to see what happens after we get the new standards in but, currently, we're okay.

The ozone standard. This is, as you say, it says reconsideration rather than setting the standard.

We had set an ozone standard. When the new administration came in, they took a look at what was done and determined that it had to be redone, and that's what this reconsideration is about.

This is going to occur in August, and what's going to happen is that the eight-hour standard is going to be tightened.

We don't know exactly how much. There's a range in the proposal, and there is likely to be a secondary standard.

The secondary standard protects against other than health effects, and the secondary ozone standard will be protect against damage to vegetation.

It's going to be on a form that we're

not used to looking at and, also, where we're not

doing a lot of monitoring. So there's going to have to be changes where the monitors are located, and we'll have to get used to looking at a different type of ozone standard for a different purpose.

Later this year, in October and in November, there's going to be a carbon monoxide standard that's going to be proposed.

It's unlikely that there's going to be any new problems that are going to be uncovered.

I remember, 40 years ago, coming to New York City, and the entire New York City was just over-covered. Anyplace you dropped the monitor in Manhattan, you would find a violation of the carbon monoxide standard, and I never though that problem would be ever dealt with, but with the motor vehicle controls that we have today, it's been many, many years since you've seen a carbon monoxide problem anywhere in the country for that matter.

The big one, and this, again, has been alluded to, is going to be particulate matter, and this is going to be changed, tightened. The formatting standard might even be changed.

Next to climate change, that's probably going to be the biggest challenge.

MR. BLANDO: I'm sorry. Bill, we're running out of time. I just want to give the council a chance to ask some questions.

MR. BAKER: Well, I was going to say,

we're running out of time so I'll be happy to answer questions.

MR. BLANDO: Questions from the Council?

MR. EGENTON: Given that congressmen seem to have the willingness to touch on this issue, at least and the President, and I believe it seems as though it's the same way after going through difficult times with the healthcare issue, where -- if the endangerment finding is overturned, where does that leave the EPA?

MR. BAKER: Up the creek.

MR. EGENTON: Is it completely or is it --

MR. BAKER: First of all, when you say "if the endangerment finding is overturned," you're about legislation that has been passed. That's gong to be challenged.

First of all, the bill would have to be signed by the President. Just keep that in mind.

My personal opinion is that it's not going to be easy to overturn the endangerment finding

because, as I said, it is a scientific finding, and I think, to most people, the science is pretty clear. So that's the way I would answer that.

MR. ELSTON: You mentioned that a greatest challenge would be particulate matter. A lot of the communities look at those two together, climate change strategies and particulate matter

concentration.

Is that being considered at all within the EPA, to your knowledge?

MR. BAKER: Yes, if I had more time, one of the things and a couple of places I was going to stress is that where I think we are moving in EPA and where the states are moving is to, you know, not look at these problems individually, but look at them as a collective air quality problem, look at the interaction among the sources that are contributing to the problem and looking at the control strategies, how they affect the various problems, and making sure that we pick the most effective strategy overall. So, yes, that is being considered.

MR. BLANDO: John?

MR. EGENTON: Yeah, Bill. This hearing is looking ten years down the road, and we can expect to see short term.

What kind of efficiencies do you think might happen? And I'll give you an example.

Looking at the Clean Air Act, and there you have five pollutants, all of which have to go through individual SIP processes, stage planning, implementation planning, which all require a great deal of resource work by our staffs, both the EPA and the states.

Is there any thought about consolidating a lot of this work and making it more efficient

because, after all, a plan is a plan only and doesn't reduce or doesn't improve the air quality.

That's my one question. The second question is, assuming that we go into an air pollution or a climate role for CO2, and if, in fact, the endangerment finding holds up, is it likely that CO2 will become a criteria air pollutant.

MR. BAKER: Well, let me answer your last question first. No.

I have not -- I think anybody who works in this field, regardless of where they're coming from, and I include the environmental community, industry, government, anyone who understands air pollution recognizes that making CO2 a criteria pollutant would be just the wrong way to go.

The SIP process was never designed to deal with that kind of problem, would not work dealing with that kind of problem, and I think you get tremendous pushback approaching it.

To talk about the -- you know, the first part of your question, you know, as well as I, that we're dealing with an act that was not designed to address the kind of problems that we're seeking today. That definitely is out of date.

Do I think of that it's going to be revised? Given the political situation, not in the near future.

I think it will probably be replaced by

other activities, hopefully, by climate change legislation, which will modify parts of the Clean Air Act by making them inactive, so that they're replaced by what's in the climate change energy legislation.

In the meantime, as I answered your question about environmental justice, we are doing what we can under the existing legislation. When I say "we," it's both the EPA and the states, to try to do things as efficiently as possible, to recognize these interactions, to try to streamline towards that planning, but you always have to come up against those legal requirements and, you know, we're all

sworn to uphold the law, and that's the bottom line, that you have to touch those bases when you do what you do.

MR. BLANDO: I think we have to move on. We're running out of time.

Thank you have, Bill.

Our next speaker is Mark Maaninen, if I've pronounced that correctly. I'm sorry.

Mark is an Environmental Permitting Supervisor within the corporate 3M environmental operations group. He currently leads a group of environmental engineers and scientists.

He is responsible for air industrial wastewater permitting for all of three 3M's U.S. manufacturing, research and development facilities.

He will be speaking to us about

innovations in permitting, and plausible air permitting, as well as the permitting process.

Mark, thank you have very much for participating.

MR. MANNINEN: Good morning. First, I want to thank the Council for the opportunity to come here and speak on behalf of 3m and talking about some of the things we've been doing with permit flexibility and innovative permits.

Let me give you a little bit of background of 3M as a company, and the importance of how creating flexible language in permits and innovative permits really kind of plays into a huge part of our company today, and as we go forward.

So a little bit about the company, in case you didn't catch it from the accent, we're based in Saint Paul, Minnesota, and as I mentioned, we're talking about creating flexibility within the existing permits. I'm sorry. I'm jumping ahead here.

We're a $25 billion company, about 80,000 employees. We make 50,000 saleable products with anywhere from a million to 2 million skews the last time I checked.

We have 80 permanent facilities with 45 issued Title V permits. We're subject to about 25 MACT standards and at least a dozen different NSPSs.

So, you know, talking about the need of

flexibility, you know, really, from working in our corporate environmental operations group and dealing with permits, to merely to try to keep up with the speed of change, from a business standpoint, while still meeting all the state and federal air quality regulations. So things like lean manufacturing,

formulation changes, plant consolidation, fuel and energy reduction projects, especially as you can with the economic downturn in 2008, everybody is reducing capital spending, and good engineers are looking for better, faster and cheaper ways of doing things, which really puts permitting as the bottleneck fast-paced processing.

You kind of see that dip in kind of an average amount of time when we find out about a project really when we want to make a change. We still see that here as we move forward in 2010, people doing things faster and cheaper.

So some of the things that we've -- actually, go back one. Sorry.

Before we jump in, that next slide is really how do we do this within existing permits. There's a lot of synthetic minor source limits where it really makes sense; Title I, PSE, Title III, major HAP sources and programs to really kind of try to help expedite that, and as well as trying to include all of the regulatory opportunities within existing rules, within Federal MACT standards where, you know,

there's control options. There's lower VOC coding options, and there's no outlet concentrations in part per million, and make sure that all those options are

really included in the permit.

We're talking about creative -- coming up with creative permit languages to really help drive program changes.

Here's one example here. You know, we run a fleet of at least 20. Kind of hearing some more about VOC about a company making anything from tape to Post-It notes to films that are used in electronic devices to where, traditionally, you go through a back review, and you come up with a 96 percent control efficiency, as far as what's established, which allows 4 percent allowable to the atmosphere.

If you can actually advance that one to where, you know, at any given time, you've got that 4 percent going to the atmosphere.

Well, we've really worked with a number of states and said hey, you've got this 4 percent going into the atmosphere that relates to many different options, you know, we're a company that's moving to water-based solvents and water-based coatings, away from the traditional solvents.

We have these RTOs, and we'd like to get away from this and building in the opportunity within the permit saying, hey, if we're going through the

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process of developing water-based coatings.

Rather than going through the permitting process where, traditionally, the permit would say operate the oxidizer at all times to where we're building in that language to where, hey, we're using a low VOC coating, that we can vent that right to the atmosphere.

It's kind of that 4 percent whether it's controlled or not. This is one example here.

Next slide, please.

The innovative permit, we worked as kind of as a pilot with the USEPA back in 1993 at our first -- Saint Paul plant.

Since then, we have added three more flexible permits in Texas, Missouri and Wisconsin, and that work really was kind of some of the pilot work which was used to build the language in the USEPA flexible permit rule that was issued back last fall, and from there, we really hope to kind of, you know, piggyback on those efforts and are working on right now to try to -- a couple of our facilities we've identified are working on flexible permits as well.

So, really, what is a flexible permit? It's a Title V permit with additional provisions

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built in for a pre-approved changes, certain types of equipment, operating certain types of facilities you may already have or can see yourself bringing in within the next five years of issuing Title V permits in exchange for beyond compliance from an environmental standpoint.

You know, the pre-approved changes are allowed to be completed without the traditional construction and permit authorization timeframe to where it really, in a nutshell, what it consists of it is providing the agency with notification prior to starting construction, saying, hey, we're putting in this type of equipment, which was indicated as allowable, pre-approved change within the permit, and then prior to start-up, you're submitting a follow-up study notification, which really establishes how you're demonstrating compliance with all of the federal and state rules, the MACT, the NSPSs, a number of the facilities as well, where the flexible permits is showing compliance with the MACT standards as well, to where those types of requirements for all those compliance and all the state and federal rules are already built into the Title V permit before the permit is issued.

So there's that obligation of knowing

what you're up against and knowing what you can bring in and how you're demonstrating compliance with a permit, as well as some of the environmental

obligations as well.

Let ne go to the next slide. So really, what this really does, from an industry standpoint, and it really allows the permittee to rapidly react to business needs.

It reduces the administrative burden for both the agency and the permittee. You can establish of having some forecast of knowing what types of equipment you're going to bring in, and rather than going through the permitting process with the public reviews and the EPA 45-day review period, where you're taking that really out of the equation and this really provides the permittee of an incentive to reduce that environmental footprint.

Next slide, please. So here's a case study, a facility in Menomonie, Wisconsin. An initial flexible permit was issued in 2004 and renewed in 2008, a very diverse facility, making product in 15 different 3M divisions.

The benefits really here -- you know, we've done 16 -- in 2005, we've done 16 flexible projects, some of those being insulation of new

equipment.

Some of them just making small changes to existing equipment that would have required affirmative action state construction permit rules, and there's been really a lot of good partnerships, and you can see the slides here as we move forward,

but really, the benefit environmentally as well and, really, from a facility standpoint, and a, you know, state standpoint, it's brought a lot of projects within 3m, as far as business cases, to where the project equipment was moved to Menomonie, rather than having to waiting six to nine months for a construction permit in California or in Minnesota.

So the next slide here. You can't really read the fine details here, but this is kind of example language when we went into renew the Title V permit and renew the flexible permit in 2008 in Menomonie.

Really, what this consisted of -- you know, this is basic language for one of our quarters that was already pre-existing language when we renewed the Title V permit.

Really, it really consisted of nothing more than just adding process numbers and stat numbers to existing language that was in the permit,

and at that time, the DNR actually came back and said, you know, we're really kind of getting a sense for how much this really reduces the burden on our end, as well as helps, you know, from a company standpoint to where, you know, there really would have been a lot of agency work that would have had to go in, you know, with each of these -- there were five or six pieces f equipment that were added.

We knew the language up front and we

built that language into the permit.

Next slide.

We ask really from an environmental reduction standpoint, you can kind of see here, this is emissions, total facility emissions to a pound emission per thousand pounds of product output, which is a growing facility that kind of normalizes the data, and I kind of mention that this was the language that we built into the Title V flexible permit, which was really based on the corporate environmental targets in the study for VOC emission emission reductions, and beginning in 2005, they had already picked up a lot of the, really, low-hanging fruit coming into the time period here in 2005 to 2009, and they made a lot of product reformulations and put in a thermal oxidizer voluntarily as well, to

where you see the 2009 numbers are well below what was really required as a part of the Title V flexible permit and the commitments we put forth as a part of the emission working with Wisconsin.

Next slide, please.

Future need for flexible permitting. You know, it doesn't work in all cases. You know, there's non-payment attainment. There's PSD implications. There's certain MACT that doesn't work with it.

For us as a company, it works really good with the types of operations we have. We

replicate a lot of things, bringing in the same types of equipment, so you're not bringing in coal-fired power plants as a part of this flexible permitting.

It really establishes and defines the types of equipment that you can bring in, and the federal and state rules that you really are triggering as a part of it.

There's really reductions both in industry and within agencies. Everybody is busy. Everybody has tight schedules, tight timelines, and things are continuing to move fast, especially with a lot of the economic uncertainties and really dealing with that impact and the speed of business.

You know, there's been a lot of projects where -- 3m is a big global company. Fortunately, we try to build capacity where the demand is.

We have a lot of international growth. We're building international capacity but, you know, here within the states try to maintain the ability we have for U.S. demand, but you see a lot of projects that come up to where they're looking at international as an opportunity, rather than here in the U.S., and a lot of that ends up permitting on that critical path and kind of does play a role in that and really -- we've seen it as really a great opportunity for really that, you know, to promote voluntary programs.

The three facilities that I mentioned

here, they are all on performance track, the state level kind of performance track equivalent in Wisconsin is really creating a lot of other really good working relationships and, really, we've been able to partner with the state and local agencies as well.

So that's kind of what we've been doing with flexible permitting and, really, what we see as the importance of it going forward.

Questions?

MR. HANNA: Thanks very much, Mark. I think you did a great job making all the highlights and the benefits very concise for us.

Maybe it's a clarification I had for you.

Since 1993, myself and I'm sure a bunch of people in this room have been waving the flexible permitting flag and trying to work toward.

One of the things that we've come up against quite often is the need to change regulations, and I just wanted to clarify that in the Menomonie case study that you gave, there was no need to change WDNR regs or federal regs to do this permitting. You found ways to do it within the programs. Right.

MR. MANNINEN: We found a way to do it within the existing framework. You know, all the federal rules were subject to federal MACT standards,

federal NFPS standards. State level, there is a number.

There is a very established air toxics program, you know, by rule, and we were able to operate that.

The only thing kinds of creative thing that the agency needed to do, from a regulatory

standpoint, they needed two permitting program, construction and operating is separate.

They needed to issue us kind of a blanket construction program that allowed us to make those changes within the five-year window. But, yeah, we're talking right within the existing framework.

MR. HANNA: Thanks.

MR. BLANDO: Joe?

MR. CONSTANCE: Typically, air pollution standards are new standards. Will you be coming down the road in the next few years? What is your processing?

To repeat that, as a major industry, how do you prepare your senior management, officials in your companies for emerging standards, new standards, air pollution standards that will have a big impact on your company's operations' and bottom line?

MR. MANNINEN: You know, great question.

You know, Obviously, the first step is identifying them and getting a sense, you know, for

the proposal or the final rule and really looking at what -- you know, what kind of implications do we feel -- what do we need to do to comply with the rule. Do we install new capital? Will it be doing a

lot of record-keeping, monitoring or a lot of times, all of the above.

You know, a lot of times it hits business by business, but if it's a big enough rule, like the greenhouse gas recording rule, well, it comes across all of our businesses, all of our facilities, and to where we really bring that together from within our corporate group and kind of carry it up through -- a lot of times, our vice president will carry that up to -- carry it up to our Board, as far as talking about the greenhouse gasses, cap and trading, and kind of framing that up as to really what kind of impact that will have as a company.

You have to work a lot with, you know, industry groups and work a lot with our government affairs, who works with, you know, politicians, both local and in Washington, so that's kind of how we handle changes in merging regulations.

MR. BLANDO: Thank you. Nicky, go ahead.

MR. SHEATS: One thing that I thought of that might be of concern though, you said, at times, special permitting will take away some

capacity to have public input in changes.

MR. MANNINEN: You know, on a project-by-project basis, it does take away that opportunity for public comment, but what it does, on the front end, when the Title V permit is issued, it talks about the certain types of equipment that could be brought in.

It talks about the regulations that -- very specific on the types of equipment you can bring in, the rules are subject to, as well as -- you know you're talking about this Menomonie facility, there's a cap on emissions not to exceed, you know, the synthetic minor PSP, 240 times cap.

There's the requirements of meeting the state rules on allowable coatings on eight pounds per gallon, to where all of those, you know, what we would be installing is really all brought forward as really part of the Title V process.

You know, there is the opportunity for public really comments that, and that's really brought to the state holders group we work with as well, as far as the language we work into the program.

So there is that opportunity for public comments which is kind of up front, on the front end.

MR. BLANDO: Joe?

MR. CONSTANCE: Those states that are able to give you the flexible permitting structure, were they the beneficiaries of additional capital investment?

THE WITNESS: Yes, there were, Especially Menomonie. The last time I heard as a part of all the projects that we have there, they added at least a hundred employees.

There's been a lot of plant expansion, and it really helps to really help make a facility -- you know, with new growth, bringing in new technology, it really helps to facilitate the facility as well as, when you're looking at economic downturns, when you're looking at plant consolidations, things of that sense, where it really gives it a more solid basis as to technologies and equipment they have there with that capital in investment.

MR. BLANDO: Mark, I just had a question.

When you showed the graph with your case study in Menomonie, you showed actual VOC pound emissions versus thousand pound of product output, and you mentioned that the facility is growing.

If one were to look at that same data up

on the chart, just on the total gross actual VOC

pound emission, I presume it would have been increasing because of the increased work at the facility?

MR. MANNINEN: You know, it actually did. Ballpark, I want to say actual emissions probably in 2005 were maybe a hundred thousand tons, and by the time we got to maybe 2007 early into 2008, they -- you know, we were probably at a 150 tons.

As I mentioned, we voluntarily put in a thermal oxidizer, and halfway through 2008 to remove some additional VOC emissions from a line that really wasn't required to be controlled by any of the state or federal rules, but we thought it was a right thing to do. This was a good time to do it, and it really provides for more opportunity for growth as well as going forward.

So, you know, actual emissions went up until later in the 2008, 2009 --

MR. BLANDO: It just seems as though, although I think flexible permits has a lot of benefits, it just seems that you have to be careful with starting growth where your actual emissions end up increasing.

MR. MANNINEN: Yes, exactly.

MR. BROGAN: Just a quick question. These facilities in Texas, Missouri and Wisconsin, are they your only manufacturing facilities?

MR. MANNINEN: No, these are the only

one with flexible permits. We have at least 80 facilities that sought some sort of air permit in the U.S.

MR. BROGAN: You mentioned that you were looking in California, and you decided not to do anything or expand there.

In New Jersey, we're always looking at the complexity of the permits from a business perspective and the cost of the permits.

You know, the New Jersey Title V program is a hundred and five thousand ton, and how those things weigh out.

What did you see, in terms of these three facilities, in terms of the incentives that were provided beyond flexible permitting and the cost of the permits?

Were they kind of within a range that made it -- that's why you chose those facilities?

MR. MANNINEN: They are all somewhat similar facilities, subject to the same regulations.

They're all on attainment areas. I

don't think you'd probably find a way of doing it in non-attainment.

Some of them were selected as well as really where we saw it being a forecasted roll. It doesn't make any sense to do it in a static facility that may be closing in two years.

There's a lot of work that goes into it

on the front end, facilities with growth is very similar, and in working with both EPA headquarters and the regions where it really has a Menomonie permit in place and is expanding on it, the way EPA headquarters really framed it up is, it's really like you have something made out of Legos, and you want to take it and bring it somewhere else and kind of move the Legos around a little bit, and maybe a little bit of difference in state and federal rules, but you can assemble that very similarly and very quickly and really still have the framework where you're meeting all of the established state and federal regulations that are out there.

So that's really where we kind of ended up, where we do have flexible permits, and as we go forward, we're really looking at, hey, where does it make sense, from a global standpoint, and it really -- and will it fit in to the rules and whether

both the state agency and EPA have an interest.

MR. BLANDO: Thank you, Mark. I appreciate it.

Our next speaker is Arthur Marin. Mr. Marin is Executive Director of the Northeast States for coordinating manager for NESCAUM.

