

Clean Air Act Advisory Committee

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Alexandria, VA

Clean Air Act Advisory Committee Full Committee meeting

Welcome/Opening Comments U.S. EPA Office of Air and Radiation

Pat Childers, United States Environmental Protection Agency (USEPA), opened the meeting by introducing Deputy Assistant Administrator Janet McCabe, USEPA Office of Air and Radiation (OAR).

Ms. McCabe welcomed the members of the Clean Air Act Advisory Committee (CAAAC), and thanked the subcommittee members for their lively discussion the day before. She began by introducing Lorie Schmidt as the new acting director of USEPA OAR's Office of Policy and Review (OPAR). Ms. Schmidt had a long career at USEPA a number of years before this appointment, and spent time in both OAR and the Office of the General Council (OGC). She then worked on Capital Hill for a few years, for both Chairman Dingell and Congressman Waxman. Ms. Schmidt's experience with clean air issues is prodigious and wide ranging, and includes work on the American Clean Air and Security Act, renewable fuel standards, and the Energy Independence and Security Act. She holds a law degree from Harvard and an Engineering degree from Purdue. She will have numerous duties in OPAR, including helping Mr. Childers with the CAAAC and serving as an advisor to Gina McCarthy in OAR.

Ms. McCabe spoke about the proposal that USEPA Administrator Lisa Jackson and US Department of Transportation (USDOT) Secretary Ray LaHood signed recently, which suggested new Corporate Average Fuel Economy (CAFE) and tailpipe standards for light duty motor vehicles for 2017-2025. The agency is looking forward to the public comment on this amazing package, and thinks it will result in huge reductions in greenhouse gases (GHGs) and billions of barrels of oil saved over the time period. USEPA is also working on Tier 3 tailpipe and fuel standards, and will have those out to the public as soon as they are available for distribution. This is another significant mobile source ruling that will bring tremendous improvements to air quality and public health immediately with the fuel standards. Additionally, they are working on implementing the 2008 ozone standard. The statutory review of this standard is moving forward, and is expected to result in a proposal in the fall of 2013 and a final standard in 2014. USEPA is currently working with the states on the designation process. Most states have submitted updates from their original recommendations for designations, and the agency expects to have the required 120 day letters out to the state governors by mid December, with the goal of final designations during the first half of 2012. This will require a rulemaking that will establish classifications for the ozone standard. Finally, USEPA is working on an implementation rule for the 2008 standard, which they would like extensive CAAAC dialog and discussion on.

Ms. McCabe continued by talking about the 45-50 areas that would be classified as nonattainment under the 2008 standard. There are a number of areas that are very close to exceeding the 75 parts per billion standard but not yet over, so they are looking at what can be

offered to those communities to get them to make changes preemptively, in anticipation of a revised ozone standard. She compared this effort to the Ozone Flex program that is already in existence. The particulate matter (PM) standard is also under review, and has caused a lot of confusion over the last few months; Administrator Jackson said recently that she intends to keep the PM 10 standard where it is.

She moved on to a discussion of the agency's current rulemakings. The Utility Air Toxics Rule, scheduled to be finalized on December 16th, received about 900,000 comments during the public comment period. There were a great number of postcards submitted, but also many thoughtful, substantive comments that have proven very useful to the agency. They are in the preliminary phases of implementing the Cross State Air Pollution Rule (CSAPR), which is another very important rule for health in the eastern part of the country. Additionally, in the aftermath of CSAPR, several rule makings have emerged. The first addresses a handful of states, where the agency felt it was appropriate to have additional time for public input on CSAPR on whether or not these states should be included in it. The second addresses data errors that had been brought to the agency's attention. These errors represented a miniscule portion of the millions of tons that CSAPR will reduce.

She apologized that Assistant Administrator McCarthy could not attend the meeting, and then opened it up for questions from the committee.

Dan Johnson, WESTAR Council, asked if the recent congressional discussions about Federal Advisory Committees (FACAs) will have any impact on the CAAAC.

Ms. McCabe has heard that there is interest in the topic, but is not aware of anything beyond general interest. It is something the agency is paying attention to and will continue to do so.

Gary Jones, Printing Industries of America Graphic Arts Technical Foundation, thanked Ms. McCabe for her presentation. He asked for more specifics on the Ozone Flex-like initiative she discussed. They are involved in two specific projects on voluntary reduction initiatives for Omaha and Kansas City for the printing industry as well as others, and are planning on putting on a series of workshops. Many of the industries involved in this are borderline, and he feels that this initiative would appeal directly to them.

Ms. McCabe suggested that he contact Greg Green and his staff about this effort. She said they are being careful to ensure that this is not a program that will excuse an area or extend deadlines, but rather it will encourage action.

Mr. Jones followed by saying that one of the actions they took in Omaha was to connect them with Kansas City so that they could learn about an initiative that had taken place about 10 years before. He also had them look at an impressive Dallas-Fort Worth project that had received a clean air excellence award years before. He suggested that a central repository of information be created, so that if cities are interested in taking these preventative steps they will not have to reinvent the wheel.

Ms. McCabe agreed, and said that the other person to get in contact with would be Becky Webber, who is the air director for region 7.

Howard Feldman, American Petroleum Institute (API), referred to the overview Bill Harnett had given about the National Ambient Air Quality Standards (NAAQS) schedule, but worries that there are a lot of undetermined dates when it comes to the PM2.5 schedule. He asked if this was anything the Deputy Assistant Administrator could elaborate on.

Ms. McCabe responded that she had no more information about the schedule.

Conrad Schneider, Clean Air Task Force, asked about GHG and Solar Power Satellite (SPS) for power plants. A piece of this has gone over to Office of Management and Budget (OMB), but he wanted to know where it stands currently.

Ms. McCabe replied that this is an important piece of regulatory activity that they have going forward. She was not able to provide specifics, except that they have forwarded a package to interagency review and are looking forward to getting it out for public comment.

Mr. Schneider followed up by asking that if there is going to be any delay with respect to existing sources, then might they consider re-panels the Best Available Control Technologies (BACT) workgroup to take this subject on and provide guidance about it.

Ms. McCabe appreciated the suggestion and thanked Mr. Schneider.

Mark MacLeod, Environmental Defense Fund (EDF), spoke about the tremendous victory that is the light duty vehicle announcement Ms. McCabe had mentioned. This is the third in a series of these events, and it seems like a unique opportunity where automakers are coming together and states and the federal government are working together in a cooperative way. He asked if there were a way to capture the story of how this was so successful, since, upon the conclusion that this rule will have regulatory certainty until 2025, this means several product cycles in this sector. He suggested creating a case study to memorialize what worked and what did not.

Ms. McCabe said that she and Ms. McCarthy had been having the exact same conversation about how to preserve this process, and how incredible this particular sector has been. She said that Mr. MacLeod's suggestion was great and that she will think about who would be suited to take that on.

Robert Kaufman, Koch Companies Public Sector, asked how Ms. McCabe's staff is seeking solutions to issue that NAAQS modeling is causing projects to be stopped or delayed, and how the inability of facilities to model compliance is causing Prevention of Significant Deterioration (PSD) avoidance.

Ms. McCabe said that Chet Wayland, USEPA, Office of Air Quality Planning and Standards (OAQPS), would be going into more detail on this topic later in the day, but that she could touch upon it first. She is spending a lot of time focusing on these issues in conjunction with staff at USEPA and the states. Additionally, they are in the midst of a comment period on guidance that

was put out about SO₂. Thus far it has presented a great challenge for permitting and implementation issues, which they did not anticipate when the move to a shorter SO₂ and NO₂ standard was made. She believes that progress has been made, but that they need to continue to focus on it. The industry and the modeling community have been very helpful in making suggestions for how to make them implementable in a practical way. These are issues that do not occur with an annual standard, but health science has made short term standards necessary and it is critical to adapt and be able to deal with that. States are worried about their workload for SO₂ implementation issues, and so the agency is looking for any flexibilities it can provide. They will continue to have a lot of conversations on the permitting side with all the stakeholders, and then after the end of the comment period will be talking with states and others about how to move forward. She encourages the members of the committee to submit comments in response to the guidance.

Stacey Davis, Center for Clean Air Policy, wanted to second Mr. Schneider's comment on the GHG rules, and find out if they are on track with releasing the refining GHG rule. She also highlighted the importance of these rules, and encouraged the administration to stay on track.

Ms. McCabe thanked her for the encouragement and said that refineries are very much on their radar screen.

Pam Giblin, Baker Botts, expressed that the modeling issue is such an overarching concern from the PSD and NAAQS standpoints. During the subcommittee meeting they had discussed getting modelers together for a workshop, during which they would hold a very candid conversation about some of the issues. Some people are hearing that there are no number of monitors that could trump a bad modeling result, which causes concern for people who have traditionally viewed monitoring as more reliable than modeling. She believes that a convening of the best technical minds on this issue would be incredibly effective.

Ms. McCabe informed the committee that Mr. Wayland had brought modelers together on the issues of permitting, and said that they should think about the best way to do this on the implementation side. This issue would not arise with another standard, because of the uniqueness of SO₂ and the use of modeling to predict nonattainment, which is part of the reason it is such a challenge. This system sprang from a concern that a monitoring network that was robust enough to identify areas of noncompliance with the standard could not be implemented because it would take too many monitors. The goal is protecting public health with the standard, and modeling seemed like a useful tool to accomplish this. Ms. McCabe said that they will discuss it with OAQPS and figure out a way to resolve it.