NESCAUM is the association of state air pollution control agencies representing the six New England states, New Jersey and New York.

NESCAUM provides technical assistance

and policy guidance to its member states on a broad range of issues related to air quality, energy and climate change.

Mr. Marin will be speaking to us about the barrier to development of effective air pollution strategy and regional issues.

MR. MARIN: Good morning. I wanted to thank the Council for inviting me to participate in today's program.

It's always fun to step back from my day-to-day activities and spend some time thinking about the future, projecting out what's going to happen in the next decade.

So this is fun for me and something that NESCAUM likes to do to help our states, which is

providing some vision and direction for the future of our air pollution control programs.

So as Dr. Zhang pointed out very nicely this morning, we really have made tremendous progress over the past 30 or so years in terms of reducing the public health and environmental health threat from a number of pollutants.

Bill mentioned carbon monoxide. I remember, when I started, that was my pollutant, and I worked, you know, many years on carbon monoxide and nobody even thinks about it anymore.

We've really addressed some of these problems. We've made tremendous progress in terms of

ozone, acid rain, lead, a number of pollutants, and I know a lot of the folks in this room deserve to PAT themselves on the back because it didn't just happen.

It happened because people spent a lot of time, were creative and, you know, came up with viable solutions to achieve these successes. But, you know, as others have pointed out already this morning, I think that our success is tempered by the reality that -- of the growing understanding of, you know, the tremendous environmental and public health threats that are posed by microscopic particles, by greenhouse gasses and other issues that we have yet

to resolve, and I think, in many cases -- you know, the title of my slide was talking about sort of incremental versus transformational change, and I think the challenge we face now is that many of the pollutants that we're trying get at, we really have to think about virtually eliminating all of these pollutants. It's no longer sort of reducing them by 25 percent.

You know, as we think about the challenges of the coming decade, we really need to think about bringing some pollution levels down to near zero level.

Next slide. So I think that the challenge we face -- among the challenges we face in the next decade is really transitioning the way we plan.

Several speakers have already mentioned sort of the SIP approach, whereby we do one plan for one pollutant.

As Bill Baker's list showed, we have a new MACT standards coming out that the states are going to have to plan or develop SIPs around that.

I think that, you know, we need to start thinking more holistically as we implement climate change planning and air quality planning.

We need to, you know, meet multiple goals across, you know, many different planning horizons. You know, climate change and regional haze, those are 40 and 50-year planning horizons.

The Clean Air Act, of course, has much more specific and near-term planning horizons that states need to deal with, and we need to meet these near-term challenges while, at the same time, pushing for transformational changes.

That isn't always easy. Sometimes short-term decisions aren't really consistent with where we need to go over the long-term and, obviously, addressing complex air pollution issues these days require us to think about energy planning, about economics, about environmental justice and a number of broader societal considerations beyond just the traditional air pollution.

Next slide, please.

As several speakers have mentioned

today, we are also working on a whole bunch of different scales, ranging from our neighborhoods, where environmental justice has really emerged as a truly important environmental issue, all the way to global issues like Mercury and greenhouse gasses and everything in between.

Next slide, please.

So what are the drivers? What are the things that are going to be sort of pushing driving the air pollution agenda in the coming decade?

Well, clearly, fine particles and ozone remain sort of key pollutants that are going to take up a lot of our planning efforts and are going to require a lot of expenditures on the part of industry to achieve standards, and as we've mentioned, you know, I think we've come to realize, and I think it's been born out, the more studies we do, the more we realize there really are no thresholds or health effects from ozone or particulate matter, and the way the Clean Air Act is structured, the EPA needs to do -- come up with a new NAAQ every five years, but I think we know enough now to understand that we shouldn't be planning for the next five years.

We should understand that we really need to be planning down towards the lowest possible levels, because that's, ultimately, where we're going to end up.

I think, you know, to its credit, the

Northeast, early on, recognized a decade ago that the solution to Mercury was essentially virtual elimination, and we've done amazing things in terms

of virtually eliminating Mercury from a lot of products that it was in and putting in tight controls on Mercury combustion sources.

Toxics, I see Joanne Held in the audience, and it's always been the poor cousin but, nevertheless, it's going to continue to be a driver in terms of where we go.

It's clearly related to the EJ issue that we spoke about earlier and will remain a driver for our air programs and the EPA.

And then we have regional haze and visibility impairment, which is somewhat of a newer issue but, again, it's one that Congress has basically laid out a mandate that the states shall restore pristine air quality in class one areas.

These are wilderness areas, national parks, et cetera, and that may make sense, you know, when you think, well, Rocky Mountain National Park, Arcadia National Park, sort of rural areas, well, we might be able to achieve that.

But you have to remember that Brigantine here in New Jersey is a class one area. It's located very close to Atlantic City and yet, New Jersey still has to come up with a plan on how do we restore pristine air quality to Atlantic City.

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And, of course, as Gail and other speakers have mentioned, really, the mother of all air pollution issues is climate change, and I think there's general consensus across the board, at least in the science communities, that we're going to need to achieve an 80 percent reduction on the amount greenhouse gasses by mid-century, and to put it in perspective, I always look at that period between 1990, when we first started thinking about climate change, to 2050, and I see that we're lucky, that Congress actually moved states that are preempted from continuing their efforts to 2020 so they get back to 1990 levels.

We basically treaded water for the first 30 years of the 60-year period, leaving us the entire 80 percent to still achieve within a very short 30-year period and, clearly, to do that, we're going to have to fundamentally change the way we produce and use energy, the way we build our cities and towns, the way we live our lives.

Next slide. So it's clear to me, that you know, the complex problems that we face in the coming decade require us to think and plan very differently than we have in the past, the old stovepipe approach, where you design your ozone SIP,

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and then you put that aside and you move on to your PM SIP and then your toxic plan, and then your climate action plan, frankly, won't work any longer.

These are all interrelated. We need to think more holistically, and we need to look at how these various programs affect one another.

You have the same sources, in many cases, contributing to these different problems, and we need to provide the certainty to industry about what we really need from them over the long run, and not what we need from them for the next plan.

We spent a lot of time at NESCAUM, over the past four or five years, thinking about how can we help the states plan more effectively, how can we think more holistically from a multi-pollutant perspective, and we developed a framework, which we think will be very useful for states, and at least help us to begin moving in that direction towards multi-approved planning, and it's a linked integrated modeling approach that includes economic models, energy models, air quality models, public health models, et cetera, to really help us think more holistically.

Next slide, please.

You know, obviously, I think these are

self-evident. There are many benefits for multi-pollutant planning. It addresses all of the pollutants rather than one by one.

It helps us to understand the trade-offs and different co-benefits of different policy options. It helps us to understand the interrelationship between the economy, energy and the environment, which is ultimately critical to our success, and also allows us to move across sectors, which we mentioned, the energy and environmental sectors specifically.

Next slide, please.

We think it makes a lot of sense. Strategies and technologies and other things that I mentioned that reduce greenhouse gasses can also reduce traditional pollutants and vice-versa, and we think that this kind of approach can help us design the kind of cost-effective approaches that minimize the impact on industry, and at the same time, make it easier for state planners and industry planners to figure out what they need to do and, also, obviously, the key is to try to find low-cost solutions and that's one of the goals of this plan approach.

Next slide.

The rest of my talk, I'm going to spend

a little bit of time trying to describe what this multi-pollutant policy analysis framework is that we developed and show you just a little bit of sort of what it can do, and how that may help us to plan more effectively and overcome these challenges that were laid out for the future.

Why don't you go to the next slide?

This schematic sort of lays out the multi-pollutant policy analysis framework, and if you look at the purple boxes, those are the models that are incorporated in this, and the green boxes are the outputs from the various models.

So just for example, if you want to evaluate a particular policy that helps predict what technologies will help you achieve your goal, and so you run the policy case through the Markal model, and that provides both emission estimates for that policy and cost and benefits on this side.

So the emissions estimates you run into by traditional air quality models, which provide predictions of changes in ambient air concentrations of pollutants, as well as wet and dry deposition.

The ambient concentrations values that come from the CMAQ model, that model then shows you the change of the health outcomes and the cost and

benefits associated with those changes.

That then leads backward into this model, which is a macroeconomic model called REMI 12-state model, and REMI provides sort of an output of key economic indicators.

It talks about gross state product. It talks about household income. It talks about jobs. It talks about how jobs move from one sector to another, all based on this initial policy.

Next slide. This cartoon just sort of lays out what's in the Markal version of the framework, and it looks at everything from sort of extraction to power generation to end uses, and we've been able to build out four primary end use sectors; transportation, residential, commercial and industrial.

So we're able to look at policies and the treatment we have on these four major sectors.

Next.

I'm going to show you now -- and these aren't on the handouts because these are preliminary results that I really shouldn't be sharing, and I can't leave with you, but I wanted to just give you a sense of what this model does.

So just to get a sense, you start with

the reference case. This is essentially business as usual.

In this case, so you look at, you know, what's the predicted energy demand increase between 2020 and 2030, and you predict, you know, based on these costs, what sorts of energies would have to come on line and would come on line with that increased demand.

In this case, you see coal not growing. It does not include the normal portfolio standard, but as you see, what basically happens is gas is the marginal fuel here. All gas generation is going come

to line to meet the expected demand.

Next slide, please.

I just want to run through two policy scenarios that we did. One is looking at what would happen if you required 60 percent of the light-duty motor vehicles to by electric vehicles by 2030.

So you run that into the model, and it predicts, on the left, this is the whole transportation system, not just light-duty vehicles.

It predicts them as you would get electric vehicles to displace traditional internal combustion engine gas vehicles.

It shows that hybrid vehicles continue

to sort of play a role. Diesel vehicles increase a little bit, and that line you see in the middle is ethanol, the E85-type vehicles, and then the slides on the bottom, different forms of changes in technology that would occur under this policy scenario.

What the model also does is calculate cost and benefits.

So in the top box, these are your costs. It shows you the capital costs, the fact that EVs are more expensive than internal combustion engines.

It changes fixed costs downward and reflects the fact that they require less maintenance, and the fuel savings occur because electric vehicles are more efficient than internal combustion engines.

The model also generates estimates of emission reductions, and as you see here, there are tremendous reductions from adopting a strategy of electrification of vehicles, and I was glad to hear the Commissioner mention this morning that this is a priority for DEP in the coming years.

Next slide. The thing you have to look at when you think about when you look at multi-pollutants is, well, those are great benefits on the tailpipe side, but the reality is that there

are other things happening, and, of course, in order to meet that demand, electricity generation goes up, and with that are costs and emission changes.

So in this case, it's looking at just increasing gas mostly to make up the additional needs of demand. That costs money to put new plants on line.

It costs money for the fuel you need to fire up those plants, and it also results in increased emissions. So you have to keep all these things in mind as you're doing multi-pollutant planning.

Next slide, please.

However, you know you're not looking at one scenario or one strategy in a vacuum. We're then looking at what happens when you layer on a renewable portfolio standard, what happens when you include energy efficiency.

Well, some of those reductions that you saw in electricity changed because of energy efficiency.

In this case, if you also layer on portfolio standards, you get increases in gas, but what we're seeing is increases in zero emission renewable fuels.

Again, it shows you sort of the changes from gas in the reference case keep growing at 2 percent to .6 and renewables going from zero growth to 5.2 percent per year.

Next slide, please.

In this, like the other one, shows sort of the costs and benefits of a renewable portfolio standards.

Next slide, please.

I just want to end by sort of showing you a little bit about our vision, and I remind you that the results that I just shared with you really are just the Markal models.

It doesn't really show sort of the full benefits that you get from an approach like this. We haven't really looked a some of the ambient air impacts, the health impacts and the macroeconomic impacts, but how we envision this happening -- and if you can just hit that button once -- this framework, we hope, will be able to help states with -- next -- develop their energy plans or integrated resource

plans for their state.

Next.

They will help with developing the ozone SIPs, PM SIPs, regional haze, Mercury plans,

et cetera. It also will help us help in understanding -- Bill was talking about secondary standards for NOX and SO2.

We're going to have to start thinking about more about some of those issues. I will provide some information on that.

Likewise, for acid deposition, it certainly is going be critical to helping us build effective climate change plans and, ultimately, to understanding the economic impacts in the states. So we think it's very powerful tool, consistent with sort of the complex world that we're moving into, and I think something hat states have to think very seriously about as the plan and trying to integrate air quality work with the larger needs and interests of state government.

With that, any questions?

MR. EGENTON: When you did the cost analysis, you went to electric vehicles per se.

Was there consideration in tying in building the infrastructure?

Obviously, there is a connection in transit transportation needs and making sure that the infrastructure is in place to make that transition.

Was that taken into account?

MR. MARIN: It is. I mean, in all cases, it looks at sort of not just the vehicles, but, say, the infrastructure, the fuel costs, et cetera, and one thing I should mention is that I, again, was just showing you just sort of the very top layer here, but what we ultimately will be doing is metaanalyses, which shows that if a state has 20 strategies in its current action plan, you can actually model them all together at the same time and look at the combined impacts of all of those strategies, and that's where it really gets fun.

MR. FUENTES-COTTO: I suppose you've seen several models to action plans for this policy. How do you calculate them all? How do you make sure that they are actual?

MR. MARIN: It's very difficult. One of the things about models that you all know is they're stupid until you make them smart. So in the case of Markal, it's the least cost model. So it takes the least expensive technology to do the job. It doesn't take into account that you actually have to -- like, it loves wind.

It always picks wind, so if you do a renewable, it loves wind, but, you know other than Massachusetts, we've been trying to cite cape winds

for a decade. It hasn't happened yet.

So you have to constrain the model. You have to layer on the politics, layer on the human behavior and some of these other things that we have to deal with in the real world.

So it is a challenge to make these models smart and to make them useful, and there's a lot of data that goes in.

For example, if you want to look at energy efficiency options in a state, you need to calculate how many square feel of commercial space there is in New Jersey, and then you put in an energy efficiency policy in there, and it will tell you a lot.

If you don't have that square footage, it doesn't tell you very much, so it's very resource-intensive upfront, but then, once the model is loaded and calibrated, you can do runs in 12 minutes.

You can look at strategies really quick, but the upfront costs are very high.

MR. BLANDO: HOW are state agencies -- how receptive are they to this approach and how receptive are they to utilizing these models?

MR. MARIN: Well, we convinced a couple

that it's a good idea. We've worked with New York a

lot. We've worked in Massachusetts. We're hopefully going to work with Maryland as well.

We've also spent a lot of time working with EPA as well because they're quite interested in this approach as well.

The Markal model was actually developed by the EPA Office of Research and Development, and we've turned it into a regional model and a national model.

So I think there is a tremendous amount of interest. I think more that state officials learn about this, the more interest there is.

MR. BLANDO: Okay. Thank you.

MR. MARIN: Thank you.

MR. BLANDO: The next speaker is Mr. Ted Aburn. Mr. Aburn is the Director of the Air and Radiation Management Administration of Maryland.

He also chairs the transport commission's multi-pollutant committee and the Midlantic Visibility Unions Technical Committee.

Mr. Aburn will be speaking to us about barriers to development of effective air pollution control studies.

MR. ABURN: Thank you very much for

asking me to come speak today.

It's one of my favorite topics, where we're going over the next ten years, and the Clean Air Act here in New Jersey and I way go back.

Bill Sullivan and I sort of came up through our careers together, sort of came up at different angles, crossed paths many times, but the past couple of years, we've actually been in kind of a partnership.

He came up through sort of the hard nose permitting and compliance side, and I came up through sort of the fluffy modeling and policy side. So, together, we actually work pretty well together.

So I'm going talk about a lot -- a little bit about some of the science we've been doing, and this might be a challenge for me because I've got a lot of animation with this.

So when I say hit the button, hit the button. Challenges -- so it's sort of interesting. I listed the key things I'd like to try to do in the rest of the presentation, but one of my big pushes is that the game has changed since the early '90 and, yes, local controls are very important, but to solve some of the problems of the next decade, we're going to need a lot more national

rules.

New Jersey and Maryland can no longer solve our own problems. We need help in reducing transport from upland states.

Local controls, I'm sure you guys are going through the same thing in here New Jersey, but when started doing this business 15 years ago, there

were actually source categories that we could regulate relatively cost effectively with big reductions, and they made common sense.

Now what we do is very expensive. The reductions are very small, and we're sort of pushing the envelope on the common sense sort of thing.

So we're having a hard time these days finding easy things to do in Maryland. I'm sure that's the case in New Jersey.

We're also facing a lot of regional competition these days. Just ports, for example, we're trying to do a lot with ports, and New Jersey is trying to do a lot with ports.

We constantly hear, we're willing to go here, but because of competition, we really need to make sure we're not going to end up in a competitors' disadvantage with other ports.

And, finally, Arthur just went though

this, multi-pollutant planning, multi-pollutant controls. I don't look at it as something we should be thinking about.

I'm looking at it as the way we have to do our business these days. We can't do control programs in isolation or plans in isolation, and so we started to do a lot of that in Maryland.

A lot of our rules are multi-pollutant rules. A lot of our plans have multi-pollutant planning aspects to it, and I'll talk a little bit

about that later.

Real quickly, in the presentation, I'm going to talk a little bit about the science. I'm hoping that when we're all finished, some of you folks may say, gee, I never knew that. So a little bit about what we're doing in terms of pollution control programs, and a little bit about some of the upcoming standards, like the ozone standard.

Hit the button.

I've been doing this 25 years, and it's the first year in Maryland I've ever been able to do this, so I do it a lot.

Hit the first button.

We obtained one-hour standard for ozone in 2009. We obtained the annual fine particle

standard in Maryland in 2009. We obtained the daily fine particle standard in 2009.

Hit the button again.

We came very close, didn't quite get there. Hit the button one more. Time, and I love to sit back and say, something has worked, what's worked, why has it worked and why should we do more of that. So I'm going to talk about that.

The science. I have the luxury of having a power plant research fund. It gives me about a half a million dollars a year for the past fifteen years.

We've done a lot of research on

transport, and over the past three or four years, two very significant new findings have come along that really change the dynamics of how we do air pollution control programs.

First, what is the change? It changes the way we understand ozone and fine particle to build up and evolve over a day and the local versus transport role and, second, it pushes this need for more and more national controls.

The two new areas are, we do a lot of measurement campaigns. We do balloons. We run airplanes to measure pollution.

We found that on virtually every bad ozone fine particle day, there's an elevated reservoir of pollution that's sitting about 2,000 feet aloft, and it mixes down around 11:00 each morning. I'm going to show you some of that.

But, anyway, it is a huge part of our daily problem. Yes, our local emissions add to it, but the elevated reservoir, the transport cloud is something that we really need to start to look at, and we really need to start to figure out better ways of dealing with it.

Finally, we started to run our balloons and airplanes, at night and we started to better understand what happens at night.

Air pollution has historically been a daytime phenomena because that's when the

photochemistry takes place.

What we started to learn is that the nighttime meteorology is very interesting and causes all sorts of movement in the pollution.

Again, I'm going to talk a lot about ozone, mostly because this was done as a presentation for the Ozone Transport Commission, but a lot of the finding we're having for ozone also apply for fine particles, at least in the summertime.

Wintertime, fine particles got some different things going on, but summertime, fine particles, a lot of what we're talking about for ozone applies to fine particles.

Hit the button. The elevated reservoir. Virtually, on every bad ozone day, there's a large cloud of pollution that sits above the Mid-Atlantic in the and Northeast, about 2,000 feet above the ground, and the pollution that's in that elevated reservoir is already in the 60 to a hundred ppb range.

If you look at the nighttime monitors, the monitors at night at ground level go down to very low levels, 20 to 30 ppb. So what you have is low levels at the ground level and a big part of the pollution sitting aloft.

Sometime around 9 to 11, as the nocturnal inversion breaks down, this aloft pollution mixes down.

Hit the button.

We've started to run balloon measurement campaigns for the past five years. We actually have focused out and do measurements at 2:00 at night, at 7:00 in the morning.

So hit the button again.

This is just one of our balloon sets of data, and if you look at the ground level, it says ozone on the bottom.

As the balloon goes up, you can see it on the left axis. What you can see is very low ozone at the ground level, and then a big chunk of ozone, this particular one, I think, at 7:00 in the morning, the ozone is about 110 ppm, a big chunk of ozone sitting aloft at 7:00 in the morning.

We virtually do these balloons every -- code orange and code red, we do forecasting. Every time we forecast a code orange and code red day, we do a balloon, and we find this virtually every day. The reservoir is there is virtually every bad ozone day.

Hit the button.

Another way to look at the reservoir is to use our air monitors, and this is just time of day at the bottom with noon in the middle, and then ozone level on the left axis.

The gray bar is our ground level monitors, and what you can see is, at night, the

ground level monitors, the line is the average. The gray shade is the spread, very low levels at night.

Then the ground level monitors, you

know, from somewhere in the morning, the afternoon, reach a peak somewhere around 2 or 3 in the afternoon.

The red line is a monitor on a mountaintop. This one happens to be Shenandoah. So what it does is it measures that reservoir all night long.

What you can see in this one -- hit the button.

You can see an elevated reservoir at night, and in this case, the reservoir -- this is from the '90s -- the reservoir is actually reaching as high as 110 ppb at night.

Hit the button again.

The nocturnal inversion breaks, all the pollution mixes down, and you literally see all the ground level monitors, within a couple of hours, go to that exact level. You see this day after day after day.

You see there's been an inversion break. You see the collapse of the ozone reservoir, and then all the ground level monitors go to the regional signal. This is the pollution coming from the regional sources.

Finally, hit the button.

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Yes. If you look back at this, this is 1990. We literally had a monitor that measured 180 ppb that day. So this is a different period, but sort of puts it in a framework.

Next slide, please.

Same thing. This is a little different. This is in the 2000 to 2005 period, and we have more aloft monitors now.

We have a monitor in Pennsylvania called Methodist Hill, one in Maryland called Piney Run, and you see the same thing. You see that reservoir aloft, low levels at night. The inversion breaks. The regional signal comes in.

What's interesting in this one is the reservoir, this is after the NOX SIP call, you can see that the reservoir is a lot less than it was in the earlier slide.

So the transport controls have worked in reducing the reservoirs which have helped us come to attainment.

Hit the button again.

So what fills the reservoir? Where does it all come from?

Well, there's two pieces that are filling the reservoir, the first two pieces, local

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emissions -- they are still probably a third of the problem.

So we still need to push on local emissions, and a lot of times, I do this presentation, I give sort of a finger-pointing kind of thing accusation, but in Maryland, we sort of have taken an approach that says, for us to go out and talk about what we want from upland sources, we have to be able to be doing pretty much everything we should be, every control program you can imagine, and I think that process is here in New Jersey as well. So we literally -- local controls are the first thing we do.

The second piece is three different types of transport, and most people understand short-range transport, which is Washington, D.C. sending its pollution to Baltimore.

It generally happens over the course of one day and the pollution is floating around the ground level from the morning to the afternoon. That's critical.

For Baltimore, probably half of that local contribution comes from Washington D.C. for Philadelphia, probably half your problem comes from Washington D.C. and Baltimore. So there's that local

daily thing.

Then there's these two other types of transport. This is the finger-pointing piece, where

the transport follows a different pattern. It literally is created at ground level. It can move aloft, and then can move hundreds of miles to the east or the west or the south and then mix down a day later. We call it up, over and down.

The first kind of transport that we looked was power plant transport from the west. It clearly follows this pattern. The pollution moves up. It moves over. It comes down.

But the more recent one we've been looking at, and this is only because we started looking at nighttime, is that at night, we see pollution from the south captured by something called a nocturnal loadable jet, which moves pollution from the south between the Appalachians and the Atlantic, straight up the coastline into Maryland, into New Jersey.

Again, we've done a lot of work. We think that, on any given day, this could add ten ppb to Baltimore's problem.

So moving on, the next one. Those two last pieces, they cover two different types of

transport. That's what fills the reservoir. That's what we have really not ability to control in Maryland. These are regional sources that contribute to the reservoir.

We're going to need a lot of help from the EPA. Next slide. Hit the button again and

again.

Same picture, different area, 2008, but the way I like to look at it that piece of bulb, the regional signal, that's what we've got to do with our local control program.

So we need to continue to push local control programs. However, this bottom piece, which on any given day, can be 50 to 75 percent of our problem, is coming from as far away as North Carolina, Ohio, Indiana. It varies day by day because the wind changes, but the only way to deal with that reservoir, that transport cloud, is through federal programs. So we've been pushing very hard on federal programs.

Next slide.

Local controls or national controls, as I've said, it's both. The local control programs have done tremendous jobs in New Jersey and Maryland, helping us get to where we are.

Again, to push for controls in upland states, we believe it's critical to have clean hands. There are other pollutants that I'm not talking about here, like toxics and environment justice. These are local controls that deals with things that are important as well, and they need fit into the service integrated multi-pollutant approach that we've been pushing.

National controls, we're pushing them as

hard as they can. We think they are the thing we need more than anything for the next set of SIPS, and then I'll talk a little bit about where we are and where we expect to go.

A little bit of how regional controls work, this is the pollution controls that were install because of a 2004 NOX SIP call.

You can see lots and lots of selective paralytic reduction control technology installed in the 2002, 2003, 2004 timeframe, the first time ever in history. When we did that -- hit the button -- we ended up with, by 2011, we expect to have 50 to 70 percent of coal-fired potassium in the east controlled by FCRs. One more time.

Finally, what that did is we looked at trends in aloft ozone before 2004 and after 2004, and

what we've seen is we've seen an approximate 20 to 25 percent reduction in this transport cloud or this elevated reservoir.

So by controlling large regional sources of NOX, we can reduce what's in the reservoir, and if we reduce what's in the reservoir, we have a much better shot at meeting our attainment obligation be.

The next slide.

So what do we have to do to meet the new ozone standards. New York has done some screening modeling, and basically, what we did is we used the old 75 ppb standard. We do know now that that

standard ends up being 60 to 70 ppbs, somewhere in that range.

In this analysis, we assumed that not only we did controls in the 13 states and transport region, but we sought basically controls east of the Mississippi. Next slide.

What we came up was that for us to get to a 75 ppb standard, the 13 ozone transport region states need to achieve about 500,000 tons per year of NOX reductions.

There are lots of NOX reductions that are going to take place because of existing programs between now and the future, things like fleet

turnover, things like the tier 2 standards, but we still need to find new reductions that are about a half a million tons per year.

Some of the things we're working on, the OTC has a stationary air source control committee. New Jersey is very active.

We're looking at 13 new control measures, everything from more controls on electric generator units to consumer products and paints and things like bioelectricity demand days.

Next button.

We're looking at a suite of mobile source controls, including new tailpipe standards, new fuels, VMT strategies, idling strategies, and then things like ports, ships, diesel equipment,

lightering and other categories.

Next button. There's also a big place for state innovations. Both New Jersey and Maryland have a reputation for being fairly innovative states, things like the Maryland Healthy Air Act.

We have an initiative in Maryland looking at a snow day kind of concept on code orange and red days, focusing on telework, connecting telework with action days.

We're doing a lot with smart growth and

VMT strategies, and then this piece, integrating climate change and criteria is a big piece for us.

We're a state that actually has a climate change law. Legislature has us basically implementing a greenhouse DS reduction SIP during 2012.

It's sort of a SIP without the measurements. It's an emission reduction rate of progress, achieve a certain amount of reductions by certain years.

So we actually have our first plan for that in 2012. So we're very much implementing our ozone plan and our fine particle plan and our final action plan.

The other piece that's become more interesting is, as we look for more and more controls locally, the regulatory stuff is harder to find, so we're looking at non-traditional approaches,

voluntary, incentive based.

They're all very useful, but they don't fit in to the historical enforceable real control program.

So this whole issue of how we take advantage of non-traditional programs in our Clean Air Act SIPs, I think, is going be a big piece of

what we're going to need to do over the next five years.

Historically, regulations are relatively easy to put in SIPs. Voluntary programs are not.

Moving on, a little bit on Maryland's Healthy Air Act, this actually very good news for New Jersey. There are the bottom, we are directly upwind of you guys, so I'm not always talking about help from people helping Maryland with transport. I'm here telling you I should be helping you with transport.

It's the biggest air pollution control program we ever recorded in Maryland. A power plant control program for pollutants, you know, deadlines for NOX, deadlines for SO2 and mercury have all just come through.

We did not have any delays in the installation of the control equipment, even though there was a huge debate in the legislature about the timing of getting the controls in, covering six plants, 90 units at six plants, everything from nine

scrubbers, six SCRs, baghouses, huge investment push control, so about a $3 billion investment invested, and anyway, we're he already starting to see the benefits of the NOX controls. Philadelphia -- hit

the button again.

We did models of what the Health Air Act would do and, yes, a lot of the benefits end up in the Philadelphia and Jersey area.

We get benefits in Maryland, but a lot of the benefits end up being -- you know, the wind blows from the southwest to the northeast, so when we control, we help -- New Jersey levels should go down.

Hit the button again.

So we have this 500,000 ton TPY target we're trying to get towards. First and foremost, the 500,000 ton per year target was set as a 75 part per billion ozone standard.

The standard is either going to 70, 65 or 60, so this is actually a very conservative estimate of what we need. We're probably going to need more.

Again, we've got the suite of measures I talked about earlier, but between the new measures we're working on through the OTC process, coordinating regionally, trying to make sure that the rules in Maryland look like the rules in New Jersey, making sure that those competitive issues are dealt with.

Those and new rules that we expect from

the Federal Government, like a good Clean Air Interstate Rule and Clean Air Replacement Rule, and then to continue the benefits from existing programs. We're actually pretty close to meeting that 500,000 ton per year target.

Again, it's likely to go up as we find some of the programs that we're implementing are harder than we thought. Maybe we are going to have to go back but, anyway, we have a lot of work going on and we're getting closer and closer.

Next slide. Transport, this is one of the things I've spent a lot of time on over the last year, and, actually, one of the things we've done is we've extended the 13-state partnership that we built through the OTC to include some of the Midwest states.

It's been a long time coming, but they're now talking about their need to reduce transport to help them attain the standards in their states.

There's actually a letter signed on September 2 by 17 states that included a very strong recommendation on national rules, and so we continue to push that with the EPA. With the connections you guys have here with the EPA administrator, feel free

to push these national rules because we think they're such a key thing.

But anyway, some of the things that we did, we did a lot of modeling, and we used the provisions of the act about transport for Section 110(a)(2)(D), but one of the things we really stressed was that for those 17 states to obtain the new ozone standard and any fine particle standard, we're going to need a suite of national programs that clearly includes EGUs, but includes other categories as well.

I think the thinking in EPA right now is that by dealing with power plants, transport is dealt with, and we're trying very hard to make sure that it's not just EGUs. It's any large regional sources of NOX and SO2s.

Hit the next button. The letter from the 17 states, that's what the ask was, and this is the suite of measures that were included in that letter.

Since that time -- hit the button again -- we've actually started to prioritize again, and through the OTC and the 17-state collaborative process, the four highest priorities we're pushing are very tough pilot plant program, and many of you

have may have seen the letter that was sent out that

provided the recommendation and, again, the recommendations not only came from New Jersey and Maryland, but it came from Ohio and Indiana, and that's sort of an interesting shift and brings coal into the discussion a lot more, and the recommendation, I thought, really did a great job with coal.

So, anyway, industrial, commercial and institutional, ICI boilers is the second piece. Cement kilns is the third piece and new federal tailpipe standards is the fourth piece.

And, again, this isn't brain surgery. What we did is we said the NOX SIP call took regional NOX out of the air across 20 to 30 states, one of the next biggest categories that are large sources of regional NOX and regional SO2, and this is where we are right now.

We also have other categories, but those are the top four.

Hit the button. The schedule, again, EPA has, in 2009, announced the -- Bill talked about this -- the reconsidered ozone standard.

They did announce an expedited schedule, meaning that we won't lose time in the public health

benefits. That was the key thing why the OTC states pushed for creating a new standard. Let's not delay the implementation of the programs and because of that -- hit the button -- we're really not losing any

time.

The green arrow shows where we are, which is at the end of the process of identifying new control measures. We're going to be finishing a lot of the air quality modeling within the next year.

We'll start to do rulemaking in the 2011 timeframe, and we're pretty much -- we're in pretty good shape.

Now, when the reconsideration standard comes out, and if it's 65, 70, we're probably going to have to take a step back and say, do we need to do more, but for purposes of getting started, I think we're in pretty good shape.

Next slide. Again, the good news is that we've seen tremendous progress in our states reducing fine particle pollution and ozone pollution, and for people like me who have been doing this for 25 years, and for the first ten years, all I can say is, well, at least as we put more cars on the road, at least the pollution is not getting worse.

It's been really rewarding to see the

ozone fine particle levels drop as they have in the last five years.

So we do have tougher standards coming at us, which means we have a lot of work to do, and we're generally on schedule with the regional process.

We need to keep pushing on local control

programs as hard as we can, but we also really need to push hard on national measures, and that's been, I think, one of our big themes for the past six months and Bill, you've heard this message over and over again and, actually, the Region 2 folks and the Region 2 folks and the Region 1 folks have sort of been our allies with this, so it's been a process of trying to move through this.

So I think that's it. I'll take questions if you have them.

MR. BLANDO: John?

MR. ELSTON: A couple of things that really fascinate me. One, of course, is the regionalization concept from the federal government for a more national role and, particularly, the smaller -- other than power sources that you mentioned, of course, once you started getting into that, you start getting into more and more difficult

permitting processes, different processes that have different things.

The general rule being that the smaller the source, the more complex it is because of the smaller nature and the individual nature of the source, and I guess I was wondering, in lieu of the fact that we had an earlier presentation from Mr. Manninen, who indicated that innovative flexible permitting should be used more and more by the states, and he cited Wisconsin, and he said his plans

were in attainment areas.

Now, the presumption I will assume is that most of this pool of ozone may be coming from those attainment areas to the south and the southeast, which again, creates a different playing field and for the different states in this non-attainment/attainment game, and I was wondering how you think about -- maybe we should begin nationalizing or make national permitting rules in such and such a case that would not only talk about putting different types of controls, technology controls, but the process by which they're installed through the permitting process might be more nationalized as well.

What's your thinking on that?

MR. ABURN: Well, I think that's an interesting idea and probably something that's going to have to be looked at over the next ten years.

The issue raised over attainment areas and how there's an unlevel playing field between the controls in the attainment areas and the controls in the non-attainment areas is dead on, and if you look hard at the 1990 Clean Air Act amendments, it did a lot of wonderful things, but one of the things that it didn't do was create a level playing field for common sense controls, which I think it really should have done.

It basically has created, to a certain

extent, created a sprawl kind of generator. It has pushed people to -- away from the cities and out into -- so that is a very important issue.

Even programs like -- one of my favorite things, and Bill came back from his talk and he said, Tad, I was really nice. You need to be really nice because over the past ten years -- over the past eight years, I've been a little bit of a thorn in the side of EPA, and so one of my favorites is NSR.

I mean, from a science perspective, there's no reason that NSR shouldn't be an East Coast program.

I don't know the whole west that well, but the NSR, if you're going to have really tough controls on cities, and you have PSD so it sort of equals itself out. They're not identical, but your point is well taken.

I think it's something that will be discussed. I was going to ask, we did some stuff with flexible permitting, but we sort of asked for -- and it sounds like they do it in Wisconsin also, but asked for a little extra.

If we're going to provide the flexibility, can you not only meet the requirements, but then start to, over time, rachet down, move it more towards Arthur's concept of how we'll eventually get to zero. That's a big goal. I'm not sure we'll ever get there, but over time, that would be an

interesting thing to pursue, is sort of incrementally, you know, committing to more and more reductions over time.

MR. BLANDO: Any other questions from Council members.

Okay. Tad, I appreciate it.

MR. ABURN: Thank you.

MR. BLANDO: The last speaker for this morning, unfortunately, is not going to be here

today. She apparently has come down with the flu.

So Ana Baptista will be submitting written comments, but it's time for lunch.

(Luncheon recess taken from 12:00 p.m. until 12:53 p.m.)

AFTERNOON SESSION:

MR. BLANDO: Thank you for coming. The afternoon session is about to begin.

Our next speaker is Joann Held. I think a lot of you probably know Joann Held, but for those of you who do not, Joann is an air toxics analyst, and she's a former DEP employee with many years' experience in the Air Quality Program.

She's active in the environmental justice projects in Camden and serves on the DEP Environmental Justice Advisory Committee and the Waterfront Staff Science Advisory Board.

Joann will speak to us about identifying point sources of toxics and NJDEP's air program's air

assessment and management process sufficient.

Joann?

MS. HELD: Thank you. I just want to thank you for this opportunity because there's really nothing I love better than just spend time talking about air toxics, and it's good to have the

opportunity to kind of retrain myself, but I'm going to have to assume that you are all familiar with the New Jersey DEP, our toxics program, and in order to get through the next 15 minutes, but I see a lot of new faces or fairly new faces on the Council, and if you would like to know more about the New Jersey Air Toxics Program, I think it's a really great program.

I'm a little bias, but it is a real good program, and you should invite everybody to come to one of your meetings and give you the big picture and also allow the little pictures about what's going on with air toxics because it's just such an important part of the program, it tends to get lost.

What I want to do today is talk about two guiding principles that I think are important in making the decision about the Programs Air Toxics Program as well, and then to give you a few suggestions for how I think the toxics program could be improved and moved down the road bit and then a couple of little at the end of this time.

So my two guiding principles -- the air toxics ended up being the way it is is there are an

awful lot of people who come down to my desk and say, I have this permit, and I can't tell if these emissions are big or little. I can't tell. I never

of this pollutant before, and we have to try to figure it out.

So we end up developing a screening worksheet that can be used to streamline the decision progress, and I was getting back to the question of is this going to harm people or is it going to improve a lot of people, is it what the department is really there for, is to protect public health, and since you know a lot of people who get bogged down in the nitty-gritty of crossing the Ts and dotting the Is, you really need to step back patiently and say what we're really trying to do is to protect public health, and what's the most efficient way to do it and let's do it.

And so that's really the first guiding principle, I think.

The second guiding principle that I think is real important for the Air Toxics Program is I think you need deputize the whole air toxics -- the whole air program.

Everybody in the Division of Air Quality and all the enforcement people who do air quality work and all the people in pesticides and right to know, and all the of those people are part of the Air Toxics Program.

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It's not just, you know, I'll get a couple of staff doing everything. It doesn't work unless everybody feels they have a stake in it, which requires a lot of training and keeping people posted about what's important and what's not, so that's another big, big piece of making the Air Toxics Program work, is deputizing everyone.

I'm going to be talking though mostly from the perspective of permitting point sources, but I'm not going to be talking about specific rules.

I'm going to talk more about kind of the procedures that can be used.

Can I have the next slide, please?

Here's three suggestions. The first is to update reporting thresholds, and I'm going to explain that and spend most of my time to explain that.

Bill is here. Bill will talk about it.

Improving toxic inventory and making better use of the risk screening worksheet. Those are the three things I'm going to talk about. I'm going to leave this up here so you can see where I am.

Reporting thresholds. In our two -- and I keep saying "our." I mean the DEP.

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In the two permitting rules, Subchapter 8 and Subchapter 22 in the appendix, there's something the reporting threshold and Table B has replaced that threshold for the hazardous air pollutants, and so for each of the 188 or 89 or so of toxic air pollutants, there is a threshold.

If you are seeing more than this in a year, you have to include that on your permit, and then, once it's included on the permit, then you have something to review.

The permit evaluator has something to review. You can do the risk screening on it. You can do a lot of other things. If you don't put it on your permit, it's like it doesn't exist.

Well, unfortunately, the reporting thresholds are no longer really useful -- really useful numbers for the reporting thresholds. They're deciding whether something should be on the permit or not.

I have actually -- the third page of your handout has a little more detail, but a number of unfortunate circumstances that conspired for -- most of those numbers will probably be too high, although some of them might be too low.

Number one, the numbers were developed

by the USEPA. As part of their MACT program under Title III, they had to develop maximum control facility standards and there are some major sources,

they say, in the Act.

Well, what if you have a new major source that's being built before the MACT standard comes out. Then shouldn't you do something, rather than let them build this new source without any consideration for air toxics.

They say, well, we have thresholds and they'll say if it's greater than a certain amount, the State will do it case by case, because it's big enough to have a case-by-case analysis.