Ms. Giblin said it was reassuring to hear that this is unique to the SO₂ issue, since there is a lot of concern that this will be the future method for all NAAQS nonattainment. When there is an air quality control that is as vast as some of the ones that exist in Texas, a few modeling results from within the area that deem it nonattainment is probably not the right way to reach a conclusion.

Ms. McCabe assured the committee that the agency's intent is to bring common sense into this issue, and are not planning to designate large areas where there is nothing as non attainment.

Gene Trisko, International Brotherhood of Electrical Workers (IBEW), spoke on behalf of the IBEW to offer suggestions to the full committee for upcoming development, especially in the NAAQS area with a new ozone and a new PM standard. In the 20 years that he has been involved in this process, he has not seen a report card of emission progress by source sector over time. There has been huge progress in reducing emissions of all the criteria pollutants and precursors, but the progress has not been evenly distributed among the source sectors. A couple of source sectors have been leaders in reducing criteria pollutants, while others have not reduced at nearly the same rate. They suggested that once a year the committee is provided with an overview of data showing emissions in tons, for 10 or 12 major source sectors and for each of the major criteria pollutants and the major precursors. Show data from year to year, starting at around 1980, to enable people to see where the major progress has been made. He argues that this annual report card would be helpful as the committee looks at a whole range of proposals that come up for control strategies.

Bill Becker, National Association of Clean Air Agencies (NACAA), responded that it is a good idea, but asked if a trend report already accomplishes this.

Mr. Trisko said that a trend report does, but that it is not easy to put it together in a simple form. The data in the report card form he suggested would come from the trends report, and then presented more succinctly.

Mr. Becker added that it is important to see how much progress has been made, but even more important to see what still needs to be done by sector. He gave an example from the vehicle industry about emissions reductions they have made and the tremendous opportunities for significant reductions that are possible for them to make in the future. A report card of past progress is important, but so is examining what opportunities those sectors can make in the future.

Ms. McCabe thanked both men for their suggestions and said that they do a lot to track what is happening and are always interested in ways to make that information more accessible. The focus at USEPA has been on areas where the emissions of pollution are most significant and where there are cost effective opportunities for reduction.

Jason Walker, Northwestern Band of the Shoshone Nation, expressed the concern from the tribal standpoint that comment period should be extended for the guidebook for building tribal environmental capacity. The comment period ends at the end of this month, but region 8 for example does not meet until December. The basis for air programs come out of the General Assistance Program (GAP), so he stressed the need to extend this period by a few months so that more tribes can weigh in on it.

Ms. McCabe said that while their office is not in charge of that process, she will take it back to the American Indian Office. She then thanked everyone for their comments, and said that she would be taking them all back to Gina McCarthy.

Multi-Pollutant Report Discussion and Vote

Keith Mason, Air Policy Office, USEPA, began his presentation by introducing himself. Together with Elineth Torres, USEPA, he has chaired a workgroup that is concerned with how to look at multiple air pollutants from major industrial sectors in the economy. Sources emit more than one pollutant and humans breathe in more than one pollutant at a time, yet the Clean Air Act put us on a pollutant by pollutant path. A different era is beginning as different classes of pollutants are being regulated simultaneously. Primarily, this is concerned with criteria air pollutants, hazardous air pollutants, and greenhouse gas air pollutants. The air pollution emission inventories really didn't have all three of these in one place until recently.

Mr. Mason thanked the workgroup for recognizing that this is developmental, and there is a need for looking back at the old system while looking forward and innovating.

He continued that three main things would be covered in the presentation. Elineth would give an overview of the contents of the report, concentrating on the conclusions and recommendations. Tim Larson would moderate a discussion amongst workgroup members to highlight the value they see in the report. In between these discussions, Mr. Mason would ask for the committee's approval to send the report to the USEPA for consideration.

Ms. Torres began by thanking the workgroup members that worked on multi-pollutant sector approaches for the last year. She stated that a year is not enough, and there are many opportunities and challenges moving forward. The report would be presented, in particular the conclusions and recommendations. The workgroup was formed under the Economic Incentive and Regulatory Innovations Committee of the CAAAC.

Ms. Torres continued that it's a complicated era for industrial sources because they're regulated in many ways. In the past, controls were constrained to emission points. Now there is a need to look at everything as a whole. In this holistic environment there are challenges to look at merging goals and getting environmental investment and compliance strategies to address every pollutant, and this is a big challenge for the workgroup. In the context of the current Clean Air Act it is very complicated to think about new innovative policies.

The workgroup was formed last year, though USEPA has been thinking about multi-pollutant sector approaches for many years. After a recommendation from the National Academy of Science USEPA met with stakeholders to understand priorities and to develop and improve emission inventories. A lot of analysis was done on how to group air regulations by industrial sector. Sector ranking was done to look at emissions and areas of concerns. Multiple rules were also reviewed to figure out the best way to harmonize regulatory schedules. During the year work has been done with priority industrial sectors and some USEPA offices have reorganized to better serve this mission.

Elineth continued that last year the subcommittee of Economic Incentive and Regulatory Innovation put together a work group to provide information, advice, and recommendations to the USEPA. The workgroup's approach was to have meetings and teleconferences, and also to have roundtables with industry to look at the specifics of multi-pollutant sector approaches. A report was put together with this information. This was a great opportunity to inform stakeholders on development and moving forward with multi-pollutant sector approaches. The

report looks at different perspectives from the workgroup and has identified areas to look into and move forward.

There were two roundtable discussions with the iron and steel industry and the chemical manufacturing industry. This allowed the workgroup to explore the attributes and challenges of multi-pollutant sector approaches. At the roundtable there was discussion of how a sector based multi-pollutant regulation could be optimized.

Specific areas of interest were looked at, such as working with the timing and sequencing of regulation requirements, the opportunities and challenges of source definition, the scope of requirements, monitoring and data, opportunities for streamlining, new technologies, energy use and efficiency and how it relates to caps, and community focus and strategies.

Elineth continued that the workgroup developed four conclusions and seven recommendations. The first conclusion states that the necessary tools have been developed for the USEPA to move into multi-pollutant sector based approaches that optimize air regulations. The time is right and the technology and tools are there to get better environmental results. The workgroup believes that this should move forward.

The second conclusion is that the multi-pollutant sector approach promises benefits in many sectors, but it must be understood that there is no “one size fits all.” There are challenges to work through with the USEPA and stakeholders. There are unique aspects that cannot be applied sector to sector.

The third conclusion states that the opportunity to advance multi-pollutant sector approaches varies across sectors. The nature of opportunities must be investigated early on in the process. The fourth conclusion is that this process needs to go step by step, with an incremental approach to new sector-based multi-pollutant approaches within the confines of the Clean Air Act. The workgroup emphasizes that this cannot be done all at one time, it must be done step by step. Elineth then continued with recommendations to the USEPA.

The first recommendation is that the USEPA should expand efforts to advance multi-pollutant approaches within sectors, with the caveat that such approaches can be anticipated to provide the intended health, environment, and cost-reduction benefits despite the anticipated challenges. This means weighting the benefits and challenges, and understanding that efforts should include greenhouse gas emissions and hazardous air pollutants.

The second recommendation given to USEPA is to establish a clear and transparent process. Multi-pollutant approaches encompass many regulations looking at different emission points. The third recommendation is to expand engagement with community residents, grassroots organizations, and environmental justice organizations. Also, approaches need to be developed to reduce facility-specific and cumulative risks and impacts.

Recommendation number four given to the USEPA is to identify and quantify co-benefits and tradeoffs and communicate them to stakeholders so they are clear from beginning. Some science isn't there yet, but what is known should be quantified and shared early in the process.

Recommendation number five is to work with stakeholders to simplify industrial source category definitions. Source wide facility definitions can help advance multi-pollutant sector approaches and reductions where they are most cost effective.

The sixth recommendation is to explore, develop and test integrated approaches to multi-pollutant monitoring, record keeping, and reporting that harness new monitoring and information technologies. New monitoring technologies been developed throughout the years and should be integrated.

The last recommendation is to disseminate information about tools and resources available to improve implementation of clean air regulatory programs. This recommendation doesn't focus only on multi-pollutant sector approaches because there are opportunities in other areas, such as permitting and innovation. It's important to put guidance out the same time as the rule, and that the stakeholder is able to understand and implement the rule.

Ms. Torres continued that the report has other information besides conclusions and recommendations. It contains information on the detailed discussions the workgroup had, presents seven areas of opportunity with potential benefits and challenges, and it also gives examples and observations from the workgroup members. The workgroup was not asked to be in agreement with the process so there are a lot of good examples and observations in the report. Also, in the appendix of the report, there is more information about examples of multi-pollutant sector approaches. It goes into the requirements of the Clean Air Act and the areas of opportunities in the Act. Also, there is an explanation on how USEPA worked with different sectors. An example was given on how the regulatory scheme for the refining sector can be optimized in multi-pollutant approaches.

Ms. Torres continued that she hoped everyone has looked over the report because there would be a chance to vote soon. Next, she thanked the workgroup for taking the time to attend the meetings and roundtables, and the industrial sectors who participated.

Ms. Torres concluded by saying that there will be an opportunity later on in the meeting to discuss the process and take questions.