They all had thresholds on them, case by case thresholds, and we decided well, we can use those numbers to report the thresholds -- and I forget the number, but we'll just use those.

Well, unfortunately, nobody thought about that the facility would only be operating for a few years before the MACT standard came out, and there was a really good air toxics analysis done, so they divided everything by ten for the RIFs, and they also assumed that the sources were fairly far from actual residences, and that's not the case in New Jersey very often.

So it wasn't representative of our permitting case that we do.

Also, they didn't actually have the factors for all the hazardous air pollutants, so they had to put in place holders, de minimis numbers.

Since then, new numbers have come along.

So there's a lot of new information that can be used to make those reporting thresholds better.

So the question is, do we really need to waste our time to improving those reporting thresholds, so we -- from Chapter 8, reporting thresholds, we put them in the risk screening worksheet.

We assumed if you have a stack that's 20 feet high and then 45 feet to the nearest property line, which happens all over the place in New Jersey, and we ran it through the risk, and you can see on the third page there that 98 out of the 99 pollutants that have cancer risk numbers for the risk screening have risks greater than one in a million, cancer risks greater than one in a million.

And then we say, so it's little greater than one in a million, not a big deal, but if you go down this table, you'll see that, still, 85 are greater than ten in a million and 30 are greater than

a hundred in a million. It just goes on and on.

This really high risk screening, which will tell you that anything lower than that, just a little bit lower than that, you don't even have to put on your permit, even though, in the screening, it could a risk of one in a thousand.

So I think we're missing a lot of really important sources by having those reporting thresholds not be up to date, and they can be updated

by first using proper assumptions about distance to property line.

Secondly, using the most recent air models out there now, we don't have to use the old models and, third, using the most up-to-date cancer and health, non-cancer reference concentrations, so that we can do a good job, and if you were to update the reporting thresholds, a whole lot of good things would happen.

You no longer would be saying to people, you know, we just don't know what's out there. I think that's one of the things that really causes the residents of this state to lose faith in the DEP, is that we just say, I don't know, and we have no way of finding out. So it doesn't inspire, you know, trust.

So this is my pitch for improving those

reporting thresholds, and as I told Bill, in my retirement, in my free time, I would update those numbers and just return with the numbers for him, and not having had any free time yet, it's about a year, if you need them, let me know.

So the next thing is to improve air toxics emission inventory. This is again getting back to not knowing.

In the current method of developing an air toxics emissions inventory, it's really sort of done ad hoc. There's really no rule. It sort of covers a lot of these toxics.

There's no simple way, a place that you can go and get this information. When we were doing our Camden emissions inventory, we had to go to about eight to ten different places, and ended up going door-to-door trying to figure out what was being emitted from these facilities. We just didn't know.

So I think improving the reporting thresholds would actually give us a lot more information about what's being emitted in this state.

Also, another way to improve that information would be to share information between programs, and I think that sharing between programs is so important.

The criteria pollutant inventory has a lot of information about VOCs and PMs, and with the emission factors, you could figure out or estimate what the toxic emissions are, and I don't think that's being done.

It needs to be done, and it needs to be done sort of electronically, not just the one person doing emissions inventory sitting at his desk calculating these by hand.

Also, I think we need to allow the EPA for better tools to do this kind of work, and the benefit would be that, every three years, when they run the national toxics assessment, we could give them a really good air toxics inventory, and they would model the air toxics in New Jersey for us and

give us good results.

Instead, they're making stuff up, the EPA, and they're giving us risks that we end up having the staff spend time refuting, correcting, trying to understand and wasting time, when we could put that effort into developing a good inventory, letting the EPA actually developing better tools.

Make better use of the risk screening worksheets.

We have the worksheet. It's available.

Permitters starting using it. It needs to be updated every two to three years using what's available in EPA, California and other reputable sources.

You should make sure that everyone in the air program understands these worksheets and knows how to use it, and I think the air toxics steering committee is a very important part of that.

They should be out training the staff to understand that this worksheet is available to be used in permitting. It can be used in testing. It can be used in air monitoring. It can be used in a lot of places to say, is this worth me looking at anymore? Can I just stop here?

You have to remember that screening means kinds of overestimating the risk, and if the risk ends up being low, even after you throw in every possible overestimation, well, then don't worry about this anymore, but if the risk is high, you look at it

more thoroughly, and once again, people don't want to add the risks, on the risk screen worksheet, you have maybe about ten pollutants that you put on an emissions volume, and that you are supposed to add+ up the risk, and if it's low, then you stop, and if it's high, then you look back, and you sort of parse out what the risk is.

I think I've been discussing, do you add risk or not add risk? I've been discussing that with people for about 20 years, and I would like to quote Dr. Baker and say, well, it depends.

If it's a risk screening, add it, you know, because we have facilities come in. We have -- with a hundred pollutants, each having one in a million of risk and because they could. You know, you passed this on the screening.

That's not the idea. They're just making up numbers to put on their risk screening worksheet because they can do it.

I think people are actually thinking about what they emit makes a big difference. If people think about what they emit, they may decide not to do it, thinking about what they emit and deciding, oh, we don't want to do that.

That's a wonderful thing, and I think consciousness raising is about the best thing you can do with air toxics.

Next slide. A couple of more things.

One of the -- to start adding pollutants to the regulator air contaminants list. It's been 20 years since Congress cobbled together a list of lists and said, these are hazardous air pollutants, and it's

long past the time for an update of that list, and the Department has the authority to add pollutants to the list.

It's in the New Jersey Air Pollution Control Act, and I think it's subsection 13i under the current rule of permitting, and you could start to add things to that list by -- hydrogen sulfide. Can you believe it's not a hazardous air pollutant? It's not.

How about some of the alternative dry cleaners solvents that have toxic properties in it. They just don't have to be regulated. They don't have to be permitted. That doesn't make sense.

So n-propyl bromide has hazardous health effects. It should be a regulated air contaminant, and it should be really easy, actually, to document the health effects, put it in the New Jersey register and make it a regulated contaminant.

We need to develop procedures to routinely address cumulative impacts in the environmental justice communities.

It's sort of ominous in here, because I think she would have talked about that, but the question, is it safe, when the next question is

raised for a newer modified source in the air already

impacted by numerous air pollution sources, the answer to the question might be yes. If there's only one source, then it's safe, but we need new tools to develop what happens when you have lots of sources in a small area, right next to lots of residents which happens in a lot of places in New Jersey.

We just don't have those tools, but I think screening procedures, again -- I'm a big fan of screening tools -- would be a way to address those critical neighborhoods.

Flag the critical neighborhoods. Flag what you mean by substantial progress, find a way to focus on development sources so you don't have to do a massive modeling job every time, and finding new says to produce new and perspective.

Those are some of the things that I think we really need to do to move the Air Toxics Program along.

If I were able to go a little longer, I would look at the next slide and suggest that you look at other areas. For example, pesticide usage shouldn't just be the responsibility of the Air Toxics Program.

There are carriers for those pesticides that are toxic. We don't what they are. They don't

know what they are. We need to get that information and take care of those, address them when it's not safe, and we don't know if it's not safe if we don't know what's being emitted.

I think we need to extend the MACT requirements from major sources to cover some of the areas in New Jersey.

Tad talked about national programs, and national programs are a start, but they don't address what we really need to have done in New Jersey, where we really have just below major sources, a whole bunch of them, and in neighborhoods where there's a bunch of people living.

We need to be able to extend some of those MACT requirements to some of those, you know, sources that are just flying under the radar in New Jersey, find a way to do that.

I'm not sure exactly how we should do it. DEP, you can figure that out, and just another area that would we might want to start considering is perimeter monitoring.

We're going to be cleaning up a lot of hazardous waste sites a lot faster, and people want to know what they're exposed to when they've got these Stone Age monitoring methods that have been

used, but there are newer equipment that's not

anymore expensive to use.

As I understand it, it's available for realtime speciated concentrations, so you can tell people what they're being exposed to. That's what they want to know.

They were working on the permitting monitoring guidance for about six years, trying to finish it, make it up to date and, again, get information and share it.

That's what air toxics is about, is giving information and sharing it and making good decisions.

So I thank you very much for this opportunity. Sorry I talk so fast, but I'll be happy to answer questions.

MR. BLANDO: Thank you. Jim?

MR. CONSTANCE: I'll just start with the first question.

Most of the time, when our agency deals with air toxics, it seems that there's somebody in the emergency department being treated for something; for example, the n-propyl bromide episode that we had recently.

What would you propose is a way to pick

up these emerging contaminants because there's hundreds of chemical compounds that enter the marketplace?

We all know that we only test about two

percent of them. So what is a method that we could use to pick up emerging contaminants before we have a patient in an emergency department or a hospital? Is there anything beyond -- because surveillance systems will pick up the people that are getting healthcare, but how can we get that information before they end up in the hospital?

MS. HELD: I don't know that I have an answer to that question, but I understand that the USEPA -- well, the Federal Government is actually looking at the TOSCA levels and making them better, so right now, there's really nontransparent things that really have to go on the TOSCA list coming down the pike.

I think it's going to be hard to find something that says here, this is going to be the high new pollutant, but when you find that pollutant, when you find something going out like n-propyl bromide, it really should go on the list.

If we were talking to each other regularly, it looks like the Air Toxics Steering

Committee, for example, that you already have a network of people you can talk to and connect to more quickly, and I think that is something that can be done right away. So if we don't have a crystal ball for what the next pollutant is, there's a mechanism to address it as soon as you know what it is.

Joe?

MR. SPATOLA: Yes, Joann, I have a question for you.

You were involved in giving us some risk numbers in the community, the environmental justice communities in this state, probably are almost comparable to cities in the United States, but shouldn't you be breaking out, as a special subset, children in these environmental justice communities, where they have a different kind of impact because of the state that they're in and factoring in things like structures and things of that sort that falls above and beyond these written numbers?

Shouldn't that be an issue that should be addressed by a regulatory agency?

MS. HELD: Not too long ago, maybe five years ago, the EPA came out with some guidance on how to adjust some of the risk factors for situations where children were exposed.

Well, I can't think of too many situations in New Jersey where it's unlikely that children would be exposed.

If you're thinking about a permit, you're not going to say, oh, but there are no children near this facility. There are no children in this part of New Jersey.

So one thing that could be considered and this is pretty -- nobody is doing this stuff, and I think you should, is adjust a few of the cancer

risk factors that are known to have -- be more severe in receiving exposure than a child could, and then make that part of this list. That would be a way of trying to address that. I haven't seen any way to quantify that.

There are -- EPA has a list of the things of things that tend to accumulate in the environment and in your bodies. You might want to just throw an extra factor ten in, but that's about the best we can do right now.

Still, it would be good to start to consider those, be a little more careful with those. That might be an approach that you can take.

MR. BLANDO: Are there any other questions?

MR. EGANTON: You mentioned the air toxics inventory.

Do you see any changes -- with Lisa Jackson being in the EPA, do you see any changes with that inventory and anything and -- information being -- flowing back and forth from the states?

MS. HELD: Not yet. Although I think, when she gets through going through a lot of high priority things, I think she would be receptive to the discussion about finding a better way of developing the Federal and the State toxics inventory, and there has been talk about a national rule that would require states to collect their

toxics emissions information.

If that discussion comes up again, it would be great if New Jersey were to be one of the advocates for that.

A lot of states are saying, no, no, no, we just can't afford to do any more work, but we make it work for ourselves by not collecting the information properly.

So I think, when it comes up again in the Federal Government, that would be a good way to make it happen.

MR. BLANDO: Joann, I just want to

quickly get your reaction.

I read in the newspaper about the whole debate about funding for the Poison Control Center, and their rationale was that people can simply search on-line for poison information, and so we don't need a Poison Control Center. I'm just curious what your take on that would be.

MS. HELD: The work that I did was mostly not related to acute exposures, and I know, myself, when I search for things on-line, it takes me a long time to make sure I found a reputable website.

So I didn't buy that personally, because who is going translate for it for you and how do you know that you've gone to the best and most expert website.

The same thing with toxics. The

community needs somebody to translate for them and the DEP needs to learn to communicate with the public in the language that they understand in the same sort of way.

MR. BLANDO: Thank you.

MS. HELD: Thank you.

MR. BLANDO: Our next speaker is Dr. Larry Bernson.

For over 20 years, Dr. Bernson has been

managing air quality activities worldwide for Alcatel-Lucent.

He also administered the USEPA Region 2 air emissions testing program for ten years, and he's and instructor at Rutgers University Air Compliance Center and Chairperson of the Environmental Regulatory Affairs Committee, Research and Development Council of New Jersey.

Dr. Bernson will be speaking to us about air pollution challenges facing the industry. It's the first time we ever sampled a smokestack was under his direction.

DR. BERNSON: Again, I'm very happy to be here.

First of all, let me just commend the Council on its genuine interest in obtaining comments and recommendations from the general public, as well as from the regulated community.

Second of all, definitely, as I look at

the Council members, you know, I definitely see some very experienced people. You know, I see people that actually worked -- there's a fellow that I worked with in the mid '70s in EPA. Again, Jim Blando, I worked with him in Bell Laboratories, when he was an intern back in the early 1990s, and even with Toby

Hanna, spending countless hours wordsmithing proposed regulatory documents.

So, definitely, you have a great group hopefully giving guidance to DEP.

I've been asked to discuss issues that are affecting industry here in New Jersey. Again, let me just make it clear, again, the comments I'm giving to you are, again, my comments. I can't represent all industrial operations here in New Jersey.

However, I do have, you know, experience in working with the Alcatel telecommunications group. I still work with and give consulting services to other types of operations in Jersey, you know, be it fuel combustion, being batch operations, be it chemical manufacturing, and when I talk to those people, I ask them, by the way, what are your feelings about DEP's program? What can be done to help make your life easier and make these problems more workable?

So this is essentially what my discussion is going to lie in.

Over the past decade, the Clean Air Council has provided exceptional guidance resulting in significant improvements in the air quality levels

here in New Jersey.

However, as recently acknowledged, New Jersey will face increasing challenges during the next decade as population grows, development and traffic congestion continues to increase, and these issues are going to be compounded dramatically by economic issues, which will result in less money available for use by industry to support their environmental programs, along with current reductions in funding with associated NJDEP programs, with less money available to fund these programs, which for years, has essentially been proactive, and that's my concern, is that for years, industry has been going well above the necessary stipulations as put in the Clean Air Act in the DEP rules.

Now, because these limitations are going to have to change. Essentially, it's going to be what is needed for us to comply with the regulations.

So maintain a positive trend in air quality improvement can continue only if there is a genuine collective effort between NJDEP and the regulated community that's focused on innovation, technology and education, and it's my position that in the future, NJDEP will have to expand their assistance to the regulated community, and I'll begin

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to give you some examples of how this assistance can be forthcoming.

There are many opportunities available for NJDEP to support the regulated community in complying with the intricate air regulations faced by many industries.

In the 30 plus years that I've been involved in the environmental field, air regulations have become significantly more complex, and associated requirements designed to document compliance with those standards have become increasingly laborious, and that is one of the main issues that industry had, is when they receive their permit to operate, there are conditions, and a lot of the times, those conditions are -- sometimes vague, sometimes too complex, and as such, that's going to be one of the main items that industry has, is what can the state do to ensure that there's going to be consistency with those requirements.

This complexity coupled with shrinking environmental staff levels within the regulated community makes it critical that air permit requirements be appropriate and consistent for similar source operations throughout the state.

Again, another important aspect is I've

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assisted various facilities in simple boiler permits and, unfortunately, depending on different permit drafters, they have different requirements.

Sometimes some of the requirements from one operation essentially is, there are no requirements, although another facility has numerous and onerous requirements for the same operation, and that's what the complaints that the industry has is, if a permit is being drafted for the same or similar source operation, make sure it's consistent and make sure it's appropriate.

In addition, specified monitored data must actually employed to document compliance, document the compliance status of the source, versus just information that may be useful to have within the NJDEP files.

This policy will reduce potential economic impacts that may result in an economic disadvantage for facilities operating in New Jersey.

Lately, I've been providing assistance to numerous facilities involved in activities ranging from simple fuel combustion to complex batch manufacturing operations. In most of these facilities, the assigned staff did not completely comprehend the requirements contained within the

issued operating certificate, and this is the direct result of budget constraints which are oftentimes forcing affected facilities to utilize just one

person to manage a wide array of the company's program activities, regardless of the individual's education and/or professional level.

And, again, just to reiterate, I just came back, actually yesterday, from a printing operation down in South Jersey that used to have a staff of five people to manage there programs and now there's one person handling air, water, solid waste, public safety and security.

So, again, these are the issues that the industry is now experiencing.

What can DEP do? Well, one thing they can do is hopefully utilize web-based training to address specific requirements; for example, instructions and examples of regulatory requirements and associated calculations that satisfy DEP criteria could be provided to all facilities on a DEP website, which would monitor and record VOC content levels per compliance plan criteria.

Another example would be for the boiler optimization requirements. That's -- again, it's a mandate that all boilers of specific size have to

basically do an tune-up of optimization.

The problem here is, there wasn't really any guidance given to facilities of what DEP expected. Unfortunately, what was happening is we had a lot of consultants -- four consultants going out in the industry to certain boiler that would do a

tune-up basically with a handheld monitor, give a PPM reading and leave.

Well, the problem here is, that's not what DEP wanted. DEP wanted a more robust program.

Again, I think what would be easier is to have DEP put on their website in example form saying, here is what we expect in a boiler optimization test program.

At that point, the industry could give that to their hired consultants, and DEP would get the information they need, and the consultants would actually be able to, in a more correct manner, get the data and get the program requirements done more appropriately.

Next, I'd like to address regulatory strategies for air pollutants and other sources not yet fully identified. This is an emerging issue directly related to greenhouse gas emissions.

Again, in the morning session, we had

numerous speakers stressing the importance of this climate change program.

The Regional Greenhouse Gas Initiative is the first mandatory market-based effort within the United States to reduce greenhouse gas emissions. New Jersey, along with other Northeastern and Mid-Atlantic states, has implemented programs to reduce greenhouse gas emissions from the power sector. However, additional educational outreach

programs are needed to provide guidance and information to the industrial and commercial sectors in New Jersey, to encourage voluntary actions to reduce energy usage and associated emissions.

This proposed voluntary carbon footprint reporting program -- again, I'm proposing that it be designed following that of the EPA Climate Leaders Program.

You know, through participation of this program, a company would commit to reduce their environmental impact by completing a corporate-wide inventory of their greenhouse gas emissions, setting reduction goals, and they'll actually then annually report their progress to the DEP.

Companies would benefit from reducing operating costs, like implementing energy efficient

projects and activities, and then would also receive recognition from the DEP on their website or in other award ceremonies.

Along with that, let me just stress that Alcatel-Lucent is a worldwide company. It's actually a merger of Lucent, which actually broke off from AT&T along with Alcatel, which is a French-based telecommunications company, and as such, coming change is actually a major program within our company, and it's a major program not because of regulations here in the United States, but because our customers mandate that they want to know what our

programs are. They want to know what the current footprint is, and if we can't give them the information that they want, we just lost them as a customer.

So to me, the voluntary approach, I think is critical, especially with worldwide facilities.

Through these state, industry designed voluntary emission reduction programs and web-based training, the State of New Jersey can increase the effectiveness of our air quality programs without creating an economic disadvantage for our businesses in achieving air quality standards not yet met and

establishing programs to confront new air pollution issues.

Again, through a genuine collaboration between NJDEP and the regulated community, the air quality progress will continue throughout the next decade.

So, again, any questions on the industry's feeling on DEP regulation in the air programs?

MR. BLANDO: Any questions from Council members? Michael?

MR. EGENTON: Thanks, Larry. Considering that your company is global, and you have other facilities in other states, we, at the state chamber, always try to look at benchmarking, look

what other states are doing and learning from that.

I was wondering, in your experience, in talking to your colleagues in other states, is there anything that we can bring to the table, as far as the states doing this to bring to what our DEP in New Jersey is doing?

DR. BERNSON: Good question. The issue -- actually, I received a request from our site in Texas.

Basically, they just relocated from

Arizona down to Texas, and I was asked to get the necessary permits for the operations.

Again, I contacted the Texas group, and what they have is -- it's really interesting. They had de minimis levels, like we have, where, again, the di minimis level may need registration. It may not.