Mr. Childers commented that the workgroup has done a great job in including the committee all along, and opened to the committee for questions.

Conrad Schneider spoke first and began by saying the Clean Air Task Force supports multi-pollutant approaches. They support multi-pollutant legislation with respect to power plant emissions, and have urged that several rules be bunched together. The Clean Air Task Force would prefer to see the rules all coterminous in order to make expectations clear and avoid sunk costs.

Mr. Schneider continued that he wants to support this report, with the caveat that he is not saying anything should be relaxed under the Clean Air Act. When the word "tradeoff" is used it should not mean that it's ok to not do things, even though new things are started.

Mr. Schneider then asked if the multi-pollutant approach has to be as good as if each of the pollutants were treated separately. If they do not, he asked how this would be reconciled.

Mr. Mason answered that the bottom line that was discussed was no back sliding. There was moving forward and optimizing, but not back sliding. Tradeoffs will be made explicit before policies are promulgated.

Mr. Schneider said that Mr. Mason's answer was very helpful. He then asked if the principle of no back sliding was memorialized in the report.

Mr. Mason replied, saying the report states that the purpose of multi-pollutant sector approaches is to achieve equal or better environmental and public health protection at lower overall cost across air pollutants.

Don Neal, Calpine Corporation, spoke next. He began by thanking Keith and Tim on behalf of the workgroup for helping him through the process. He stated that this was a good beginning to a process that is really complicated. The rewards are great for industry, in terms of understanding more about what the expectations are holistically.

He continued that this process will integrate all of the requirements and help them comply better. After reading the report, Mr. Neal wanted to make sure the USEPA will come back to the committee with a plan on how to move forward. He would like to see the USEPA move this report forward and provide regular updates or a way to track the progress.

Mr. Becker began by saying that the map displayed the day before was really good. It layered many, not all, of the air pollution problems on a single map. Some of the colors overlapped, and the purpose was to show how many colors were over the country. It showed that the breadth of the problem is ubiquitous and covers a lot of the country. If the USEPA expands to other pollutants that are not on the map, literally the whole country would be colored in with some air pollution problem. This makes the case for the multi-pollutant one-stop-shopping approach and that a broader approach is needed. Continue to use the map and expand it.

Next, Mr. Becker followed up on Mr. Schneider's point. The purpose of a multi-sector strategy is to provide administrative expediency, cheaper costs for industry, and hopefully a better environmental result, not just to maintain the status quo. Mr. Becker argued next that since industry will save money, some of the savings should go back into environmental protection. There will be a lot of effort to set up this system that helps industry in flexible ways, at cheaper cost, and some of the savings should go to ensuring the environment is better. The status quo should not be maintained, improvement is needed.

Next, John Paul, Regional Air Pollution Control Agency, asked Conrad Schneider a question. He gave a hypothetical example within the context of single pollutants. Imagine there is a utility not required under the Cross State Air Pollution Rule (CSAPR) to install a multitude of controls, but they voluntarily put on a scrubber and SCR. At the same time, a utility maximum achievable control technology (MACT) mercury rule is not being met. The question is, if there is significant over control for one pollutant but the mercury number is not met, would this not be automatically rejected and instead looked at more closely? The real test is when there is over controlling for some pollutants while other MACT standards are not quite met.

Mr. Schneider began by telling Mr. Paul he did not fully understand the question. He reiterated that the plant does not have to install an FGD device under CSAPR, and then asked if the utility is in the CSAPR region.

Mr. Paul responded that they could be anywhere in the country. The goal is to have every EGU well-controlled. The question is, if they're not doing enough to meet a MACT rule, is it enough? Mr. Schneider replied that no, it is not enough. If other devices are installed for other purposes, it's still not sufficient to reach compliance in the hypothetical situation.

Mr. Jones commented that his experience with the common sense initiative was with the print step project for the printing industry. It was successful after multi-pollutant and multi-media approaches were put into an easier to implement program. The baseline was that there would be no change in the regulations, so the focus was more on the administrative side. It was organized so that requirements were easily understood and there was administrative flexibility. Certain levels were established based on pollution prevention. There were less administrative requirements as participants moved down levels. The EJ discussion was also factored in. This program was built out of the Environmental Results Program, which had significant reductions in pollution. In Mr. Jones's industry alone it went to 99.9 compliance rate.

Mr. Jones continued that the Sustainable Green Printing Partnership is a certification program for being green. A core aspect of that is compliance. A facility that wants to be certified has to be in compliance first. To continue certification they must have a continuous improvement project. There is no backsliding, requirements stay in place, and industry is provided an incentive and a reward. Currently, the system doesn't let them move out of the program as new technology is developed, but the building blocks are there in terms of using a flexible approach. As companies reduce impacts there should be incentive to move down, in terms of administrative regulatory burden.

Mr. Trisko recommended not giving up on the prospect of developing a similar workgroup to explore future multi-pollutant control opportunities for the EGU sector. Right now everyone is wrapped around CSAPR and MACT, but going forward the relevance of multi-pollutant approach will remain viable. By identifying the opportunities and cost savings that can result from a multi-pollutant strategy, and identifying the constraints under the existing act in achieving these benefits, it might be possible to produce a roadmap on how to achieve it through regulation or legislation.

Ms. Giblin spoke next and began by thanking the workgroup for being sensitive to all of the diverse views. Ms. Giblin asked if there was any way to have Mr. Mason's small panel discuss their hypothetical questions before the vote. This would make folks who didn't work on the report more comfortable. The discussion this morning was very good but her understanding was that there would be a panel discussion.

Mr. Childers stated that the reason it was set up in this manner was to make the discussion broader than the report itself and to open the door for questions beyond the report. There have already been questions that pushed the limits of the report. The committee has had a couple of weeks to deliberate on the report. Mr. Childers continued that he would like to move the report

forward to the USEPA. Afterwards, there would be a workgroup discussion and the people on the workgroup can talk about what's there and what's not. Mr. Childers stated that he has a preference of moving the vote forward prior to discussion.

Eric Svenson, PSEG Services Corporation, stated that if a vote was going to be taken, he wants to talk about the next steps after.

Multi-Pollution Report Discussion and Vote

Mr. Childers clarified that that agenda was set up to allow the panel discussion to move beyond the report. He requested the vote take place before the discussion. Any objections to moving forward with the report were represented by turning one's table card upright. After seeing no table cables turned, Mr. Childers successfully passed the report and moved into the panel discussions.

Ms. Torres called upon Mr. Svenson for his comment before moving into the panel discussion.

Mr. Svenson congratulated the workgroup for the passing of the report. One of the original considerations into creating the report asked how USEPA can better incentivize facilitates to replace outdated or poorly performing equipment and improving energy efficiency while improving malfunctions. There is a challenge of having subsidies be present in some industries and not in others. Mr. Svenson noted it would be worthwhile to study how markets are influenced when moving forward with the report.

Tim Larson, Ross and Associates, thanked the committee for the opportunity to lead the panel discussion. He referenced the list of discussion questions from the presentation, which served as an outline for discussion. Three active workgroup members make up the panel. Mr. Larson proposed addressing the first question to start and suggested concluding the discussion by moving into the other questions and future steps.

Mr. Larson introduced the panel consisting of Pat Traylor, Dan Johnson, and Howard Feldman. Mr. Larson proposed the question to the panel.

Mr. Traylor began the discussion by thanking participants for the opportunity to serve on the panel. Mr. Traylor provided background on his involvement with multi-pollutant benefits. He moved straight into innovation and the attempt to link aspects of the CAA together. Mr. Traylor worked to coordinate aspects of the CAA including New Source Performance Standards (NSPS), the MACT program, and NAAQS to create a joint approach to regulation. USEPA is faced with a multitude of requirements where the Agency is on the cusp of a new era of air pollution control. The Agency is struggling with keeping up with the current requirements, providing the example of the chemical sector where there are 41 pending rules and 33 existing rules. While backslide is not the intent of the Agency, it is important to understand delays and inefficiencies do occur. USEPA is trying to streamline effort to make less drag in both creating requirements and implementation. The main benefit is that the Agency and the states implementing the programs would be eased under these existing programs. Mr. Traylor addressed EGU's in regards to the multi-pollutant approach. The synthesizing of the four USEPA CAA programs

could benefit the EGU sector. Reoccurring comments from progressive utility executives stress the need for certainty regarding regulations. Utility executives need to know what changes are predicted so budgets can be altered to meet the new requirements. Energy efficiency and reductions in greenhouse gas emissions will result from offering certainty to utility executives. Another main benefit is clearing the drag to the Agency rulemaking process by adopting a synthesizing approach and to energy efficiency, closing old inefficient units and improving the performance of current units through the multi-pollutant approach.

Mr. Johnson began by quoting the core principles and purpose of the CAA. It states, “To protect and enhance the quality of the nation’s air resources so as to promote public health and welfare and productive capacity of its population.” Mr. Schneider’s question voiced concern that in trying to strive towards multi-pollutant system, CAA requirements along the way become relaxed. Mr. Johnson noted the CAA strives for public health and environmental protection. If in the end there is better public health and environmental protection, but not for all pollutants, then this is an issue. There is challenge involved in how to communicate the tradeoffs and what language to use to show the benefits. Mr. Johnson quotes the goal in the second paragraph of the report, “That we achieve equal or better environmental and public health benefits at lower overall costs.” It is easier to answer individual questions such as was money saved and were lower emissions achieved. However, at the end if there comes a question of pollution standard tradeoffs, the answer will be no. There must be an understanding of the tradeoffs before a decision can be made. In regards to the third question, Mr. Johnson recommended the Agency focus on language and defining the currency and the manner in which better environmental and public health protection can be collectively concluded and sort out what costs will be included in that discussion.