If your emissions exceed the di minimis level, then there's a permit by rule, and by a permit by rule, it gets a listing of source operations, where, again, you don't have to submit a permit application.

You may have to register, depending on the magnitude of the emissions, and then you have your typical permitting programs.

So the difference there essentially is the cost to industry to design, submit and pay for an air pollution permit where, essentially, it's all de

minimis emissions is something that we have here in New Jersey, where in other states, we don't have, and that would be another recommendation that I have, is that if the emissions are all below specified levels, why is there a need to actually go through with this whole radius submittal process and submit to the State, where you only really have to basically have

the one-half on hand, documentation that we have at the facilities saying we're below these levels. We can have a very simple registration form.

MR. BLANDO: Joe?

MR. CONSTANCE: I just have a brief question. On the air permits, are they now available by computer?

These companies that have obtained air pollution permits in the State of New Jersey, having access to the computer, does that help in any way bridge this gap between a regulated and the regulator community, in terms of coming up with consistency or what's been done with similar type of pollution in the state?

DR. BERNSON: I think there's two issues. There's the web-based ability for anybody to go into, you know, DEP and get copies of or records of various permits held by various facilities.

Those records are very limited in its information. Again, all that will do is basically say, you have a permit that takes care of this

emission unit, that has this piece of equipment.

So on one hand, it's interesting. There are some facilities that didn't have their permits, and they said, fine, can we go on the website and

pick up copies of the permits. Well, that doesn't help you. All it does is give you PCP number and the equipment. They don't give you the operating scenarios or the information on the operation itself or the allowable emissions.

On the other hand, in the middle of the emission application, which I think you're addressing there, yes, I do believe, now that everything is computerized, there is more consistency between similar source operations and what individual permit drafters will then put into the permit, you know.

However, there are still some -- there's still a gray area, and I think there's still some permit writers who do look at these permits and are more stringent in their requirements than other ones, but, definitely, there has been a significant narrowing of the gap between the ranges of permit requirements for similar sources.

MR. BLANDO: Thank you.

The next speaker on the agenda, Tony Russo had an unexpected schedule conflict and is unable to be here today, so let me just move on, if possible.

Our next speakers will be a team

presentation by Richard Webster and William Schulte.

Oh, okay. Mr. Schulte. He's an associate attorney with the Eastern Environmental Law Center and represents citizens' groups in a wide range of environmental matters and he will be speaking about future legislative options.

Thank you.

MR. SCHULTE: So, first of all, I would like to thank you all for the opportunity to be here and to speak and present today.

I guess I'll get right to it. So this sort of ties in with some of the things that have been going on this morning. I know the gentleman from Maryland earlier was talking about local strategies to address air pollution. So this sort of ties in to that theme there.

The next slide, please. So this being in a nutshell the problem that -- whether this was meant to address future possible legislative options to address air pollution and, basically, in a nutshell, the problem that we are trying to address through the solution that we're proposing is all their facilities with all their pollution control technologies and the seeming lack of ability to require those facilities to you upgrade their technology as they continue to operate.

So some of these older sources continue to contribute to increased asthma rates, cancer and non-attainment being a very serious one.

The next slide, please.

So what we sort of felt was the simplest solution on its face was to the develop legislation that would requite the DEP, every five years, to do a review or analysis to determine -- this is a term that we can came up, best installed control technology at each category of major source of emissions for each Clean Air criteria, and as a second step, a law requiring that each time one of these facilities goes through the Title V renewal process, that they are required to upgrade to whatever the DEP has determined is the best installed control technology.

Next slide, please.

The benefits would be improved air for citizens to breathe, a way for New Jersey to work towards achieving attainment for a certain criteria of pollutants, a level economic playing field among certain categories of air polluting emissions and, also, not really a necessary need for extensive economic or cost analyses because the facilities would, by definition, once the DEP determines what

the best installed control technology was, there

would already be facilities operating with that technology.

Now, that's basically it in a nutshell. We have a case study to sort of demonstrate what it is we're talking about.

Next slide, please.

So we chose municipal solid waste incinerators as our case study. In New Jersey, there's five municipal solid waste incinerators in total, two of them who have air pollution control technology, at least with respect to particulate matter that is not as efficient as their competitors', and, presently, DEP believes that it doesn't have the authority, upon the Title V renewal process, to require those facilities to upgrade their technology.

The next slide, please.

So New Jersey's five solid waste combustors are in Camden, Essex, Gloucester, Union, and Warren Counties.

Essex is the largest among those. Camden is the third larges, both of which went on-line about 20 years ago, I believe right around 1990. Next slide, please.

Just a little background about the neighborhoods in which these incinerators are.

The Essex facility is in Newark, New Jersey, in the Ironbound community. I don't know if

you're familiar with the Ironbound.

These numbers up here, the census numbers, that's according to the 2000 census. Essex County has the highest asthma rates in New Jersey.

Camden also has some of the highest asthma and emergency room discharge rates in New Jersey, and the census tracts close to the facility show that they are predominately minority populations, and pretty high proportionate families that are below the poverty level.

Next slide, please.

As we've been going on, I realize that I could preach to the choir in terms of particulate matter.

Next slide, please. This is just a map from the DEP website showing the PM 2.5 non-attainment areas in New Jersey, and Camden would be right there, Essex right up in the corner there.

So as you can see, these facilities are located in areas of non-attainment.

Next slide, please.

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And here is another map. I had a lot of formatting difficulties with this one, but this map shows hospital and discharge rates for asthma.

This is a map from the New Jersey Strategic Asthma Plan for 2008 to 2013. As you can see, Camden County, Essex County, Hudson County, Piscataway shows a pretty strong correlation in the

non-attainment areas for PMC 2.5.

Next slide, please.

A little bit about the control technology that these facilities have to control for particulate matter.

Camden and Essex both have electrostatic precipitators, where the other three facilities in New Jersey have fabric filter baghouses.

Essentially, electrostatic precipitators are not as effective as fabric filter baghouses. They're prone to malfunctions.

Fabric filter baghouses are, essentially, from what I understand, exactly as they sound, basically, large filters, and according to DEP, these baghouses achieve half of the emissions of particulate matter per pound of waste combusted at these facilities that ESPs do, and they also contribute to mercury reductions, which are high at

the Essex and Camden facilities.

So as I mentioned, only two in New Jersey out of the five have ESPs, Essex and county.

At the time these facilities were built, I know there was a challenge put into the Essex facilities permit, where people were commenting that they thought that baghouses should be required to be installed as opposed to ESPs, and at the time, the DEP had concluded that there wasn't really any discernible difference between baghouses and ESPs.

So once that challenge went to court for review, the Court concluded that the DEP's decision was reasonable and allowed it to stand.

So the companies that operates the Essex facility, just as an illustration to demonstrate how and why they used fabric filters today, the companies that operates the Essex facility currently operate 41 facilities in the United States, 38 of which have -- I'm sorry. Next slide, please.

-- 38 of which have fabric filter baghouses.

The company that operates the Gloucester facility, 16 in the United States, 14 of which have baghouses.

I couldn't find any conclusive

information on the company that operates the Camden facility, which is why I included Gloucester in this example.

So just an illustration to show that, today, fabric filter baghouses are the preferred method for controlling particulate emissions.

Next slide, please. As for the Title V improvement costs, I'm sure most of you have are familiar with it. Congress amended the Title V in 1990.

All the permits include all the emission limits and monitoring and reporting requirements necessary to assure compliance, and though Title V

permits generally don't impose new substantive air quality control measures, the Clean Air Act does authorize states to adopt requirements that are more stringent than federal requirements.

So instituting some sort of legislation would be wholly authorized by the Clean Air Act.

Next slide, please.

So a little bit about the renewal process. Every Title V permit has a period not to exceed five years. Every renewal has to go through public review and comment.

I know in the past, at least with

regards to the Newark and Essex facilities, community groups, environmental groups, citizens, Newark City Council, has requested for upgraded technology, specifically, baghouses, but DEP has maintained that it is not authorized, under the New Jersey Title V permitting program, to require those upgrades upon renewal.

The next slide please.

Just to wrap up, the solution that we have proposed is something similar to a five-year BICT review and, again, BICT, that's a term that we made up, and this would be a way to just do a review of what new facilities, as they're being constructed, what those new facilities are required to install and have that be the benchmark for renewals and how existing facilities are going to improve their

control technologies over time.

So as I mentioned earlier, back in the '80s, when these facilities were first being built, it wasn't clear whether ESPs or baghouses were more effective.

Today, it's clear, but we do not have the tools to require an upgrade on those facilities.

So just as a conclusion, this would be a way for New Jersey -- I wish I could say lead the way

in permitting processes, but I didn't have time to do a review to see whether or not any other states have a program like that in place -- but it would be a way for us to start adjusting local impacts of air pollution particulates in particular, so that's it.

Do you have any questions?

MR. ELSTON: Yes, I'm not clear from your presentation.

Are you saying that your position is that DEP has the authority to go ahead and require this now or are you asking that it seek legislation to provide that authority?

You seemed on the fence.

MR. SCHULTE: Yes, to your second question, yes, we're suggesting that DEP be given the explicit authority to institute a program like this.

As to your first question, you know, I'm not a legal authority on what the DEP can or cannot do.

I think that, probably, the way -- and this is just my own personal opinion, the way the New Jersey permitting program is written right now, I'd say it doesn't explicitly authorize or forbid DEP from doing this, but I can also say, if I was the attorney for a facility that was affected by this, I

probably would bring a challenge to it, and it would probably be a valuable challenge.

I don't know if that answers your question.

MR. ELSTON: But you see no problem under the Clean Air Act with the DEP obtaining authority?

MR. SCHULTE: No, I don't. I believe the Clean Air Act actually gives the DEP the authority to impose requirements that are more stringent than what is contained in the Clean Air Act.

MR. LAUMBACH: So your recommendation would be that the department seek the authority to undertake this five-year plan?

MR. SCHULTE: Yes.

MR. BLANDO: Nicky?

DR. SHEATS: AND you're talking about statements, and just following up, I think I know the answer to this question.

Did you consider whether the DEP could do rulemaking as opposed to legislation, or do you

think that would bring litigation around and it would just be a cleaner method --

MR. SCHULTE: I think I've got to look

at the way the statute, the current New Jersey permitting program statute is written.

Again, you know, from what I've seen of it so far, and I'm, by no means, an authority on this, but from what I've seen of it so far, there's nothing, I think, explicitly either authorizing or forbidding DEP from doing a rulemaking, but there probably is a risk that if they did do a rulemaking, somebody would bring a challenge to that. So I think legislation would be a clear-cut way to give them the authority to do so.

DR. SPATOLA: At the renewal of the permit, if a facility does not have the BICT, but is still meeting its emissions standards from the permit itself, would it still be advising them to replace whatever they have to meet this BICT level of control?

MR. SCHULTE: Yeah, well, that's sort of going along with what Mr. Martin said this morning and how he wants it to be based on facts and science and data.

You know, we know that, in the '80s, as I said, when these facilities were first built, it wasn't all that clear which was more efficient, ESPs versus baghouses, and this is just one small example.

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I'm not sure how widely this example is representative, but we did know now that baghouses as constructed are more effective at reducing particulate matter. So.

If a facility was -- you know, one idea we had toyed around with was tying this to whether or not the facility is in a non-attainment area, so that, you know, if a facility was in an attainment area, then perhaps it would not be required to upgrade to BICT, but if it was in a non-attainment area, even if it was meeting the permit requirements to upgrade to BICT.

MR. BLANDO: Nicky?

DR. SHEATS: Along with that, would you also take into account whether it was located in a environmental justice neighborhood or --

MR. SCHULTE: Yes, absolutely. As we saw with the maps, a lot of times non-attainment areas do correlate with those areas.

MR. BLANDO: Thank you.

Our next speaker is Dr. Peter Montague.

Dr. Montague is an Executive Director of the Environmental Research Foundation of New Jersey. He's a trained historian and presently writing a book about managing cumulative impacts over environmental

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stress factors.

Dr. Montague will be speaking to us about environmental justice.

DR. MONTAGUE: Thank you very much. Thank you for the opportunity to testify.

I wanted to recommend some of what I think of as modern policies for addressing climate change, and using those responses to climate change as an opportunity to make additional gains in human health and environmental protection.

Climate change, as you know, does not lie somewhere in the future. Climate change is happening now.

We are seeing multiyear droughts in the Western United States. We've seen multiyear droughts in China, in India and Australia.

We are seeing larger and more intense storms right here in New Jersey. So we need to be addressing climate change now, and as we do that, we will have many opportunities for piggybacking better methods for protecting the environment and human health.

I'm going to suggest three policies that can do just that.

One is that the State should develop and

implement climate change policies that reduce emissions of fine particulate matter, fine PM, and its precursors, SOX and NOX, in addition to emissions

of carbon dioxide.

We often think of the best response to climate change as reductions in our carbon footprint, but we could also reduce our general air pollution footprint at the same time if we crafted our policies carefully to do that.

The second kind of policy that would achieve these multiple goals would be energy conservation and renewal energy sources being used extensively in New Jersey's urban areas.

There's a huge untapped opportunity for employing greater efficiency and conservation of energy, particularly in urban areas, which would simultaneously reduce costs to consumers, would reduce global warming by diminishing CO2 emissions, would improve human health by diminishing fine particulate matter emissions and would create jobs at the same time, and if this were done in the urban areas, which are among our most distressed areas in the state, it could have very beneficial social consequences as well.

A third public policy that would be

worth considering would be an environmental justice committee could be formed in New Jersey in state government to oversee the environmental justice aspects of climate change policy in the state, just as a way of elevating the issues of justice, equity and fairness as we develop policies.

It would be a way of making explicit the kinds of questions that environmental justice naturally raises, such as who's going to be getting the benefits, and who's going to be paying the costs.

As you know, often, those are not the same groups of people, and that disparity between who's getting the benefits and who's paying the costs has, in the past, led to the creation of environmental injustices, so if we were to make those -- to elevate those issues by giving them an explicit embodiment in a committee, whose job it was to discuss and highlight those issues, we could all benefit because, of course, if we protect our most vulnerable populations, we protect everyone.

I wanted to then give an example of how some of these policies would work out in a real-life situation here in New Jersey.

As you know from a presentation that you heard a year ago, there is a large coal-based power

plant proposed for a 106-acre site in Linden, New Jersey. The name of that facility is PurGen.

Now, Linden, New Jersey, has already been designated, as of June 15, 2005, an official environmental justice community in New Jersey under Executive Order 96. So Linden is acknowledged to be an environmental justice community, because of the demographics of the community, because of the burden of pollution that this community is already bearing

and because of health problems, particularly among children in Linden.

This is a nominal 750 megawatt electric power plant that will gasify 7,000 tons of coal per day or 2.55 million tons of coal per year, and this facility has now filed with the DEP an application for a preconstruction permit and operating certificate.

So we have data from the company about what the their emissions would be, and on page 2 of my written testimony, which I hope each of you have been given a copy of -- it looks like you have not been given a copy of.

MR. BLANDO: We'll be sure to get a copy.

DR. MONTAGUE: I was prepared to hand

these to you personally, but they were taken from me with the promise that you would get then.

So, anyway, I'm just going to read you the numbers, 383 tons of NOX, 641 tons of carbon monoxide. These are annual emissions by this facility in Linden. 286 tons of SO2. 28 tons of H2SO4, probably in form of an acid midst, 135 tons of PM 2.5, 1100 tons of ammonia, NH3, 57 tons of volatile organics, and 16 tons of hazardous air pollutants every year into Linden, an area that's already non-attainment.

Now, in the permit application from the

PurGen company, we read an acknowledgment that this company cannot meet existing air standards, and so they will be required to purchase offsets.

Specifically, they will have to provide offsets for NOX, for VOC, volatile organics and for fine particles, and so they will shut down -- by the offset purchase process, they will shut down pollution somewhere outside of Linden, and they will move that pollution into Linden, thus creating a hotspot in a town that is already a hotspot.

This is a gross environmental injustice, no matter how you take a look at it.

The PurGen application says that, at

maximum, they will be producing 450 megawatts of electricity in their 750 megawatt plant.

So they've got 300 megawatts that's going to be doing something else besides generating electricity, and that's 40 percent of the coal coming into Linden to be processed into gas and then used.

That 40 percent of their, coal or roughly a million tons per year, will be doing two things.

It will be making urea, a nitrogen fertilizer, and it will be powering the pumps to send the plant's carbon dioxide through a 138-mile-long pipeline, which will end up 70 miles off the coast of Atlantic City, where they will have a platform that is pumping their CO2 somewhere between a mile and a

half and two miles below the bottom of the ocean.

They will be producing 1.3 million tons of urea each year, and we know from scientific literature going back to at least 1970, that the ecological science community worldwide has recognized since 1970 that humans are already mobilizing as much reactive nitrogen as all natural processes around the globe.

So human activities in 1970 were doubling the amount of reactive nitrogen cycling

through the biosphere, and since then, the amount of reactive nitrogen produced and introduced into the atmosphere by humans has only increased.

A very recent study in September 2009, which I cite in my paper and provide a link to the original study, suggested that to be sustainable, our human nitrogen use needs to be cut to 25 percent of what it presently is worldwide.

So you might argue that making more electricity is a good thing in Linden, but I don't believe that, from an ecological perspective, you could argue that making more urea fertilizer in Linden is a good idea from any perspective, except perhaps, that PurGen will be making $650 million a year selling nitrogen fertilizer.

And so, finally, this -- a state energy and climate change policy that was focused narrowly on CO2 might conclude that PurGen is a desirable

facility because it's going to bury 90 percent of its CO2 somewhere under the Atlantic Ocean, hoping that it will stay there forever. That's the hope.

But if we had climate change policy and energy policy that looked at the environmental justice aspects of our efforts to curb and manage global climate change and took into consideration all

pollutants as an important component of our overall climate change footprint, the PurGen plant would not be seen as a desirable facility, and probably would not be recommended as something that we would want to license to operate in New Jersey.

I'd be happy to answer questions about any of this.

MR. CONSTANCE: Let me ask you, the emissions submissions that were made, were they emissions that were detected or were they the emissions that were planned after control permits?

DR. MONTAGUE: These are the emissions that the company acknowledged that it will putting into the air in Linden after it has all of its pollution controls in place.

MR. BLANDO: Dr. Montague, it seems that one of the issues that you bring up is sort of what you perceive as problems with the offset, programs offsetting the pollutants.

I wonder if you can expand on that just for a minute.

DR. MONTAGUE: Well, it's the nature of an offset program that if you don't offset in the same community or very close to the source of the pollution that you're introducing, you will be moving

pollution and in the case of this particular facility and many facilities that you can point to, offsets have the effect of creating hotspots.

They move pollution from remote locations into areas that are already burdened and make a bad situation worse.

So if we were to sanction offsets, I believe offsets should be purchased only -- should only be used in the communities where the new source of contamination will be introduced, and there should be a stipulation that after the offsets are put in place, they should create a reduction in total contaminants and total health harms and environmental harms in the community where the offsets are being employed.

MS. PAUL: The question was, you know, if the proposed schedules allow for it to create -- for a fund to be created in the open air for energy efficiency.

DR. MONTAGUE: I'm sorry. I don't know the answer to that question. Perhaps someone more knowledgeable than me would know the answer, but I don't know the answer.

MR. O'SULLIVAN: I don't claim to be an

expert but the answer is yes, I believe a portion of

it.

MR. BLANDO: Thank you.

DR. MONTAGUE: Thank you.

MR. BLANDO: Our next speaker will be Valorie Caffee. Mrs. Caffee is a convener of the New Jersey Environmental Justice Alliance.

She chose the Environmental Justice Advisory Council to the NJDEP, serves on the Board of Green Faith and is Co-Chair for Labor of the Coalition Task Force.

Ms. Caffee will be speaking to us about environmental justice.

MS. CAFFEE: Good afternoon. Thank you, again, for allowing me to speak for a few moments about another aspect of environmental justice that intertwines with what prior speakers have presented this afternoon.