Mr. Feldman thanked everyone for the opportunity to serve on the panel. Mr. Feldman emphasized the specific language that was used in the report was intended to be read explicitly. In regards to question three, Mr. Feldman referenced refinery sector rules as the example and briefly went over some of the regulations within the report. Expected changes include new source performance standards and Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs). There are many changes to be addressed at once; providing both a tradeoff and benefit. If there are benefits from streamlining reports requirements than the changes are successful. A downside of streamlining would be if there were too many changes preventing comments from being made. When looking at tradeoffs, the justifications for different rules also must be addressed. The benefits of one rule should drive the need for another. Mr. Feldman provided the example that if a volatile organic compounds (VOC) standard is needed for conventional pollutants, this is not driving the need for a NESHAP hazardous air pollutant standard. Mr. Feldman acknowledged there are a lot of changes to be made for USEPA in developing uniform standards. There is a lot of information to analyze in a 60 day comment period, creating a downside of a daunting amount of complexity. There is a potential benefit of the cycling time, review time, and capital investment time. Mr. Feldman questioned if all the necessary controls could be installed in one turnaround cycle. Fence line monitoring is beneficial at times in certain locations, but may be not on the large scale. What would be the need for dispersion monitoring if fence line monitoring is used? These are all things that become important in discussing multi-pollutant regulations.

Mr. Larson thanked Mr. Feldman for his comments and acknowledged that the issues regarding multi-pollutants become complex quickly. Mr. Larson explained the workgroup attempted to maintain focus on what was intended to be accomplished from the regulations, to provide a framework for thinking about regulations in a consistent and productive way across sectors, and to provide a framework for identifying the potential tradeoffs and costs and benefits from various perspectives. Mr. Larson opened the discussion to all workgroup members as well as CAAAC members. Mr. Larson urged the meeting participants to not simply focus on the challenges, but to also share the potential benefits of a multi-pollutant approach.

Praveen Amar, USEPA, thanked all participants for their hard work that has gone into the report. He spoke in regards to the first question of most promising benefits of pursuing a multi-pollutant approach suggesting that USEPA consider implementing multi-regulations and go beyond the sector based approach that USEPA currently uses. USEPA should not have two separate regulations for ozone and particulate matter because the pollutants have many overlapping issues that can be better addressed with one regulation. Pushing to move away from sector-based station source approaches, but go beyond and combine at least two pollutants to regulate at once will exemplify the tradeoffs and benefits of streamlining.

John Walke, Natural Resources Defense Council, noted three truisms facing the Agency at the moment. The fundamental role of the Agency is to carry out statutory instructions from Congress. Secondly, the Agency faces shrinking resources to carry out the statutory responsibilities due to diminishing budgets. Thirdly, in carrying out statutory responsibilities the Agency should operate in an efficient and effective manner. Mr. Walke offered caution that the Agency historically creates initiatives that are extremely time consuming and requires excess resources. Mr. Walke noted the Agency is currently a decade overdue in carrying out Congressional instructions under the CAA. Mr. Walke cautioned initiatives are consuming resources that should be put towards enforcing statutory requirements. He offered the option to integrate resources to better both initiatives and statutory requirements that are overdue.

Mr. Schneider thanked Mr. Johnson for reframing the discussion questions and for the input he provided to the meeting. Utility air toxics provide many co-benefits. A situation may occur where literal compliance with one particular statutory requirement may not result in the level of health benefit as another requirement. Mr. Johnson successfully identified the different motives of people responding to the challenge of co-benefits. Mr. Walke posed a question to the workgroup. He asked whether people 10-15 years ago consulted the cluster regulations as an example of success of multimedia.

Mr. Mason responded the workgroup touched on this example as a previous effort and noted he almost addressed this example yesterday because of its relation to multi-air pollution science. An example was provided regarding controlling air and water offices controlling in separate ways. In short, this example was discussion, but due to the complexity of multimedia it was not used.

Julie Simpson, Nez Perce Tribe, commented that the streamlining concepts proposed in the report have potential benefits for small agencies, such as tribes. There becomes issue when a small organization does not have distinct positions in the environmental field. Quality assurance

may be only part of the work along with technical and regulatory assistance within the boundaries. These scenarios must be taken into consideration.

Ms. Davis stated a benefit is that greenhouse gases are specifically included in multi-pollutant framework. Including greenhouse gases may assist in addressing the issue sooner without having to wait for the legal process to run its course.

Mr. MacLeod offered thanks for the presentation on multi-pollutant science. He referred to the discussion on the effects of pollution on the human body and the research being done on this topic. Mr. McLeod requested that the presentation be made available to the full committee.

Mr. Mason responded the presentation will be made available.

Robert O'Keefe, Health Effects Institute, followed up by noting that a benefit to the multi-pollutant approach is that it begins to establish a scientific and intellectual framework that is moving from the facilities down to the work that is being conducted in the scientific community. He noted the increasing difficulties in using epidemiology to sort of the effects of each pollutant at lower levels. Mr. O'Keefe recognized the challenges surrounding this issue and pushed for continued discussion to work to ensure public benefits.

Liz Naess, USEPA, stated that it is very encouraging to hear that stakeholders understand the benefits of a holistic approach. States have been talking about a holistic approach for a long period of time and are committed to moving beyond the report. For state regulators, there is a challenge with having diminishing resources when there is a federal approach that is most cost effective and more reductions. Stakeholders see the benefits of making the multi-pollutant approach happen.

Mr. Amar addressed the question of near-term opportunities. He suggested implementing what USEPA had done about a year ago where they formulated guidelines and trained USEPA regions about energy efficiency. This initiative could be moved along to include efficiency in the near term.

Mr. Feldman clarified that due to the large amount of data on the refinery rules a request for a notice of proposed rulemaking has been submitted to the Agency. Mr. Feldman addressed the issue of tradeoff. There is a large tradeoff between addressing conventional pollutants and greenhouse gases. The example was provided of taking more sulfur out of gasoline, which would cause the product to be refined further, and would result in the use of more energy and increased greenhouse gases. This tradeoff is how to reduce one pollutant while consequently increasing another. Mr. Feldman touched on the different drivers from different sectors because the standards that support different regulations may not mesh together easily.

Mr. Johnson emphasized the point about tradeoffs in reduction. Despite the lack of previous success on this topic, Mr. Johnson suggested in the long run everyone would benefit from having a means by which this topic can be discussed.

Mr. Traylor responded to the notion of NAAQS revisions and supported the coordination of both revisions and implementation. He referenced the 2004 NRC report discussed at yesterday's meeting that suggests the idea of multi-pollutant coordination of NAAQS revisions. This idea can be profitable because it streamlines information and provides certainty going forward. Mr. Traylor addressed the comment of the mixture of the different air pollutants and the idea that the Agency should be looking at the science of the mixture of all air pollutants. He suggested the use of expanding the USEPA use of pollutant surrogates. More of this will provide more linkages and clearer co-benefits among the programs.

Mr. Becker responded to Mr. Johnson and Mr. Feldman on the contradictions of reducing one pollutant while increasing another. To follow up with Mr. Feldman's example, Mr. Becker posed the situation if USEPA required a tighter vehicle and fuel standard and lowered sulfur to 10 parts per million (ppm), and greenhouse gas increased. Assuming the refinery is in Texas or New Jersey, and the increase in greenhouse gases triggers new source review, different requirements would be enforced based on the location. Until federal, state, and local policies change, all that will be required by a refinery is to meet the greenhouse gas standard would be to improve energy efficiency. Why do the two multi-pollutants have to conflict?

Mr. Feldman responded the point is that the greenhouse gases would go up, which is the tradeoff of the new regulation. This scenario does not have to deal with permitting, but instead is suggesting there is a tradeoff when reducing one pollutant and causing another pollutant to increase. Mr. Feldman stressed that greenhouse gases emissions may still increase due to controls put on elsewhere. Additional controls on greenhouse gases do sometimes increase emissions.

Mr. Larson highlighted that the workgroup recognized that tradeoffs exist in implementing control strategies. These tradeoffs are important to look at and work towards creating strategies to compensate these tradeoffs. One of the advances USEPA has been making is looking at other implications of specific rulemakings on other pollutant emissions. Mr. Larson turned to Ms. McCabe. As the recipient of the report, Mr. Larson inquired if she had any comments to what had been addressed.

Ms. McCabe thanked all who contributed to the report. She reiterated the report is only as good as the follow up that occur from it. She assured participants that regular reports will be given to update participants on the status of the report. The topic of multi-pollutant regulations is important to discuss. Ms. McCabe noted there are many potential benefits as well as difficulties in ensuring all opinions are heard. While progress has been slower than intended, the passing of this report shows the beginning on the next step moving forward. Ms. McCabe thanked all participants again for their advice to USEPA.

Mr. Larson asked for reflections on the CAAAC workgroup processes.

Mr. Feldman thanked Mr. Mason, Ms. Torres, and Mr. TIM for pushing to get the report completed. He cautioned the report was lead and directed by USEPA and there are various pros and cons to this.

Mr. Neal agreed with Mr. Feldman in that the role of USEPA has changed in the workgroup. As a group, he suggested discussing the implications of having a heavily influenced USEPA report and control.

Ms. Schmidt thanked all presenters and participants. She dismissed the meeting for a break before beginning the next section.

Subcommittee and Day 1 Report Outs

Bill Harnett, OAQPS, spoke about the lively subcommittee meeting that had taken place the day before, and said that they agreed on two topics that they would like to have further discussions on with the full CAAAC. First, they discussed the issues with one hour standards, and the accuracy of using models versus monitoring. The subcommittee is interested in more information from the agency about what steps it has taken to test the accuracy of the models. The group also suggested that the industrial sources consider funding state monitors in an effort to replace the need for modeling in certain cases. This would enable the move to more monitors where they otherwise could not be afforded by state agencies. He said that they would be preparing information on this topic and distributing it after the meeting.

Secondly, they spoke at length about GHG permitting. The permits have not been coming in at the number the agency projected when doing the tailoring rule. There was a difference of opinion as to why this is the case, but all members thought it was worth delving deeper into what was driving this. He said that the agency is also moving towards the rule making on phase three to examine the cut offs, and see whether it is necessary to lower them or if they can remain the same. In that context, they are gathering information on what is impacting permits and peoples' experience with the process up until this point. This information will be made available by the next meeting.

Another topic the subcommittee discussed was the challenges tribes are facing with designations. The agency wants to consult more with the tribes and allow for their areas to be designated separately, but the two tribal members of the subcommittee brought up the fact that many tribes need technical support that the USEPA has not been providing. This puts tribes at a disadvantage in conversations with the states, and It is important that the agency rectify this. He said that he will be reporting back to the members of the subcommittee when he knows what can be done to secure technical assistance.

Joy Wiecks, Fond du Lac Reservation, reiterated that the issue of modeling versus monitoring is of great importance to the tribes, and that if there is a workgroup put together on the issue they would like to have broad tribal participation on it.

Mr. Walke, Natural Resources Defense Council, asked Mr. Harnett whether the agency has the official count of the number of GHG permits that have been submitted.

Mr. Harnett replied that there are about 100 applications in the system, and 17 permits that have been issued.

Mr. Neal followed up by talking about the three GHG permits that Calpine has filed. Two of the permits were with region 6 and one was with Delaware. He said that they Calpine has found the process very reasonable and have no complaints.

Next, Gay MacGregor, Office of Transportation and Air Quality (OTAQ), USEPA, gave a presentation on the Mobile Source Subcommittee. This subcommittee typically meets twice a year, not in conjunction with CAAAC. When she took over the subcommittee about ten months prior, the first action she took was to survey members about their preferences for how to run the meetings. This survey led to themed meetings that centralized around a specific topic. The October 2011 meeting's theme was about the heavy duty GHG rule for heavy duty technologies. She referred anyone who was interested in this topic to their website, because a few very interesting advanced technology presentations were given by DOE, Eaton Technologies, and a number of other relevant groups.

The SmartWay transport partnership is USEPA's voluntary program that addresses the supply chain. The program works via partnerships between USEPA and various shippers and carriers, who all have different requirements under the program and make different commitments. For the last 5-6 years, the subcommittee has focused mostly on the heavy duty on highway trucking sector for Class A trucks, and in urban delivery. They have partnerships with about 100 of the largest truck carriers, and with 1000 of the small to medium carriers. They also have all class 1 railroads, fortune 500 shippers and major logistics firms as partners, and constraining logistics for the best environmental benefit can prove incredibly effective.

She spoke about the benefits of the SmartWay program from 2004 to present, listing the testing for the on highway GHG rule as a direct result of information that they were able to glean by engaging with the major shippers, manufacturers, and transporters. This program only has authority to regulate new engines and vehicles, so this enables them to address the legacy fleet and test out new technologies. Additionally, their work with the SmartWay transport partnership allowed them to gather data in terms of fuel savings and criteria pollutant savings.

She gave an overview of the roles of various entities within the program. USEPA is at the center of the organizational chart, with the role of verifying the reductions that can be gained from technology. The shippers are also a huge part of the program because they leverage and comply based on manufacturers. Finally, the program helps provide financing to individual truckers to modify and upgrade their trucks. In order to join the program as a carrier, companies must commit to reducing their emissions by a certain percentage over a period of years, and for shippers it is a very similar process. Data is reported to the workgroup every year about the actual gram per mile and gram per ton mile fuel used to ensure accountability.

Ms. MacGregor spent the next portion of the presentation discussing the subcommittee's newly formed workgroup, which will focus on the SmartWay legacy fleet. The subcommittee is being stretched thin; It is operated primarily by their seniors, who are ex-logistics and company people that have returned from retirement, which has proven much more effective than operating through a big contract. This has left them feeling overwhelmed, however, and so part of the role of the workgroup is to expand the program with minimal resources, and to go into the broader portions of supply chain that exist outside of trucking. Chaired by Terry Goff and Buddy

Polovick from the SmartWay staff, tasks for the workgroup will include looking at the program and helping to consult them on how to manage it, extending it into relevant areas, and helping with strategic growth. The workgroup is a two year workgroup, and has three subcommittees under it: one to broaden the stake holder group, one to collect data, and one to look at opportunities in the non-road sector. She mentioned that the SmartWay program has a corollary program in Canada, Australia, New Zealand, France, that are all based off of this model. As data is collected in other countries, it will ultimately allow for analysis across the entire supply chain.

Mr. Schneider thanked Ms. MacGregor, and spoke about how interesting it was that they were already considering multipollutant factors.

Terry Goff, Caterpillar, lauded Ms. MacGregor for her presentation, and reemphasized the impact that learning from the SmartWay program has had on the medium duty and heavy duty rule that just came out. This rule was able to effectively move through a multi stakeholder process, and from the start to the end the rule making process occurred expeditiously and thoroughly. He credits the effective utilization of SmartWay for making this work. Through the workgroup they are hoping to look at these additional sectors and stretch SmartWay deeper into the legacy fleet.

Lee Kindberg, Maersk Line, pointed out that the mobile sources comprise about a third of all the emissions dealt with in the United States. Most of the people on the CAAAC are fixated on the stationary sources, but these supply chain area is a rapidly evolving area as the standards are defined for scope three on GHGs. Both the incoming supply chain and the post use supply chain must be considered. The marine sector has worked for approximately 10 years to develop metrics, but these are limited to the ocean piece. Since most supply chains are global in some way, the question that needs to be addressed is how to extend and provide good GHG accounting, while connecting to the global supply chain.

Mr. Schneider thanked Ms. MacGregor and the members of the subcommittee again, and then moved into Mr. Wayland's presentation on ambient monitoring.

Monitoring Discussion

Mr. Wayland from the Office of Air Quality Planning and Standards began the monitoring discussion by saying that he was pleased to be here to talk about ambient monitoring. There are a lot of changes happening with the monitoring network because new NAAQS have come on board. He continued that he would try to get everyone up to date with ambient monitoring, the issues, and take feedback. At that point, he gave the floor to Lewis Weinstock, USEPA. Mr. Weinstock would walk through the presentation because he has more expertise in this area.

Mr. Weinstock began by thanking Mr. Wayland. A saying in the monitoring world is, "It's always about the monitoring," though SO₂ may be an exception to this. When compliance, health studies, and modeling verification are talked about, inevitably the monitoring person is sought out. The availability of quality data is key.

Since there had not been a monitoring discussion in a long time, Mr. Weinstock said he would give an update on monitoring for criteria pollutants and air toxics. There would also be time for questions. It is important to realize that monitoring must respond to changes in science, objectives, and health studies. In essence, Mr. Weinstock continued, the USEPA is trying to revise ambient monitoring as they go and this is a big challenge.

Topics Mr. Weinstock would discuss are the criteria network, emerging issues, air toxics, tribal programs, near road monitoring, and new technology.

Increasingly, the person on the street is really in tune with air quality because of technology. In the 80's the data was very closely held and reported after the fact. The community might find out 3 months later that there was episode, not that anything could be done at that point. For a lot of reasons, stakeholders want to know immediately when there are air pollution episodes. The air quality index can now be found on the internet, and this helps people to make everyday decisions, such as whether or not to go running.

Mr. Weinstock continued that Chet deserves a lot of credit for this. The Air Now program is ten years old and is the best illustration of how the Agency has taken publicly available data and allowed people to use it every day.

One of the most obvious things discussed in the compliance world is the NAAQS. Traditionally, this is a use for air quality data. For example, it allows us to check if the air is within standards. There is a linkage between air monitoring and air quality standards, or NAAQS. A core and traditional use of air data is emission control strategies. Air pollution research, health studies and chemistry studies also depend on the long-standing permanent national air monitoring network. Researchers can count on it being here in five or ten years. The state, local and tribal network is the backbone of health research.

Next, Mr. Weinstock introduced the Air Now website, which is airnow.gov. It contains publicly available information and makes complex information easy to use for the average person. There are new apps for the iPhone and the iPad.