Just a few words about what the Environmental Alliance is, it's an organization that was founded in 2002 by environmental activists, who thought that we really needed a stand-alone independent environmental organization that addressed the disproportionate pollution that too many of our residents in New Jersey experience, particularly, those people living in urban centers, and most

particularly, people of color and low-income residents, and we work with various community members, especially when we're asked to address their environmental concerns and struggles that are taking place, such as the proposed plan in Linden, and we provide organizing and technical assistance to such communities, to help them find solutions to their problems, and in addition to that, we also work on promulgating larger environmental public policy concerning, promulgating our own public policy recommendations, which I'm going to share with you today.

The reduction and elimination of air pollution, especially in our communities of color and lower income communities in our urban centers where most pollution is concentrated has been a primary focus of the alliance for some number of years, actually, since we were first founded and we, specifically, in the past few years concentrated more about focus on looking at particulate matter or PM, and this is pollution because of their links to adverse cumulative health impacts.

In fact, according to a report released in 2005 by the task force, Trenton ranks number five in health problems related to exhaust, while the

entire State of New Jersey is around second in the

same report for the various health impacts from diesel pollution nationwide adjusted for our population size.

These diesel exhausts, which is, at its core, elemental carbon, is a major contributor to PM, which is comprised of 35 percent elemental and organic carbons.

Also, according to a report published 2008, while carbon has a warming effect in the atmosphere, they're a three to four times greater than prevailing estimates.

The Environmental Justice Alliance's vision for improved air quality in New Jersey is contained in our seven-point policy recommendations that, if adopted, would significantly reduce New Jersey's air pollution levels over the next decade, and the policy recommendations are as follows:

The Governor should issue an executive order requiring all privately owned, publicly contracted, diesel-powered vehicles, to emit no more pollution than a diesel-powered vehicle constructed after the year 2007. The executive order should also require all diesel-powered equipment to retrofitted with the best available technology to reduce these

toxic air emissions to the greatest extent possible.

Number two, the state should implement the Coalition for Healthy Ports Clean Air Plan that would require all truckers to do business with the

ports in Newark and Elizabeth to be employed by a trucking company that is responsible for using clean trucks and paying a living wage and also, with benefits to the drivers.

Number three, the annual air fine PM standard in New Jersey should be lowered from -- its currently 15.0 to 12.0 micrograms per cubic meter.

The PM standard is 15.0 nationally, but in California has taken the lead here and have lowered the standard to the more protected value of 12.0, and we think that New Jersey should do that.

Number four, air pollution emitted by incinerators in Camden and Newark should be reduced in the short run and a firm closure date should be established for both facilities in the long run.

We really call for the closing of facilities. These impact on people who work at those facilities, but incinerators are not huge employers and, again, as Dr. Montague mentioned, cost, benefits and cost, we think, here, in this instance, that the balance as far as the benefits that go through to

residents who are living with this incineration in their backyard outweigh the instance that a few jobs that may be lost, and then we would certainly hope that those that are -- people could find decent employment elsewhere.

Number five, the State should develop and implement climate change policies that reduce

emissions of fine PM and its precursors, as well as the emissions of carbon dioxide, and this has been monitored for a couple of years now in addressing climate change issues, as well as reductions of air pollutants within the state and nationally.

We just feel this is so important because they're a key to reducing pollution now and so we must use this as we talk about carbon monoxide.

Number six, energy conservation techniques and renewable energy sources should be used extensively in urban areas, and as mentioned before, we believe that the establishment of an Environmental Justice Committee in New Jersey that oversees environmental justice aspects of climate change policies in the State. It is really crucial because this committee would be dedicated to really looking at the impacts of climate change on the environmental justice community.

The Alliance also supports recommendations contained in the 2009 report entitled, "Strategies for Addressing Cumulative Impacts in Environmental Justice Communities."

This report was produced by the Environmental Justice Advisory Council to the NJDEP. In particular, we're also working on the Advisory Council on its recommendations to have the department do the following to help clean up New Jersey's air.

One, explore the possibility of

establishing a community-based fine particulate matter air monitoring system in areas overburdened with pollution.

Two, establish a policy for reducing or eliminating air toxics in urban communities based on findings from air quality studies done in Camden and Paterson.

Three, once again, institute that 12.0 standard.

Four, commit to addressing co-pollutants as part of climate change strategies and directing resources to urban areas where climate change impacts are most felt.

And five, the NJDEP should aggressively enforce regulations in hotspot areas in environmental

justice communities.

In conclusion, the Alliance's air quality vision for New Jersey over the text ten years is a vision of the state taking more aggressive and precautionary steps to identify, reduce, eliminate the high concentrations of diesel and PM that now cause 1,900 deaths and 53,000 asthma cases in each year and will also cause other cumulative health, economic, educational and environmental impacts.

Any questions?

MR. BLANDO: Questions from the Council? Nicky?

DR. SHEATS: Now, did you want to

comment on the cumulative impact tools? I call them tools, the work that the DEP has developed so far?

MS. CAFFEE: Just real briefly, one of the outcomes from the cumulative impact report is that the DEP has developed a method to scientifically look at the nexus of exposure to environmental pollutants in a way that will really help us to better identify the populations that are being more adversely effected by the most disproportionate pollution.

Problems arise, and that method right now, we hope will soon become a tool that can be more

widely used by activists and advocates who work on environmental justice concerns once we have the GIS application attached to it. So we're really looking forward to that happening.

MR. HANNA: Valorie, maybe I'm showing my ignorance here, but I heard both you and Dr. Montague mention the recommendation to have an Environmental Justice Committee formed, but I heard the Commissioner mention this morning, and I thought it already existed, that New Jersey already does have an Environmental Justice Council. Is that correct?

MS. CAFFEE: Yes.

MR. HANNA: What's the difference in roles, just to clarify.

MS. CAFFEE: Right. This new committee would actually be given the charge to roadwork on

climate change, whereas the advisory council is an advisory body to the Commissioner at the Clean Air Council. You're an advisory body also.

This one has areally -- it's not really a narrow focus. It's interrelated concerns and problems, but that would be its primary focus rather than the role that the Advisory Council has currently. In fact, we've been in existence since 1998. So we have a bit of a different role.

Also, what's important here too, a key phrase here, community based rather than -- some of us that are on the Advisory Council are from affected communities, but this will be more of a grassroots type of entity.

MR. HANNA: Thank you.

MR. BLANDO: Manuel.

MR. FUENTES-COTTO: You mentioned that the Environmental Justice Advisory Council recommended the possibility of a community-based fine particulate matter air monitoring system.

How would that be different from the existing systems from the DEP?

MS. CAFFEE: What would be different is that the community that's affected or the residents of the community that are -- the residents of the affected community would be given the opportunity to learn how to do their own monitoring and actually, that can be done in a very effective way, and there

are a lot of models for that nationwide, as well as here in New Jersey.

In fact, our Alliance, a couple of years ago, used high school opportunities to do some air monitoring projects which were very successful and also which turned out to be scientifically verifiable

of the data that we garnered from what they did.

So that can be replicated by community members in areas where people suspect there is a problem that really needs more closer monitoring.

MR. BLANDO: All right. Thank you, Valorie. We're just going to take a short ten-minute break. The court reporter needs a break and needs to rest her hands for a moment.

So feel free to take a break. We'll be back in ten minutes.

(A brief recess is taken.)

MR. BLANDO: Okay. We're about ready to get started. Our next speaker is going to be Dr. Judith Auer Shaw.

Dr. Shaw is a Senior Research Associate of the Bloustein School at Rutgers and a former member of the DEP, worked on many urban issues. She is a member if the Center for Green Building and the National Center For Brownfield and Neighboring Redevelopment.

Her current research focus is on development of New Jersey's Green Building Manual.

Dr. Shaw will be speaking to us about improving air quality, community planning and green

building.

DR. SHAW: Thank you. Hello, and it's such a pleasure to be back and to see so many wonderful people that I do miss very much.

My name is Judy Shaw. I'm with the Center for Green Building at Rutgers.

I'm going to talk to you today about the interface between planning and green building and it's a little bit different than the things that Valorie and Peter were talking about, and I hope you will find it instructive and useful.

What I want to start and finish with is the same point, which is that we are working very closely with the Department of Community Affairs, DEP, the Housing Mortgage Financing Agency and the BPU to identify green building guidelines for the State of New Jersey that can be used when we are making incentive decisions, and I mean "we" as the State of New Jersey, and we have put together some interim guidelines because the Economic Development Authority has language in certain legislation for the Economic Recovery Act funds, for higher education funds and some other programs to have rebuilding standards be one of the criteria on which projects are judged, and if I could ask anything the Council

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or recommend anything to the Council, it would be that we look into encouraging the addition of language that requires green building standards to be addressed in projects, whether this is for any kind of air permitting or other permitting, but trying to emphasize the importance of going green in front of a project is really important, and I'm going to talk to you now about planning and green building.

And I'm also going to attempt to multitask with this, so you're on backup. Right? Thanks, Val.

The Clean Air Council is specifically supposed to be covering the issues of current planning practices of government agencies whose decisions affect air pollution and the integration of strategies for efficient air pollution controls.

Obviously, when we are adopting policies that require or recommend that green building strategies be a part of this, that would be a good example of where we're going with this, but this is a presentation on two projects that we've been working on, the green building manual and also the green building remodeling guidelines in the context of community planning.

Just by way of background, in 2007, I'm

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sure you are all aware that there was a Global Warming Response Act passed by the State Legislature. This is just an indication of why they felt it was important to move on this.

They did projections of growth in metric kind of emissions, and you can see that by 2050, we were going to be close to over 180 million, so getting a handle on this now is a good thing.

I just wanted to include this from the report, which is an illustration of the split of the contributions and, obviously, the biggest one with the big arrow there is transportation, which is 49 percent, and that is definitely something that we can address in community planning issues, and then the orange section is the 20 percent that comes from residential and commercial buildings, which is the focus of the green building project.

Clearly, when we are looking at planning in communities, we recognize that the settlement patterns that we have been following for many, many years have major land use and greenhouse gas emission impacts, whether it's -- urban heat island effects from impervious surfaces from development. It's the commercial and residential building areas or just the transportation of electricity on lines. It all ends

up being CO2 emissions.

So we really need to look at the holistic picture on how we do planning in communities

if we're going to get a handle on reducing carbon emissions.

This is just a reminder to us that efficient land use patterns are out there, that we have highly inefficient ones in some instances.

This kind of thing down here, impervious surfaces and adding heat islands defect as well as water issues, and then we have all kinds of scenarios where we can do it a little more constructively.

The whole idea of traditional neighborhood design is very dominant in planning a role these days, recognizing walkability. We've got transient-oriented design programs that are very active. We have the Urban Transit Hub Tax Act, which has been trying to focus there.

I think everybody's mantra is redevelopment not new development out in where there are environmental sensitive areas or areas that are currently in uses that might be in the long-term better uses for us, like farmland.

Basically, this is about recognizing that we want to have connectivity so that people can

be encouraged more to walk. All of us would like to walk more to the things that we enjoy within our communities, but let's face it, most of us don't live within walking distances of those spaces.

One of the more common strategies these days for creating an identity for a community is to

go through a community visioning process.

Community visioning has been around for a while. It's pretty well standardized, but every community needs to go through it on a regular basis, if only for the fact that, politically, people change leadership on a regular basis.

We've got that four-year cycle and invariably, we can have one group and one council make really good process and an environmental commission make really good progress, and a new team comes in and you kind of start all over again, so we want to make sure you've got community engagement in this.

So we need to look, when we do community visioning, people look at traffic patterns and they look at the kinds of structures that they want, and they look at the playgrounds, and they look at the various housing scenarios, but we really need to add greenhouse gas reduction and air quality to that

vision possess, and first of all, you need to have clear data.

Communities have and residents of communities generally have very low information about what the traffic patterns are and what their energy uses are, and we need to have just sort of a local report card on these kinds of things, so that people can quickly understand what the baseline is for where they have a common footprint of a community, so that

they can begin to measure against that and track their improvements.

So they need to establish objectives, and this can be something that I've talked about on a local municipal level or on a regional level, but it's basically focused on the fact that reducing vehicular traffic is an objective, that we want to reduce greenhouse gasses, that we want to promote rebuilding and we want to promote green rehabilitation for residences and businesses, people working very closely with code officials because they, among the many people that are involved in the adoption of this thinking process, are critical, and if they're participating in this, we feel that you've got to get laid up on that.

I will say also, at this point in time

that if you haven't already heard, that one of the things that the legislation was encouraging was that we have the green building manual be developed that -- sorry -- the global -- I can't do that. The Global Warming Response Act was immediately followed in legislation by the call for the green building manual, and then the Department of Environmental Protection wrote recommendations, and in those recommendations, they encouraged not only that there be this guidance to green building, but also, that as codes came up for readoption at DCA, that they look at how to integrate green building into that.

There is a new energy code that's coming up. Joyce said it's ten days from now, maybe five days from now, pretty soon.

MS. PAUL: Five days.

DR. SHAW: So there is some progress being made in that, but one of the things we haven't looked at is what DEP's response may be to that. So that's a good question for you all to think about.

This is just pieces of general information from the Council on Green Building showing that there are great benefits associated with building green and, obviously, what we're talking about in the majority of cases is this is new

construction, and in the climate that we're in now, obviously, what we really need to be looking at is existing construction.

The green building manual has a basic philosophy that you've got to look at how green buildings affect the economy, the environment and people. So, obviously, there are health issues associated with the people side there.

We've got health and safety and satisfaction and productivity because those are all parts of their indoor environment.

We certainly have clean air, clean water in the environment section, and then we have recognitions that there are costs associated with those things.

The green building manual also has the synergistic power to link a lot of different benefits.

It's an air quality improvement. It's a lower energy consumption factor. It's also the reduction of greenhouse gasses, improvements to water quality, et cetera.

These are all things that wind up being collateral benefits of adopting a policy for green building, and last but not least, this better

neighborhood design which kind of ties the circle in along that.

What does this mean? In terms of the green building manual, this is the legislation that set it forward, and it basically asks for guidance and specific performance criteria.

It asks that it be focused on owners and builders and construction professionals, so that they would be able to use this in their work, that there be programs that encourage and require green buildings, that it be a resource for local government, and that it will apply to both commercial and residential buildings.

So we've been developing this under that rubric and doing -- working on new and existing commercial and then looking at new and existing residential and identifying opportunities to improve in those areas.

The foundation of this is that it's performance-based. We are not trying to make new regulations. I can hear that applause now.

We are pointing out that when there are incentives available, it helps people who want to do this kind of thing, and a lot of people do, it helps them cross over that one hurdle, which is the return

on investment side of it, to get into adopting these.

Oftentimes, the person who develops a building is not the person who lives in the building, so the benefits that would accrue to an occupant are not recognized by the person who does the investment, so we have a couple of challenges in that way.

This is just sort of our basic outline of this. We have a very strong state quarter process. We've been working with commercial and residential building community representatives across the board from the trades out to developers.

Eventually, what we're looking at is having strategies and then implementation recommendations and evaluation protocols.

That is probably one of the most important functions of this, because if you build a green building, and it doesn't operate according to the plan, we don't have much of a benefit from it, and so that's a big piece of this.

Just a small piece that we are looking at is, in terms of design, build, operate and

evaluate because on the minus side, we've got the first cost and the operation cost, but then for commercial buildings, we have health of employees, comfort, productivity and, obviously, the

environmental benefits.

The commercial building process, this is just the design, build, operate and evaluate continuum on the top and, of course, I'm not on the predesign -- schematic design one, but it's all -- one of the biggest issues is that you hire a contractor, you hire an architect, you hire an engineer, and none of them meet each other, so the integrated design approach is critical to this, so that's probably the biggest thing.

We're looking at being able to verify what gets done, and then we've got lots of resources for people, in terms of design tools, so that we can really encourage the front end as a development strategy.

These are just the impact lenses for the various strategies that we're using and recognizing -- it was very difficult. We initially thought we'd be able to do a real straightforward cost/benefit analysis, but when you start looking at the energy impacts of a roof overhang and a window and the daylighting and an orientation, it gets very complicated very quickly.

So we're hoping to find some models out

there so that, in the end, if we can do low, medium

and high, that's a good start so that's a lot of what we're looking at in that framework.

This is just and illustration of why post-occupancy evaluation is important. These are the different green buildings that have been developed, and we did an assessment of those -- not we, but there was an assessment done of those buildings, and as you can see, that's a goal, and the dotted line his heat and energy, and it's way higher than what it was intended to do, so in fact, if it's not run properly, we don't do post-op evaluation, we don't get what we intended to get.

The green building manual is a partner to a document called the green home remodeling guidelines, and now I do my show and tell.

You have a little bookmark. It just has information about the website, and these are available. This is the CD version of the green home remodeling guidelines, so when you are working on your plans for the summer, pick that up.

We took a look at what the scenario was for us, and 54 percent of the building stock in the state is single-family, and 20 percent is either attached or two, three and four-unit buildings.

66 percent of it was built between 1940

and 1979, and 23 percent of that is prewar, so we've got a huge cohort of properties that have not been constructed with things like building envelope or any kind of energy efficiency in mind.

They were the building practices of the time, and with the exception of some things from a long time ago, where you had big solid walls because you had people who were working with different mediums, we had a lot of stock that is currently sapping the energy values and, of course, if we take that out, 15 percent of our energy comes from coal.

Coal is a major contribution to the air quality issues. If we can reduce those numbers, we can gain that benefit on the back end.

So that's the read on the green home remodeling guidelines, and there are a number of strategies in this that really focus on air quality.

I think some of you have seen this from EPA, but it really identifies that there are lots of areas within a building that have air quality components to them. We don't necessarily think that impervious surfaces around the house are an issue of air quality, but when you think about the heat island effect of a driveway, and the fact that it raises the level of temperature in the area, and to the extent

that that impacts people's need to air-condition and

so on and so forth, we get that spiral effect.

This is how the various strategies are presented in the green home remodeling guidelines, and you can see that we have a number of them that have recognized high air quality issues, and then a lot of them that have big energy savings on them, and all of those are designed to try to promote air quality improvements in buildings.

This is just an illustration of the kind of values you get. You have a low cost here for weather stripping and doors and windows, and high cost for these things, like a programmable thermostat, but as it goes out, more expensive, but higher values looking at the impacts from the different options of the model.

Again, these are just sort of illustrations of the concept, but we've got green building design. We've got better orientation. We have moisture control and that has to do with mold issues that are always affecting folks in terms of indoor air quality, and things like air sealing, and it's kind of a double-edged sword in the air sealing world because you're sealing things in so that you have a controlled indoor environment, but that can

have different repercussions.

If you have a high VOC paint in the house, you need to be mindful of airing things out and that kind of thing, but 90 percent -- apparently,

according to the EPA, 90 percent of our time is spent indoors, so these are critical issues.

So we look at these building design issues. We look at building commissioning, which is trying to get a baseline on the building, as far as, you know, how much energy it's using and how much can we reduce it.

So we're looking -- we use a lot of simulations to do that. We have people doing energy audits all over the state, and I certainly hope that, at some point, BPU is going be coming back on with some more of that, and this is my last slide, so I'm pretty good.

This is from my friends at the Philadelphia Water Company, but I just wanted to sort of leave you with this idea that coming back all the way around to the concept of planning and visioning, and what we can be, this is a rooftop in Philadelphia, but it can be anywhere.

You can see what it is, and the idea is that if we could do some really aggressive green

building strategies -- we have photo mosaics on these roofs. We've got green vegetative roofing. We've got gardens down below, we've street trees, all of these things -- and the reflective roof instead of the standard roofing, these are all things that can make a difference to air quality both on a large scale and on a small scale, and it's something that

we can each contribute to.

So that's my takeaway. I would like to see the Clean Air Council look at how we're integrating green building and thanks for arriving. I'm sorry. Athena has been one of my main partners here at the DEP, and we just hooked up now, but I want to encourage the adoption of those standards.

I want to encourage all of you to be asking the question about where are our commitments to reduce the overall footprint through all of these kinds of strategies, and where can we tie incentives that are currently offered by DEP to these programs and see if we can't start seeing some improvements.

That concludes my remarks, and if you have any questions, I'll be happy to answer them.

MR. BLANDO: Thank you, Judy.

Do we have any questions from the Council. John?

MR. ELSTON: Thank you, Judy, for a wonderful presentation.

I guess a problem, and maybe other people call it the same thing, but it's the tenant/owner relationship of homes where the owners of the home often pay the utilities and, therefore because the tenant doesn't put any new equipment in because somebody else is paying for the utilities and, of course, the tenant doesn't do it because the cost, and he or she does not own the property any

way.

Is there any ideas how to get around that in building the incentives, and even the state and federal incentives are only partial incentives. Anyway to get around this dilemma?

DR. SHAW: Not wholly, but you make steps forward as you know. We make new steps. There is a new technology called smart metering and what does is, that allows people to actually gauge how much they're using, and sometimes just being conscious of that is a deterrent, if you will.

There's also the opportunity to start sub-metering within buildings, so that they can do that as a retrofit.

However, the fact that we have so many

existing buildings of such age that they're all wired the way they are, and to go in and rewire would actually require gut rehabs. So it's a very difficult issue in terms of existing.

In terms of new, there can be incentives in terms of following those kind of innovative technologies when you're doing new buildings, but in the retrofit world, and as I said, you know, 66 percent of the housing population is single-family homes, it's going to be very difficult to see that happen immediately.

So we're going to be looking at opportunities for that, but I think, you know, in

terms of policy, what it really focuses on is the need for us to begin to adopt those kinds of things when we're passing out the considerable amounts of incentive.

You know, we're strapped, I agree, but we are still giving out significant amounts of money for tax credits, for various government grants and so forth, and if we can adopt a universal commitment that when there is building involved with this, that they integrate those kinds of features into it for whatever, and you know, all of us have heard about the idea of expedited permitting, but there are ways

besides financing to promote and encourage participation, and so those are some of the things, I think, that we really need to look at it.

We're going to be doing a policy report in conjunction with the green building manual when we finish it up this summer, so we are looking at some of those issues as well, but it is definitely a tough one, John.

MR. BLANDO: Any other questions.

MR. ELSTON: I have a follow-up.

MR. BLANDO: Quickly, because we're running over.

MR. ELSTON: It just seems like we kind of jumped over that, and yet, as you mentioned that the housing stock, particularly for rental properties is the older stock, which is the most in need of

upgrades and that sort of thing. So it's self-defeating unless we have something to do in that area.

I think we have to be creative enough to think of ways for a model lease, for example, that if a utility goes above X percent, it reverts back to the tenant or something along that lines, but, you know, some ideas along those lines that you can do that.

DR. SHAW: Yes.

MR. ELSTON: And I think for you to set up and for Rutgers, you can look at some of those ideas, to try to come up with some ideas to make it happen, innovative ideas.

DR. SHAW: We have definitely been looking at methods across the country, and there are municipalities, as well as state efforts that we are finding that we can extract from, so we are hoping to, in fact, be able to provide that.

MR. BLANDO: Thank you.

DR. SHAW: Thank you very much.

MR. BLANDO: Our next speaker is Dr. Robert Nolan, Director of the Bloustein School of Planning and Public Policy and serves as Director of the Voorhees Transportation Center.

He's a former policy analyst at the USEPA, and his research is focused on the intersection of our transportation policy decisions

influence travel behavior and environmental outcomes.

DR. NOLAN: Thank you for letting me be here.

We're talking about something a little different than what you've heard about.

I was asked to talk about economic

effects in transportation, so I'm making a theory here about how transportation policy affects the behavior of individuals, and then how that leads to various environmental outcomes, namely, air quality or greenhouse gasses.

Some of the major issues here that I want to talk about, how does the funding of transportation infrastructure affect both air quality and greenhouse gas emissions indirectly through how we make our choices on how to travel, and how do people respond to changes when we actually build things or change the network and try to understand that there's a lot of theory on that, and I'll talk a little bit about development impacts also, and how that has an indirect impact on environmental impacts.

Why is money so important? What's our main policy here as to why we're trying to fund stuff?

Although New Jersey is broke, in terms of the transportation trust funds, so they're not funding much.

The primary consideration is to reduce

congestion, reduce the traffic congestion. So for example, actually, the Turnpike Authority is doing major expansion of the Turnpike.

I think the Garden State Parkway is also being expanded adding lots of lanes down there in various places, so that's all so -- you know, we're going to reduce congestion, but the other argument we hear is we're going to increase economic development.

Now, I'm going to slowly try to decompose these arguments and show you why, to some extent, they really don't make too much sense and we're probably not spending our money the right way.

So the first one is whether, when we expand roads, do we reduce congestion. That's the first question, and I see somebody nodding their head no. Kind of. That's the right answer.

Basically what happens is when we expand roads, you have get several behavioral effects. The first one is that travellers like to travel -- they have a desired time to travel, especially during peak hours to get to work, to get to various activity.

So if they were maybe getting up a little earlier in the morning, they might decide now that they can sleep a little later, and so you'll see the peak travel will still be congested, even if you expand the roads.

That's kind of the first order effect it has. We see this shift back towards the peak. Some

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people will take trips that they did not take previously. Okay. So it's now worth it, so the cost/benefit relationship of taking that trip is now worth it, when before, it wasn't.

Some people may change their route also, and if you expand and you have two parallel routes in one, and they're both congested, and you expand one of them to make the travel faster, people are going to shift on to that travelled faster route, and you'll still a lot of traffic.

People make longer trips, maybe not immediately to go to work, but you might decide that you want to go a little further to a different shopping mall or go to a restaurant that's a little further if you can.

So we know that people respond to changes to how long it take to get someplace.

People will also start using cars instead of public transit if the roads are not as congested. That's very important in New Jersey, where we have a large investment, quite a large transit system, but the other key one here is we open new land for development.

This is slightly a longer run effect. We allow development to occur in various areas; and

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that will tell you m to lead to both more and longer car trips as people move to those locations.

So if we think about this, just to go through some basic economics here, we have a demand and supply curve and, so on the bottom here, I have how much people travel in aggregate, and here on the vertical axis, I have the price, which is basically the travel time. That's basically you cost of travel.

I know gasoline is a bit more expensive than it used to be, but still, people mainly judge their decision to travel based on time. That's the primary cost.

So we have some equilibrium here, where people are travelling this much. Now, if we increase the road supply, we're basically shifting that supply curve over here, and we get a new equilibrium over here, and, basically, what we're getting is we're getting some shift here. So we're getting more travel. We've reduced the price. We've reduced the travel time. We're getting slightly more travel.

So that's kind of what we call the reduced travel effect.

Now, in the long run, what it looks like is we have other influences, economic growth, more

people, more people buying cars.

We get some additional shifting off to the right. So what the transportation engineers will

tell us is, well, it's still congested because of that.

So, empirically, it's very hard to decompose these different factors here, but we've done it over the years.

So there's been a lot of empirical studies over the last 20 years now trying to decompose this issue, and coming to the same conclusion that we get a real effect, so as we increase the road capacity, we increase the use of cars, basically.

One of the arguments that was used, at least for a while, by people that didn't like this result was, you know, the planners know where to put the roads, so NJTP up there, they're planners. They figure out where the demand is going be. They're going to put the roads there, and they expect them to fill up.

So this gets into the whole concept of whether we have what we call a causal relationship, whether the roads actually cause an increase in traffic or it's some other factor, and the basic

story is, we found doing some work, sophisticated modeling, that we do have a causal relationship but it runs both ways to some extent.

The planners put the roads where people want them, but we still know it generates more traffic above what they're forecasting.

So in the long run, especially as the land use patterns change, we found that we do not reduce congestion, and the models used by the MPOs, metropolitan planning organizations, which enables them to get the federal money to plan their own network and build their own network, basically don't properly capture these effects, especially the long-run effects, and so that tends to be a problem in terms of how this affects the air quality monitoring into modeling emissions and such.

There have been improvements over the years. It's been about 20 years that people have really identified this problem, this criticism of the models, but I think some of the problems go beyond what has been argued, in terms of the basic structures of some of these models.

But what about vehicle emissions? We'll hear the argument frequently used, well, yes, but we know it gets reduced travel, but still, if we can

slow the flow of traffic, we'll reduce pollutants that way, the tailpipe emissions.

Yes, that's true. In the short run, that happens because we have more constant flow. If we get rid of some of the hard accelerations, some of the idling that might go on in congested traffic, we will reduce emissions.

Now, we can look at that it two ways. First of all, this effect doesn't last very long.

The second one is, as we get to newer vehicle technologies, especially moving towards hybrids, and there's not a lot of research on this yet, this effect pretty much disappears even in the short run, but in the long run, and this is an experiment we did a few years ago -- let me see if I can explain this.

We did an assimilation of vehicles, and we had some initial level of emissions up here. This is for NOX emissions, okay, and we basically added a lane to congested facilities that we were simulating, and we get a reduction from about 96 kilograms in aggregate to 65 or so.

So we got some reduction in emissions. Then we basically simulate what happens when you add more cars.

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There's a few different assumptions here on cold starts actually, but we found anywhere from 11 to 14 percent more cars and that emissions benefit disappears. So we're back up to where we were before. We're back up at this line, okay, and these numbers here would be well within the range of what we would expect from reduced travel, maybe even somewhat below it.

So we're going to get a worse situation in the end, in terms of our emissions, just by doing a simple experiment, but I should mention again that new technology, this is becoming -- the way I like to

put it is there's a much stronger correlation between your vehicle travel and their emissions.

It's not going to depend on acceleration and your hybrid. For a hybrid vehicle, if you're stopped, your engine is not running, basically, so you're not polluting anything.

So as we move to these new technologies, these effects are going to change.

The other issue here -- there are benefits here, so I want to talk a little bit about the economic benefits, but I want to look at them in a different way than we usually think about them.

Even if we add the lanes to the road and

reduce more traffic, there are benefits to that, because people can now travel, when, where, and why they may want to, so we get more mobility.

So this increased mobility will increase overall consumer welfare. In the cost/benefit models that are sometimes used, and I say sometimes because we usually don't do cost/benefit analysis of road projects, but those that do them, basically, they assume that that's going to fall on the person who's driving, all of the benefit, but when we start thinking about the longer run effects, it's not so simple. Okay.

There are different distributional effects, so let me kind of graphically illustrate this in a very simple way.

We know, you know, if we go to the economics literature in urban economics, we know that if you live closer to a more accessible location, your land values will be a little bit more expensive.

If you live in Manhattan, it's going to be pretty expensive, very accessible, very centrally located.

If you live further out, it's less expensive. If you live close to a rail station, it will tend to be more expensive.

This is assuming all else is equal. We're assuming controlling for other things that affect the value of land, such as housing, such as school quality and other environmental effects, et cetera.

So we know, if you're close to here, and assume this is the most successful location, and you move out and your travel time increases, but the cost of the land decreases. So if we expand the road network, reduce congestion, that's before we pass the addition, and after it, we get this shifting, so we're now putting some value on less successful land because we can access it more easily.

This is basically -- we can figure this as being an ex-urban area, where the land didn't have much value and now it does. Now, we can development it.

There will be some value in developing

it, building housing there or perhaps some new mega shopping mall or something, but there are other things that happen.

So we think of it this way: The people who are benefiting here are the people who own that land.

It's not saying anything about who's

driving. So there's people now that have more accessible land. The values increase, and they benefit, but there's a secondary effect here, and let's say we put more housing on that land. Housing prices will come down, okay, or we put more big malls, efficient malls on those lands, get more competition in retail, for example, retail prices will come down, so the consumer also benefits. So there's a secondary effect.

Basically, I haven't said anything about who's driving, who's using the roads. Basically, from this, we get benefits that allow more land to be developed, benefiting the landowners or those who own more successful land, and we get a benefit to consumers because the housing prices have gone down -- well, not a benefit to those who currently own housing, but those who want to buy into the housing market, as well as commercial development.

The cost, on the other hand, is that these new developments will tend to be more car dependent. That's going to have more environmental

impact, air quality and greenhouse gas impacts, and all other sorts of environmental costs that might be associated with what we typically call sprawl development.

So that's the basic economics, so what can we do about this? Probably, the first thing I just want to note is, New Jersey Transit is going to increase fares by 25 percent.

My rough estimate would be that with full price, we will probably see about an 8 to 10 percent reduction in usage of New Jersey Transit.

Some of that will be people moving from trains to busses. Obviously, some will move from busses to cars or trains to cars. Some won't take trips anymore, so we're reducing mobility, but we will probably see some increase in car use, probably not as much as we typically would estimate, because a lot of trips into Manhattan, people are not going to away for it. They'll be willing to pay for it.

But you think about the incentive structure that we're setting up. Okay? So, basically, we need to think about how we fund roads versus public transit. We need to think about the user fees for both.

So, basically, New Jersey has the third lowest gasoline tax in the country, and I don't know when they last increased it, but it's the third lowest.

We know if we increase the gasoline tax

marginally, it will do two things. It will provide funding that can be used. Typically, a lot of that funding will go to building road crossings, but it could also go to public transit.

But it will also lead people to decide to purchase more fuel-efficient vehicles, although, frankly, we're just talking about increasing it by five or ten cents. That will be a very marginal effect.

Development patterns make a difference, and Judy talked about some of this, but, basically, how we develop and where we develop, so we have can develop in more transit-rich areas.

California has some legislation now, their Senate Bill 375. It's focusing development in what we call transit-rich areas. So every locality has to have a plan for how they're going to develop in those areas, and that gives more options for people, in terms of how they decide to travel, with the consequent reductions and emissions from vehicles.

I think that's it. Questions?

MR. BLANDO: Joyce?

MS. PAUL: This morning, one of our speakers said that electric cars trade one pollution

for another pollution, but can you elaborate on that a little bit and talk about what cost impacts of exchanging pollutions might be, and that means the prognosis of electric cars in New Jersey.

DR. NOLAND: I assume that he's talking about pure battery electric vehicles.

MS. PAUL: Dr. Zhang can answer that.

DR. ZHANG: Okay. What I mean is that we use electrical cars, yes, the battery power. Electricity is maybe somewhere else. It depends on where you are, you know, living and where the power is you are getting.

So it could possibly be coal-fired power plant located a couple of hundred miles away, so that basically sort of increase the use for that.

You sort of shift the pollution source to the coal instead of you burning gasoline directly. That's what I meant.

DR. NOLAN: That's a valid point. I think there are two issues there, is, you know, that's going to increase the ozone levels in theory. Okay?

But there's an exposure component that we usually don't look at, okay, so if you're reducing particulates, if you're reducing NO2 within the

community, you get benefits.

So there are exposure benefits from shifting into that coal power plant.

Now, I will be the first one to say that I don't believe anyone is serious about dealing with climate change until we start decommissioning coal power plants.

We shouldn't be relying on those. So you need to think about a different source for the battery electric vehicles and, in theory also, people can be incentivized to charge these at night.

Now, 50 percent of New Jersey's power is nuclear. Whether you like that or not, I don't know, but that's the base load for New Jersey. So if people are charging at night, they're probably charging by using nuclear, unless we're importing a lot of coal power from Pennsylvania.

MS. MOUNT: When you mentioned cost benefits or cost analysis of benefits, we see a raise for the transit fare, that it's very easy for the government to figure out that it cost this much to run a train, and so the people who ride that train can pay for it, but it's very seldom that they really figure out what it costs to build the roads and to maintain roads, and the pollution that comes from

those cars.

We have a hundred miles of road in our town. It costs a lot, and nobody figures out how to get somebody to pay for that, except for the

government, the taxpayer.

Do you see a way that we can be more equitable in our decision-making, in terms of resources going to transit, versus resources going to roads, when we really have a better sense -- a better sense of where the costs really are. Wouldn't that be good?

DR. NOLAND: It would be great, but I don't have an answer. I'm sorry.

I gree. I mean, I think -- I don't understand why people -- why, politically, it's so difficult to increase the gas tax by a few pennies here and there.

Granted, we're not in a great economy. You don't want to raise taxes in this sort of economy, but there have been opportunities in the past. Why it didn't happen? I'm clueless.

MR. CONSTANCE: What kind of funds can you generate, say, at two cents per gallon?

DR. NOLAN: I don't know the details in New Jersey. I can't answer that.

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MR. ELSTON: You ventured a guess that this 25 percent increase in the transit fare would probably result in 6 percent or 7 percent more cars on the road.

DR. NOLAN: No, that's not what I said. I said, a rough estimate, I guess 8 to 10 percent reduction in transit use. It doesn't mean they're

all going to use cars.

MR. ELSTON: Well, then maybe I'll ask you to push your guess a little further. How many more cars would that result in?

DR. NOLAN: I don't know the numbers of what the usage is by bus and train is. So I haven't worked out some back of the envelope --

MR. ELSTON: Maybe it would be a good exercise for your organization to do that, and then it would be fairly easy to attribute that increase into emissions increases because that's a straight factor, and it's something that ought to be said, and I assume that you don't think that this transit increase is a good idea, that this ought to be out there on the table, so people can say, okay, there are X amount more tons that's going to be contributed to the pollution level in New Jersey.

DR. NOLAN: Yeah, and I don't know

whether -- you know, I would assume New Jersey Transit has some rough numbers on this.

I would also assume that NJTPA and the D ERPC have some numbers it for New Jersey, and for the latter two, I would say it's probably important because they need to think about conformity analysis for air quality, and if this is somehow locked into -- you know, conformity is a method of, well, we'll build the roads here and we know that might be bad, but let's also say this transit project can get

a benefit from it.

So I don't -- again, I don't know the details behind it, but I think it would be interesting to know what the assumptions were on the fares when they made these sorts of assumptions in their analysis.

MR. ELSTON: I think so, too.

MR. HANNA: We've had some discussion in years past about smart growth in New Jersey, and one of the big concerns that always seems to have arisen when we've had that discussion, and I know one of the recommendations from the Clean Air Council several years ago was to focus on more centered development, urban development, as opposed to the idea of sprawl, and you know, the impacts on air quality, the EJ

communities and so forth, and I'm just wondering, you know, clearly, the data that you're showing implies that if we expand the roads and allow ourselves to expand out, we'll possibly have more emissions and more cars, but I just wonder if you can comment on what the impact would be of transportation and keeping sort a more urban center development if we were to continue on trying to focus on that redeveloping urban centers and so on, especially with increases in train fares and so on.

DR. NOLAN: Well, I would emphasize that you need to do that in areas that are well served by transit or coordinate that with a plan to provide

more service, and that would have the best effect.

There's a recent study by the National Academy Or National Research Council. They came up -- I'm trying to remember the numbers, but they basically were looking at greenhouse gas impacts from various strategies of development, and the rough numbers, I believe were -- they had a large range, if you just do more intense smart-growth-type development of somewhere like a 1 to 11 percent reduction in greenhouse gas emissions. It's a very large range, but I believe they caveated that and said, if it's done with supported transit policies,

you can get up to 25 percent reduction in greenhouse gasses.

Thank you. Do you have any additional questions?

Okay. Thank you very much.

MR. BLANDO: Thank you. We are now moving on to our public speakers, and the first registered public speaker we have is Bill Wolfe, Director of New Jersey Public Employees for Environmental Responsibility.

MR. WOLFE: Good afternoon. My name is Bill Wolff. I'm director of New Jersey PEER.

I'm also wearing another hat as a citizen, where I try to get word out about important public policy issues, such as we're discussing today, for environmental groups and citizens that want to be

active in their communities.

I'm very pleased to be here. We have had some very interesting testimony. In terms of the vision, I would align my views most closely with what we heard from Nescaum, and I thought that was a regulatory vision that I think needs to move forward and some of the planning and regulation that's been effective in the past in terms of the SIP process and regulating traditional pollutants and just building

on the success in the past.

With respect to hazardous air pollutants, I think Joann Held's comments were exactly on point, in terms of technically what needs to get done to improve that program in the department.

All the recommendations are eminently doable. They're doable within a very short timeframe. They're doable within existing regulatory authority. They're doable through technical manuals and procedural and management changes within a department, and I would highly urge the Council to look very closely at them, and light a fire under the Commissioner, who has -- you know, he talks the talk. He has the power and the authority to implement those recommendations.

So I think you have to call him on that as a Council, and to see if he can make some progress.

I just want to make a couple of points, in terms of some of the threats to air quality and global warming and public health that I see that are completely unaddressed, and nobody is talking about, but are highly significant and can undermine everything we're trying to accomplish.