There are a lot of challenges with the everyday business of air monitoring. In the past, the air monitoring world was stable. Five or six years ago the administration decided to review the National Ambient Air Quality Standards on the five year cycle mandated by the Clean Air Act. Since 2006, all of the air quality standards have been reviewed and advised, except carbon monoxide. For some of the standards, like lead, SO₂ and NO₂, the standards hadn't been changed since the 1970s. When they were revised, changes in the monitoring network were required. New changes and monitor regulations were promulgated that affected the monitoring agencies. It will take five or more years to integrate the changes and reconfigure the network. Because of the economy there have been limited resources available at the federal and state level. It has been harder and harder to pay for new technologies and new equipment, and to find people to do the work.

Mr. Weinstock continued that the monitoring network is changing because of successes with control programs and air quality standards. Many pollutant levels are dropping, though there are still issues with sources and roads. Networks have to be reconfigured to capture higher numbers. Ozone and fine particles are more ubiquitous pollutants that are generated in the atmosphere. A lot of monitors are needed and big networks have to be maintained even while revising the other networks.

Mr. Weinstock continued that there are method issues. Lead is an example of this. In 2008 the NAAQS level was tightened by a factor of 10. Sampling and analytical methods were necessary to make sure it was still appropriate going forward. Resources are getting tighter so there is a need to get smarter about implementation.

Next, a summary of what has happened in the last 5 years was given. Mr. Weinstock would summarize changes to criteria pollutants and the primary and secondary standards revisions. In 2008, ozone was revised and it is now in the middle of another review.

In 2006 the PM_{2.5} standard was changed. Currently, PM₁₀ is being looked at, and in particular, PM_{2.5}. A proposal on monitoring and the NAAQS will be out during winter of 2012. The SO₂ standard was changed to a 1 hour standard. There were minor monitoring changes also. NO₂ is a huge thing to talk about. The standard and the network were revised, along with the strategy on how to determine compliance. Mr. Weinstock said he would talk more about this. Carbon monoxide hasn't changed, but the network will be refocused on the new road monitoring strategy.

Lead has been a huge topic for the last three years. Two rounds of monitoring changes are now being finalized. Those measurements are coming in and designations being made now. Mr. Weinstock moved on to showing maps to illustrate where there are a lot of assets and where there aren't.

When thinking of air monitoring networks, most people think of ozone. The levels are relatively high compared to the NAAQS and it has been a long-standing challenge to comply nationally. From the map it is evident that there are lots of monitors, over 1000. There are lots in the east and in California. There are not as many in the west which presents a challenge because historically ozone wasn't a problem there, relative to the NAAQS. Now there are concentrations of monitors in Wyoming, Colorado and Utah. There have been findings of ozone levels in the west that are higher than ever before. They have been found in the winter rather than summer. This is an illustration of how networks have to be responsive to changes. Overall, the ozone network is really robust and powerful. There are places to fill in, and there is a need to adjust the time period the ozone monitors are operating. They do not all run year round, but rather run in seasons where NAAQS violations are most likely. The period of time should be revised and sometimes lengthened.

Particulate matter has a robust network also. There are more PM₁₀ monitors out west where it's arid and there are coarse particle issues. Back in 1999 and 2000 a PM_{2.5} network was established, and there are at least 1000 monitors each. The PM fine particles monitors are more area wide, while the PM₁₀ are more source oriented. Both networks are relatively stable. There

has been work with states to consider divestment in some Eastern PM10 monitors. As new challenges are integrated into the network, the Agency must be realistic about good uses of resources. In most cases levels of PM10 are low, so some monitors could be freed up.

Mass measurements are the total amount of PM in the air, and the standard is based on this. The speciation network is focused on components of PM because fine particles have several components. Knowing what component is driving the violation of the NAAQS is critical to getting areas into compliance. It is also critical for health studies to know what the component is that's driving health effects. It could be metal or sulfate, and there could be different drivers in different areas and seasons. Many argue that this is more important than the mass network. There are constant challenges by the health community to measure more.

So in summary, with ozone and PM, there is a need to understand the challenges ahead. There are robust networks but they are not perfect. With ozone, work needs to be done on ozone seasons. The administration considers a biologically relevant secondary form for the ozone NAAQS every 5 years, and if that gets finalized it will put the focus on ozone in rural areas where there aren't necessarily people, but there are forests, and other natural areas. Networks are sparse in these areas. There are a lot of monitors in the east and there may be redundancy. There could be some divestment.

PM10 is relatively stable in challenge. The Administrator recently made a commitment that she wouldn't touch this standard in the next review cycle. The challenge is, since 1987 there have been indicators that include coarse particles and PM2.5. There is a small network for PM10 minus 2.5, but it is hard to get the resources to put a network in without a NAAQS driving it. States are now starting to run PM10 minus 2.5 monitors, and this data might bolster the case to make a change in the future.

Mr. Weinstock continued that he would talk about PM2.5 near roads. There are many new technologies that can measure this automatically with a lot less manpower. There is a real learning curve to get them to work better. States are eager to move to automated methods but they must be accurate.

With speciation, they are going down the road of automated technology. For carbon, sulfates and metals there could be a long term investment there.

Next Mr. Weinstock discussed lead. Lead got very little attention for 10 or 20 years. It was taken out of fuel and the network got turned off. In 2008 the standard was tightened by a factor of 10 and work was needed to refocus the network. This was done in two ways. First, the network was focused around sources larger than 1 ton. Now, monitors are being put around half ton sources, and that should be done in the next 6 weeks.

Many stakeholders asked about lead in airports because it is still used in fuel. A special study will commence in 6 weeks to study fifteen airports that have different risk characteristics. Airports are not used to being monitored, but there will be good data in the next year. There are a lot fewer lead monitors compared to ozone and PM. There are 70 or 80 one ton monitors that are source focused.

Mr. Weinstock then moved on to near-road monitoring. In most cases the monitoring networks have done a good job characterizing the country's exposure in many areas. One area where there hasn't been a concerted effort to characterize exposure is near-road monitoring. This has become a huge issue for the Agency and stakeholders. Tens of millions of people live close to roads, and there is research based on the variety of health effects. There is no long-term infrastructure for monitoring pollutants by the road because this has not been a key objective for state, local, and tribal monitors.

The Wall Street Journal had a front page article titled, "The Hidden Toll of Traffic Jams." It talked about the health studies done and effects on people who live near roads. There is a belief that people don't live near roads, but actually millions of people do. One example is the Chicago suburbs. There is now an opportunity to determine what these people are being exposed to.

The impetus was the NO₂ NAAQS revision in 2010. The Agency made a conscious decision to select the level of NO₂ NAAQS on peak exposure. In most places peak exposure is by the road, so therefore to put this NAAQS into action a near road network is needed. Right now, the Agency is working on putting the first wave of monitors in places where there is lots of exposure and traffic. It has been a huge hurdle because no one has been trained to work by road until now. In 2013 and 2014 there will be two phases of this initial effort. About fifty near-road NO₂ monitors will become operational.

The CO requirement was layered on top of this, so by 2017 there will CO monitors there. Internally there is discussion on how to do other pollutants like PM_{2.5} and black carbon. There are great partnerships with NACA, federal highways, and the science advisors, to put together a guidebook on how to put monitors by roads.

This is not just an NO₂ network; this could be a backbone of monitoring for decades to come. Depending on each area's concerns, there is now a way to get measurements of different pollutants where tens of millions of people live. Areas of a million or more will have the first two phases of monitors, and it will be geographically and meteorologically diverse.

Monitoring Discussion

Mr. Weinstock continued with his presentation on air toxics and hazardous air pollutants. Historically, air toxics monitoring has been viewed as more of a local issue. Often air toxic problems are driven by local sources and local concerns. For decades, state, local and tribal agencies have successfully managed funds to put together a network using their own methods. It was argued among science advisors that there is a need for a national presence to create a backbone of a national long-term network for air toxics. A national monitoring network could be combined with monitoring agency initiatives and create a nationally consistent basis of what is being measured and how measuring and reporting take place.

Mr. Weinstock moved into the portion of the air toxics presentation on monitoring and the community scale grant programs to give meeting participants a sense of how USEPA is moving forward.

The National Air Toxins Trends Stations (NATTS) is a very small, but comprehensive air toxics monitoring network, consisting of 27 sites across the country that measure a range of pollutants. The USEPA office works with state or local agencies to run NATTS sites, which over the last 8 years have been phased in, starting in 2003 and reaching completion in 2008. This NATTS network is the only national air toxics network that USEPA supports and has served as an outlet to test methods and procedures. Air toxics data is used for a variety of purposes, not inconsistent with how criteria pollutants data is used.

The NATTS network has both urban and rural site locations that were chosen based on risk and the availability of partners. USEPA is currently conducting a comprehensive reassessment with stakeholders to ensure sites have been located correctly. Mr. Weinstock referred to the presentation for a list of items measured by the NATTS network. These measurements are known as risk drivers and more information on risk drivers can be found through the link in the presentation.

Another issue being addressed is modernizing air toxic methods. Challenges of air toxic measurements include high cost and time delay. The process of getting data takes time and getting the data days after measurement for a 24 hour review is not ideal. However, there is new technology in the world of metals that is allowing the use of near real-time measurements. In addition to running the everyday network, the group is working to see where the new technology can be used and trying to find ways to reduce costs, allowing the new technology to be used by others. This new technology will be helpful once perfected to state, local, and tribal agencies.

Mr. Weinstock began discussing the Community-Scale Air Toxics Ambient Monitoring (CSATAM) Grant Program. USEPA conducts a competition on a national scale every few years to any state, local, and tribal Air Pollution Control Agency. The objectives include characterizing the degree and extent of local-scale air toxics problems, tracking progress of air toxics reduction activities, and developing emerging measurement methods. Mr. Weinstock mentioned approximately 40-50 grants have been awarded over the past 5-6 years that are in various stages of completion.

Mr. Weinstock presented the seven, geographically diverse grants proposals that have been recommended for an award. Certain grants offer a follow-up project to ensure the program was successfully implemented.

Mr. Weinstock moved into the tribal monitoring portion of the presentation. Tribes are faced with the same challenges as states; funding and ensuring sufficient quality of data. USEPA air quality rules have been modeled after large agencies abilities, not necessarily the smaller entity such as tribes. USEPA wants to be conducive to tribes that wish to conduct monitoring for their own objectives. Mr. Weinstock referred to the presentation for tribal air quality monitoring success stories.

Mr. Weinstock concluded the presentation with final thoughts related to air toxics monitoring and the strategies USEPA intends to convey. One of the important strategies includes investment and divestment. While an extensive monitoring network exists, these networks require new needs despite the shrinking of resources. With a lack of new resources, the current resources must be shifted to meet new monitoring needs. USEPA is very interested in new technology, but the technology needs to be cheaper, require less manpower, and perform better. Mr. Weinstock advised USEPA cannot be timid about investing in new technology and re-training employees in order to move forward.

Mr. Weinstock touched on the issue regarding data management and the inefficiencies in how data monitoring occurs. He noted there are states that operate outdated data systems. Mr. Weinstock stressed again the importance of advancing technology to require less man power to operate machines.

Mr. Weinstock inquired if there were any questions regarding the presentation on air toxic monitoring.

Ms. Schmidt thanked Mr. Wayland and Mr. Weinstock for the presentation.

Mr. Hellwig elaborated on the topic of increased costs, noting that the closure of a monitoring station saves little money. Costs to develop a new site range between \$100,000 and \$200,000 per site. Mr. Hellwig pointed out this is between 1 to 2 FTE's that a state has to decrease in manpower. High costs are also associated with the upgrade of digitization for monitoring stations. Mr. Hellwig suggested discussion be about reducing staff to be able to run other parts of monitoring programs. With more sites comes the need for more manpower and with reduced manpower the sites cannot operate correctly. There is a question as to where the reduction should come from. Ultimately, an increased number of sites results in the loss of positions within the agency.

Mr. Becker followed up with the issue about the extent to which USEPA is going to require SO₂ modeling to help find if the level of SO₂ compliance within a short term standard. Mr. Becker questioned whether modeling should be used to demonstrate compliance or mandate modeling supplemental to monitoring. He noted the monitoring network is not sufficient to stand alone. By establishing an appropriate monitoring network, state concerns would be eliminated due to the increased accuracy of measurements. Mr. Becker proposed the scenario where the regulated community would fund the network; a cost around \$100 million. If industry was able to support this cost and distributed the technology to a third party, Mr. Becker believed states concerns would be addressed. Mr. Becker welcomed reactions to this suggestion from both industry and USEPA.

Ms. Simpson thanked Mr. Weinstock for the presentation noting the coverage on tribal monitoring activities and issues. There is a concern within tribes that the importance of rural air toxics monitoring will be forgotten. As budgets are cut, research will become focused on urban areas. Ms. Simpson urged USEPA to not lose sight of the impacts of air toxics on tribes, who are struggling to keep up with the efficiency quality that the states have.

Mr. Jones inquired if the monitors are sensitive enough to determine whether the source of the pollutants is domestic or foreign?

Mr. Weinstock replied that for gases, ozone, and SO₂, there is no way to determine the original location of the pollutant. For particulate matter, however, the original location may be traceable based on patterns of emissions along with the use of meteorology. An example of Sahara Dust was provided, which possesses a chemical signature that is unmistakably traced. Monitoring simply determines how much of a pollutant there is.

Mr. Jones followed up with a question regarding particulate matter. Can location be traced for condensable or organic derived chemicals?

Mr. Weinstock replied there are various types of markers that can be looked if the measurement was stable enough to remain on a filter. If the methods can retain the filter, the original location can be identified. However this is a pollutant specific question.

Mr. O'Keefe thanked Mr. Weinstock for the presentation. Mr. O'Keefe spoke from a health community perspective and offered support for the expansion of near roadway monitoring. He noted the completion of the review of historic data on health effects of exposure to traffic related air pollutants. The example of Chicago was successful in proving the importance of near roadway monitoring.

Mr. Johnson thanked Mr. Weinstock for the presentation. He noted there will never be enough monitors to truly characterize air quality. Monitors are very expensive and require many resources. Traditionally, divesting in something else has been the way to meet the cost and resources needs of monitoring. He suggested an idea from the National Aeronautics and Space Administration (NASA) to take a portion of monitoring network and replace with background information or transport information from satellites. Mr. Johnson inquired as to the progress or potential of progress in this area. In the context of SO₂, what is the purpose of monitoring if the goal is replacing monitoring with modeling as the determination for attainment/nonattainment designation.

Mr. Weinstock commented on the question regarding NASA's remote sensing to assist with air monitoring. He noted the timeliness of question; there was a meeting on this topic at USEPA the same day. Mr. Weinstock confirmed progress has been made in column measures of ozone, particulate matter 2.5 and satellite monitoring options. He assured there is promise in the NASA monitoring and suggested that in some cases NASA monitoring may be the only way to fill data gaps. This is because in remote areas, it is not feasible to rely on regular monitoring methods. The use of NASA assistance in air toxic monitoring is a long-term project, but progress is sure to come.

Mr. Wayland stated the future lies in a combination of monitoring, modeling, and satellites. Mr. Wayland agreed that it will be impossible to have monitors everywhere. He noted that USEPA is working with CDC on a project to fuse model data and monitor data to maximize information on air toxics. Mr. Wayland confirmed that satellites have made substantial progress and ensured the technology will continue to advance. Mr. Wayland mentioned the hope to create a sensor

application for the iPhone that takes air quality measurements. He noted that the application may not be at the level of the regular monitoring, but it would serve as a start to have monitoring where it normally would occur. He continued to the issue of SO₂ by clarifying that modeling is not replacing monitoring; instead a combination would be used. Mr. Wayland reminded meeting participants that standards have not been changed since the 1970s. Typically, both the monitoring and modeling tests must be passed to meet the SO₂ standard. Mr. Wayland commented this is the first time a 1-hour standard must be met for SO₂ and NO₂, rather than the annual standard for modeling. Difficulties are arising with meeting the shorter standard and USEPA has to figure out how to communicate the two standards better by reaching out to industry partners in sharing the gaps in data, where the gaps are, and how to work to close gaps in modeling. Mr. Wayland noted that working with a source one-on-one has proved successful in solving the problem. He confirmed there is more work to be done on the standards and encouraged participants to take Ms. Schmidt's suggestion to comment on the guidance documents through December 2nd. Mr. Wayland recognized there are always cases when the model is not correct, but is good. He confirmed USEPA is open to having sites where monitoring is better than modeling. Mr. Wayland cautioned that there is a difference in the modeling process between whether the inputs of models are over conservative or the actual model is conservative.

Ms. Giblin thanked Mr. Weinstock for the presentation and mentioned the topics of modeling and monitoring should be present on the CAAAC agenda more often. Ms. Giblin stressed the point that more monitors are not necessarily needed; rather better located monitors are better. By studying monitoring data, strange patterns such as the spikes in Houston may be explained. She requested a copy of Mr. Weinstock's presentation for future reference.

Mr. Childers confirmed the presentation will be available on the website within a week.

Mr. Trisko thanked Mr. Wayland and Mr. Weinstock for the presentations. He offered a response to Mr. Becker's suggestion on alternative funding mechanisms to increase monitoring capabilities. There is a complexity within industry, deriving from its partly regulated and partly restructured nature. Some utilities may be able to obtain rate based treatment if successfully justified to the public utility commissions. However, restructured states that operate in competitive markets would not be able to recover the costs. Therefore, the opportunity to participate in the funding program would be diminished. Mr. Trisko offered an alternative to look toward other industry sources for funding. In addition, Mr. Trisko requested the need to give attention to the seriousness of the problems associated with demonstrating attainment with the 1-hour standard using modeling-based approaches.

Ms. Wiecks offered perspective from a tribal point of view. States have assisted tribes, filling gaps in tribal monitoring in terms of providing audits and data upload to AQS. However, it is unreliable to depend on states due to the cutting of state funds. Tribes are having trouble meeting auditing requirements that state 10 percent of monitors must be audited every year. She suggested the possibility of tribes auditing tribes, but recognized transportation may not be cost effective. Ms. Wiecks voiced concern for the future on how to solve this auditing tribal problem.

Ms. Simpson followed up on the concept of using smart phones to help fill gaps in the monitoring network. Rural areas of tribes need to be considered when thinking about the smart phone application because not all tribes are able to afford smart phones. In addition, not all tribal areas offer complete cell phone coverage.