The first thing I want to talk about is what the governor has called common sense regulatory principles in Executive Order No. 2, and if the Council is not aware of that both the federal standards policy in that executive order and the cost/benefit analysis requirements of that executive order can completely undermine everything we're trying to achieve, whether it's the flexible permitting, with the gentleman from, 3m or whether it's Joann Held's more restrictive in passing air pollutant control requirements, or whether it's environmental justice, or whether it's innovative green design, green building, whatever it is, it's going to have to be done here, and under that executive order, it would have to jump through additional procedural and subsequent groups dealing with a disincentive towards anything that was not federally promulgated, and it would require to be justified by cost/benefit analysis, and as you observed, the cost/benefit analysis methodology is fatally flawed under the current practice, and it discriminates against all the policy objectives we're

trying to achieve.

So I would urge Council to read Executive Order No. 2, make specific recommendations

with respect to how you believe Executive Order No. 2 should be implemented in the global warming, climate change and air quality programs, and, frankly, if you feel the way I do, raise objections to say this is an inappropriate public policy for New Jersey, and that New Jersey historically has done things much ahead of the Federal Government, in terms of timing and much stronger substantively in that if we have now tethered our wagon to the Federal Government, we will not make progress.

So I think that's a very important point.

The second thing I want to call your attention to, which is equally dangerous, which is moving on fast track in our legislature, are two pieces of legislation that actually implement those executive orders that are actually substantively worse than those orders.

One is Assembly Bill A2464 that deals with guidance, and it would require that all the technical content that we've been talking about today, that the department would need to implement, could not be enforced and enforceable, therefore, requiring that any informal guidance -- there was web guidance talked about, all the training modules, all

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the good things that can improve the world would either have to be promulgated as a formal regulation, or could not be enforced in any way.

So it would further polarize what is now done by the department in guidance to urge the regulators to do the right thing, yet, in a regulatory way, the department often reserves the regulatory authority to either enforce that or withhold the permit approval on it, so it takes away quite a bit of leverage from the department.

The other one is a worse bill. It would require A2486. It's the Federal Standards Bill. It would say that -- frankly, I could not believe this, if I didn't hear it from the chairman's and the sponsor's mouth.

This bill would require that any technical requirement in DEP, and all other state agencies, but I'm just focusing on the environmental stuff, that was more restrictive or filled a gap in federal requirements would have to be specifically legislatively authorized.

So when the department wanted sulphur and fuel standards that didn't exist at the federal level or green design requirements or any kind of global warming mitigation requirements, or anything

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that wasn't done at the federal level, they would have the ability to go to the legislature and get a piece of legislation passed.

This has the commissioner's support. This has the governor's support. This was in the transition reports. This is all what's moving down the track in this administration.

So I think that the biggest threat in air quality and global warning right now is the current administration down at the other end of State Street, and they're having specific effects right now. That policy is killed, the greenhouse gas monitoring rule.

So the State -- DEP's gas monitoring requirements affecting more sources at lower thresholds would result in a more accurate inventory of gas emissions.

That monitoring rule that was proposed last year was killed by this governor under this policy. I believe it was due to the federal because EPA has a monitoring rule, but EPA's has a much higher threshold, doesn't capture as much emission. So EPA is deficient, and yet we're tethering our wagon to their monitoring requirements.

It's affected the sulphur and fuel

regulation, and Bill O'Sullivan had to hold an additional public hearing to take additional public comment, and that rule is now in jeopardy.

So I would urge Council to look at that rule to say you support its adoption as proposed because it's vulnerable now.

The second point, and that's a whole set of just -- that I just touched upon. Those are a few illustrations of a global problem on everything that moves through this department right now.

The second point I want to make is with respect to -- I'm going to use the R word, regulation, good old-fashioned regulation.

New Jersey in 2005 defined greenhouse gasses as air contaminants under the State Air Pollution Control Act.

That set the stage to regulate greenhouse gas emissions in a traditional way and then collect fees for those emissions and implement a program.

In fact, that 2005 rule specifically said that was the first step in building a regulatory program. We were ahead of the Federal Government.

We anticipated the Massachusetts case. We anticipated the endangerment filing. We started

to make progress on the regulatory front, and it's been five years now, and nothing has happened.

So I would urge the Council to ask this commissioner, after five years, what have you done? You've defined it as an air contaminant. Why haven't we made any progress on that front?

In December, the department issued the Global Warming Response Act report, mandated under that act the final report.

I would urge Council to either read that report. It's chockfull of recommendations. This is not a knowledge gap we have here. Go through that report. Pick out a dozen of what you have think are the most cost effective, environmental effective, whatever judgment you pick, and say, come up with a timetable to implement these dozen recommendations in your own department's report.

So, again, that report should be the template for progress moving forward, and I think your Council has a lot of credibility and influence who can give it that push, and you can release your recommendations report to the commissioner and hold a press conference with the environmental community and do it at the State House and get some public knowledge and awareness and build some of the

political support that you're lacking, which is a frustrating process, I think.

The third point I wanted to make was on hazardous air pollutants. Joann covered that field, I think.

I would make just one set of recommendations. The department had an EPA-funded report, a monitoring study in Paterson, the Urban Community Air Monitoring Pilot Project. The final

report was issued final on February 24.

There was specific findings and recommendations in that report that speak to the inventory issues, to air permitting issues, to enforcement issues, and it's titled, "New Improvements to NJDEP Emissions Database."

I had dropped with you the final report toned down. It was relatively critical of the department's database.

At any rate, the recommendations here talk about expanding the emissions, the regulated pollutants, all types of things that Joann went into, but that report should again not sit on the shelf and should be implemented.

Even if you just asked the commissioner, hey, Mr. Martin, what does this mean? What is this

report about? It got some press treatment, and it's kind of fallen since then.

It dealt with cumulative impacts, all the things Joann talked about.

The last thing I'd ask of the Council is, recognizing that we had at the outset a historical review, the Council was formed by statute.

The appointees are by the governor. Its mission is defined. It holds annual hearings that are open and transparent that people can come and talk freely without intimation.

There should be reporters in the room.

I tried to get the press here. There are a whole set of important issues. Unfortunately, the press is broken down as well.

The point is, you have a structured process. You have highly capable people that make good, strong technical recommendations.

That model should be applied across the board, and it was the model that got legislation enacted with Senator Smith, the Coastal and Ocean Protection Council basically modeled on this council.

My point is, structure is good, and process is good and structure is good, but there are backwater bodies that, actually, Commissioner Martin

testified to on Monday, 57 separate commissions boards and councils, and they have a variety of integrity, in terms of appointments, in terms of transparency and openness, public participation, the rigor in their work.

So I would urge to the Council to support a state level -- at the federal level, there's something called the Federal Advisory Commission Act, FACA. I would urge that a state law be enacted to structure that process, such that your appointments go through, you know, ethics and conflicts of interest screenings, that the public has an opportunity to participate in your work, that there's public hearings, all these kind of good things, and the reason I say that, and I'll conclude

on this note, is that, you know, although we live a democracy, you know, it's not free, and yesterday, I was escorted out of this very room in a public hearing with more people than are here by three state policemen, because this commissioner said that I was not invited to the Site Remediation Advisory Group quarterly meeting.

Now, the Site Remediation Advisory Group does the same thing you do for the Site Remediation Program, all right, and they were critically talking

about two very important issues dealing with the new life effect professional program and the new risk prioritization methodology that the department has been working on for ten years.

So there was highly substantive things there, and it was an important meeting that somebody like me should be at because I've been involved in those issues for a long time, and this commissioner felt the need that he had the authority to throw me out, and throw me out with the state police, and I had people in the street saying, hey, Wolfe. What did you do? You got he is escorted out of the building by state police yesterday?

So if we had a FACA at the state level, that wouldn't even be a question. We would have an open process that we could have some public trust and comments.

So I would urge that you also take up

that process issue. It's an easy thing to do, and if you need Commissioner Martin's testimony, on Monday, he submitted testimony to the Assembly Appropriations Committee and, frankly, he was very complimentary this morning about the role of advisory groups, in terms of what they contribute.

However, the Assembly Appropriations

Committee is complaining about the department's resource commitments to staff those functions.

So over there, he's saying one thing and here, he's saying another. I can understand in both places. So I'll submit his testimony for your consideration and make it part of the record and also assembly Bill 2486 as well.

MR. BLANDO: Thank you very much.

MR. WOLFE: Questions?

MR. BLANDO: Any questions from the Council members?

John? Do you have a question.

MR. ELSTON: No.

MR. BLANDO: Thank you.

MR. HANNA: Our next speaker is Wilbur McNeil, President of Weequahic Park Association.

MR. McNEIL: In the interest of time, I'll be very brief, and you have my remarks on the record, but I would really like to tell the Council, when you have your local meetings, you come to Newark, you either come to the Port Authority, Newark

Airport or you go to the College of Medicine and Dentistry.

If you really want to know the public thinking, you want our input, have those meetings

locally.

If -- all the remarks about the urban areas in dire need, that should be reflected in your board also when appointments are made, you know, and basically, that our interest is the Newark Airport.

We are one mile west of the Newark Airport, and in all the talk about vehicle traffic and emissions from vehicles, airplanes and diesel ships are not included.

We believe that the Port Authority and the emissions coming from airplanes and ships are one of the worse polluters in our area, and we would like daily readings in our community, so that we can know what kind of bad air we are breathing.

Thank you.

MR. BLANDO: Thank you.

Our next public speaker is Timothy Minnich, President of Minnich and Scotto, Incorporated.

MR. MINNICH: Well, thank you. My name is Tim Minnich. I'm with Minnich and Scotto. We're an air quality consulting firm in Freehold, New Jersey, and I actually have some comments that hopefully Sony will pass out to you soon.

25 What I want to talk about is realtime

1 air monitoring during hazardous waste site cleanups.
2 This is sort of an extension of what Joann Held was
3 talking about earlier, and it has been touched on a
4 couple of times besides that here today.
5 First of all, I want to tell you that
6 I'm an atmospheric scientist and a meteorologist and
7 I've been an air quality consultant for 35 years.
8 My purpose here today is to identify the
9 need for requiring new air monitoring approaches to
10 ensure the public's protection from potentially
11 harmful emissions during the cleanup of hazardous
12 waste sites.
13 This is of particular concern for the
14 carcinogens, benzene and naphthalene, the air drivers
15 for many cleanups in New Jersey, especially with
16 sites with significant coal tar contamination.
17 From a regulatory perspective,
18 inequities exist in how state of the art techniques
19 are applied to, A, the community health effect side
20 of the equation or exposure and, B, the means
21 typically employed to measure such exposure, air
22 monitoring.
23 Simply put, compliance with risk-based
24 benchmark values or risk-related benchmark values,
25 i.e., one in a million risk concentrations for known

or suspected carcinogens.

As a point of reference, the benchmark values for benzene and naphthalene are 0.04 and 0.006 parts per billion or ppb, respectively.

These values are very low, especially when compared to other air compounds of concern. For benzene monitoring, a handheld photo ionization detector, which is commonly referred as a PID, is typically employed, but there are serious drawbacks to this approach.

First, results are reported only as total volatile organic compounds or TVOC, while benzene is the only compound of real concern.

Second, the instrument sensitivity at best is about a hundred ppb, well above benzene's benchmark value of 0.04.

Finally, the PID is only a field screening instrument, not intended for exposure assessments and not designated as a USEPA-approved monitoring method.

There are designated benzene monitoring methods occasionally employed, which do have the required sensitivity, for example, summa canisters, but because they require off-site laboratory analysis, they can provide results only after the

fact.

For naphthalene, the situation is not much better. Perimeter air monitoring plans rarely, if ever, call for any type of realtime naphthalene monitoring, even though it's a carcinogen about four and a half times more potent than benzene and frequently migrates off-site as a vapor in concentrations several levels in magnitude above its benchmark value.

A high-temperature gas chromatograph referred to as azinos is sometimes employed to monitor naphthalene in near realtime, but like the PID for benzene, it's neither sensitive enough, nor a designated USEPA method.

The good news in all of this is there is an EPA method, which is Method TO16, which monitors both benzene and naphthalene, as well as hundreds of others gaseous compounds in realtime.

Open path fourier tranform infrared spectroscopy or FTI spectroscopy, method TO16, does not require off-site laboratory analysis.

It's applied in the standoff configuration and can simultaneously measure more than 30 compounds along an entire monitoring segment or path, up to 200 meters long.

This path integrated concentration solves the problem of spacial representativeness inherent in traditional point monitoring.

All measurement data are permanently

stored in the instrument as electronic files, enabling one to revisit this data at any time in the future to a set path's community exposure, even for compounds which are not previously considered.

The bad news is that TO16 is not routinely -- not yet routinely used in the state. It was, however, successfully applied to demonstrate community protection during several New Jersey site remediations under the Federal Superfund Program, including the U.S. Army Corps of Engineers, five-year remediation of the Lacardi landfill, the former number one site on the National Priorities List.

Method TO16 has been used at many hazardous waste sites around the country and is strongly endorsed by the USEPA.

Our company recently completed a two and a half year applied R and D study under contract to the Gas Technology Institute resulting in a methods guidance document for the application of open path FTIR spectroscopy during the cleanup of former manufactured gas plant sites, NGP sites.

This project clearly demonstrated both the field hardiness and the economic attractiveness necessary of the technology.

Through organizations such as the Air and Waste Management Association, we have begun promoting this approach as a more effective means to protect local communities during the site cleanups.

To date, we have presented to the DEP, New Jersey members of the Interstate Technology and Regulatory Council, ITRC, and to the New Jersey Environmental Justice Advisory Council.

Already, there are a number of individuals in these organizations who strongly advocate this technology.

Finally, we had an early discussion with New Jersey's Licensed Site Remediation Professionals or the LSRP organization.

So in closing, speaking as a resident of this state, I would like to acknowledge the Clean Air Council's unwavering commitment to the continued strengthening of the protection of public health from harmful air which is over the next decade.

I respectfully request that the CAC and the DEP seriously examine this issue of realtime air monitoring during hazardous waste site cleanups, and

finally, I assert that incorporation of method TO16 for this purpose will to be an important component in the achievement of the CAC's stated goals.

Thank you very much for your time and attention.

MR. BLANDO: I'm just curious. Have you published the results of your applied studies in peer-reviewed journals?

MR. MINNICH: Extensively published.

MR. BLANDO: I'm sorry.

MR. MINNICH: Yes, results have been extensively published.

MR. BLANDO: Can I ask that you submit those publications to the council?

MR. MINNICH: Sure.

MR. BLANDO: I appreciate that. Thank you.

And our last speaker is Michael Richter from Sustainable Cherry Hill.

MR. RICHTER: Good afternoon. I just wanted to say first that it's a shame that people had to leave because I brought along a $5,000 gift certificate to Bergdoff and Goodman that I was going to raffle off for those who chose to stay until the end.

MR. BLANDO: Well, we're still here.

MR. RICHTER: But I left it home.

I was trained as a respiratory therapist and then I worked for ten years in hospitals here in New Jersey, primarily in acute and critical care, and in my career as a respiratory therapist, I saw firsthand how exposure to toxic inhalents wreaked havoc on one's respiratory system, and how long-term disease wreaked havoc on one's quality of life, how it wreaked havoc on their families and their financial well-being, and on the entire healthcare delivery system.

It's no secret that air pollution

exacerbates respiratory disease that many folks live with, including children with asthma, adults with emphysema, those who work in polluted workplaces without adequate breathing protection and so forth.

In the last several years, I've devoted considerable time and energy to bring awareness to my community regarding New Jersey's best kept secret, the vehicle idling laws.

In my humble opinion, most New Jerseyans know nothing about these regulations or think they only apply to trucks or diesel trucks or it's a 15-minute limit or it only applies to paint street

sweepers.

Several years ago, I brought my concerns to then Assistant Commissioner Lisa Jackson. I made the case that the state had done a poor job of publicizing the no idling laws, and that with little expense, they could rectify this shortcoming with several initiatives that I spelled out.

I'm pleased to say that she did implement one idea which became the genesis of the first idle air site in New Jersey at the truck stop in Paulsboro along Route 295.

I'm aware that the DEP Diesel Risk Reduction Program has taken numerous strides towards trucker education regarding idling.

I submit, however, that most citizens are woefully unaware of these regulations, and to a

lesser extent, blatantly ignore them.

I maintain that with negligible expense in this particularly dire budget climate, the state could and should undertake a public awareness campaign to reduce idling, both by our own citizens and the millions of drivers who pass through New Jersey.

Those who remember the oil embargo of 1974 will recall that right turn on red was

implemented to reduce the amount of gasoline being consumed.

The unintended benefit was a huge reduction in emissions from the vehicles that didn't sit at intersections waiting for a green light.

In one study, a city the size of Houston saved some one million gallons of gasoline annually. Many groups across the country, including my own Sustainable Cherry Hill, have seen the need to educate our residents regarding idling, simply because they don't know the laws exist.

In effect, we have to reinvent the wheel some 25 years later.

I lived in the Camden County to Philadelphia corridor, which is ranked 23 on EPA's most polluted air list.

A concerted effort by New Jersey DEP to educate the public would seem to be a priority, but I see precious few signs, no PSAs, public service

announcements, no visible enforcement to the public at large.

My message today is simple. Please make idling a priority in New Jersey. It's the lowest hanging fruit to pick in the fight for cleaner air.

It's a moral obligation we have to the

densest state in the country. It's our job to protect our children and those who suffer from cardiopulmonary disease.

MR. BLANDO: Any questions?

MR. RICHTER: Okay.

MR. BLANDO: I thank you.

MR. RICHTER: May I ask, since I'm new to this forum, what does the Council see as its role in an issue such as idling?

MR. BLANDO: Our legislative mandate is to develop recommendations that then go to the Commissioner of DEP.

So, for example, if the Council were in agreement with your recommendation, we would then forward that recommendation in our annual report for consideration by the Commissioner.

MR. RICHTER: All right. Let me add just some real-world experience.

You know, we organized this group called Sustainable Cherry Hill a couple of years ago. We modeled a resolution after other existing resolutions, took it to our mainland council.

They passed it, and our police department has shown no willingness to invest any effort in educating or enforcing.

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I've been told that New Jersey DEP, since the regulations were implemented, had the sole authority to enforce idling violations up until a couple of years ago.

Please help me if I'm -- you know, when the police were given the authority in the State of New Jersey to enforce. But, you know, again, apart from the very few signs that some private businesses have purchased from the State DEP and put on their buildings, I see no signage whatever.

When you drive into the State of New Jersey, you see a sign that says, when your wipers are on, your lights need to be on. It makes perfect sense.

Why don't we have signs that say something like, you know, we have idling limits on the Turnpike or any of the other major interstates, where we have the electronic signs overhead?

Why can't we use those signs to show to a hundred thousand people a day that New Jersey has idling laws? So there's a lot we can do with very little cost in this climate to clean our air.

MR. BLANDO: You know, I think there probably are many of us on the Council who would probably agree with you, and those are some good

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points, and we certainly appreciate you coming out to remind us of that issue, and it's certainly at something that will we take into consideration.

We certainly have interest in particular for anti-idling at schools and other places too, where children are congregating at school busses, and we've had some discussions in the past about studies that have shown exposure to diesel emissions from school busses and those sorts of things.

We certainly appreciate you coming out and reminding us of this important issue, and we'll certainly take it into consideration when we develop our report.

MR. RICHTER: Thank you.

MR. BLANDO: Bill?

MR. O'SULLIVAN: Bill O'Sullivan, Air Director for the Department of Environmental Protection.

I just want to thank the Council for another great year. I keep saying this every year, that your hearings can't get any better, but I think this is the best yet. You had a great group of speakers, really on point.

Jim did a great job keeping things timely, and we're looking forward to a very thorough

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and constructive report.

Thank you very much.

MR. BLANDO: Thank you.

(The hearing is concluded at 4:00 p.m.)

C E R T I F I C A T E

I, MARY G. VAN DINA, a Certified Court

Reporter and Notary Public of the State of New Jersey, do hereby certify that the foregoing is a true and accurate transcript of the testimony as taken stenographically by and before me at the time, place and on the date hereinbefore set forth.

I DO FURTHER CERTIFY that I am neither a relative nor employee nor attorney nor counsel of any of the parties to this action, and that I am neither a relative nor employee of such attorney or counsel, and that I am not financially interested in the action.

Notary Public of the State of New Jersey
My Commission expires August 31, 2010
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Dated: 4/26/09