Kelly Green, USEPA, agreed monitoring is important. He thanked Mr. Weinstock for the presentation. Mr. Green offered caution in terms of creating cycles of creating multi-pollutant standards, which creates the need for money and better data. When starting the process of developing new standards, the Agency needs to think about how the regulation changes will affect monitoring and how to be more efficient on the implementation side.

Mr. Weinstock agreed this was an excellent concern. He assured Mr. Green USEPA is trying to think ahead and make costs less burdensome. Mr. Weinstock noted the last few years have been unstable due to the length of time before the regulations were reviewed. The current length of time was unrealistically long. Mr. Weinstock assured Mr. Green the last five years was atypical and upon the completion of the review will enter a period of stability.

Mr. Becker responded that it may be illegal to set a standard and take into consideration implementation issues including monitoring. He agreed the idea was good, but acknowledged an inability between setting the standard and implementation.

Mr. Wayland concluded the presentation by thanking the committee for the ability to present modeling and monitoring issues. He acknowledged the current unprecedented time that involved many regulation changes that are quickly taking place. Mr. Wayland believed a more stable time is ahead and assured the regulations will be looked at more frequently. Mr. Wayland recognized many issues were raised that need to be taken into consideration regarding modeling and monitoring discussions.

Ms. Schmidt thanked participants for a great conversation and dismissed the meeting for lunch.

RPO Program Evaluations

Mr. Larson spoke about the Regional Planning Organization (RPO) program evaluation. His firm, in partnership with Industrial Economics, conducted an evaluation of the RPO program earlier this year. As part of the Regional Haze Rule implementation, a collection of RPOs were developed and supported across the country. They were designed to support regional technical analysis, technical capacity, and to design a forum of support for the implementation of the regional Haze rule.

The evaluation effort was launched in November of 2011, and was funded by USEPA with two specific goals, to review past roles of RPOs and to inform future USEPA and partner decisions and work to address regional air quality planning and technical support needs. He went into the specific focus and scope of the RPO evaluation. They looked at RPOs role in the support of regional Haze, state and tribal implementation development, and the broader US air quality management plan. Further they looked at how the RPOs interfaced with the regional Haze State Implementation Process (SIP) process, and did those roles vary across regions. They collected

perspectives from participants involved in the RPO process, including tribal members, state agencies, the actual RPOs and multiple jurisdictional planning organizations (MJOs), and staff members from USEPA, about the perceived value of RPOs and the benefits of RPO support. They looked at perspectives on existing and future needs for regional air quality data management. They reached out to assess how lessons learned from the regional Haze planning process will inform future planning decisions, and what type of technical assistance would be useful. Next, they looked at design attributes to address the particular technical support needs that were raised. Trends in funding were also evaluated by the group, and he spoke about the issues that have arisen due to federal funding becoming steadily unavailable. Various states have stepped up and reallocated some of the STAG grants, but the congressional line item support for RPOs no longer exists.

Mr. Larson presented a timeline of the evaluation process, explaining that it began in December and was wrapped up by May of this year. Their approach involved seven main steps. First they reviewed background documents pertaining to RPOs, Next, they developed a logic model and evaluated questions based on input from USEPA. Then they conducted about 38 interviews with representatives from RPOs' MJOs, States, Tribes, USEPA HQ and Regional Offices. Additionally they reviewed a set of comments submitted by the National Tribal Air Association. They then analyzed data and identified findings, and then had selected sections of the draft report reviewed by RPOs to ensure accuracy. Finally, they wrapped up the final draft of the report to provide to USEPA in July 2011.

He gave an overview of the history of regional haze process and the roles the RPOs played in it. USEPA was tasked with addressing regional haze in the 1990 Clean Air Act amendments. The legislation called for study of the issue before implementation. The Grand Canyon Visibility Commission completed the study and issued the report. The successor of the Commission was the Western Regional Air Partnership (WRAP). WRAP received the most funding in the early years because the other RPO had yet to form.

He showed a map of the United States that outlined the coverage of each of the five RPOs. Most of the RPOs and MJOs are sister organizations. WRAP/WESTAR are an exception. Though most RPOs seem likely to merge with MJOs, this is unlikely to occur with the WRAP. The MJOs are: WESTAR, CenSARA, LADCO, NESCAUM, MARAMA and SESARM. OTC also works with the Northeast and Mid-Atlantic organizations. In general they found a lot of support for the regional configuration as it currently is, with some potential opportunities to tweak them going forward.

Mr. Larson then gave an overview of the findings of the evaluation, many more can be found in the report. Universally, they found that people agreed that RPOs met a clear need for regional technical support and collaborative forums for cost-effective air quality planning. Existing RPO-MJO structure can inform future design by: using a combination of permanent staff, in-kind contributions, and targeted contracting that best meets regional needs, focusing on technical analyses and support rather than policy or research, and including tribes. The assessment determined that the scope of RPOs should expand beyond regional haze to address multiple air pollutants (e.g. CSAPR, NAAQS). They also found that there is a need for national-scale coordination of regional technical work and alignment with USEPA policies to leverage

resources and prevent duplication of efforts. And finally, they concluded that RPO's have developed tools that can continue to facilitate regional air quality work in the future.

From a capacity building standpoint for states and tribes, the evaluation determined that RPOs created a forum for dialogue that went beyond regional haze, and increased collaboration on air quality management. This allows existing talent to be utilized, so that each jurisdiction is not forced to reinvent the wheel in tight budget times. There was also a universally expressed sentiment that a new era is approaching, and that the lessons learned from RPOs will help to inform that process. Mr. Larson then passed the presentation on to Jerry Kurtzweg from the Office of Air and Radiation, USEPA.

Mr. Kurtzweg presented the next steps for the evaluation. The final report was distributed to state and local agencies, tribes, RPOs, and MJOs for comment, and USEPA plans to follow up on the report with regional discussions. To alleviate the increased burden on states and tribes, USEPA requested an \$82 million in STAG funding for FY2012. The agency has been unsuccessful in securing this additional funding from congress so far. Congress has been continuing the level of funding that the agency has had in the past by issuing continuing resolutions, as well as subjecting them to reductions across the board. He suggested that this was testament to how affective the RPOs have been, as the states are willing to come up with the money to continue supporting them. The agency hopes to help facilitate the continuation of a multi-state effort, and will encourage tribal participation as well as the development of new tool to accomplish this. USEPA wants to engage state & local governments, tribes and RPOs & MJOs in a conversation at a regional level on how to move forward on regional planning, and plans to do so at the beginning of calendar year 2012. They plan to explore whether an RPO and MJO merger is an option in each region, and identify upcoming regional planning needs and shortfalls of technical support in states and tribes. Additionally the agency will discuss ways to support tribal involvement in regional air planning, including possible USEPA funding for tribal involvement. Lastly they intend to identify ways to achieve efficiencies through joint USEPA/RPO development of tools and data, aligning with USEPA policy (i.e., SIPs).

Ms. Wiecks, Fond du Lac Reservation, asked Mr. Kurtzweg to expand upon the efforts USEPA plans to make to encourage Tribes to participate.

Mr. Kurtzweg explained that with the decline of the functionality of RPOs, the component states have continued the MJOs that were already in place. These were state organizations, whereas the RPOs actually included tribes. The agency will encourage the states to include tribes, and will probably come up with some of the funding to facilitate this.

Ms. Wiecks followed up by asking if the involvement would mean joining the MJOs.

Mr. Kurtzweg replied that the charters of these groups are primarily developed by states for states, and so they will have to see what the individual states want to do and how they will incorporate the involvement of the tribes. He explained that this will probably vary from area to area.

Ms. Wiecks agreed that tribal involvement has been very strong in certain areas, but not in others.

Mr. Schneider thanked both speakers and moved onto the next presentation.

Integration of Energy Efficiency /Renewable Energy and Air Quality

Chris Stoneman from the Office of Air Quality Planning and Standards began the discussion on integration of energy efficiency and renewable energy and air quality. Mr. Stoneman began by apologizing on behalf of Greg Green, who could not make it to the meeting. He also said that he appreciates being on the agenda.

Mr. Stoneman continued that he wanted to spend 45 minutes talking about the integration of energy efficiency and renewable energy and air quality. He would speak first for 10-15 minutes, and then Robyn DeYoung would speak for 10-15 minutes.

First, Mr. Stoneman will discuss the draft roadmap and incorporating energy efficiency and renewable energy policy and programs, and state and tribal implementation plans. Also, a policy that the Agency is planning on reissuing called ozone flex will be discussed. That may present the first opportunity for states who are interested in being a flex area to use the manual. Following that, Robyn will talk about efforts her office has underway to assist states, tribes, and other agencies with outreach and quantifying the impacts of energy efficiency and renewable energy.

Next, Mr. Stoneman moved on the roadmap. Historically speaking, in 2004 USEPA issued guidance on incorporating energy efficiency and renewable energy in SIPS. Since then there have been very few takers, for a number of reasons. One reason is that the effort required for documenting the impacts of energy efficiency and renewable energy policies weren't worth the credit. A second reason is that the USEPA's guidance wasn't clear enough about what the expectations were for documentation. Another reason could be a lack of information on the impacts of these policies and programs, as well as a lack of tools. There is a variety of reasons why only a handful of states are incorporating SIPS. With all of the revised NAAQS coming out, OAR is taking another shot at this, and has made it a priority to provide tools and information to states, local agencies, and tribes. Foremost among the tools and information is the roadmap. The focus is on helping states and other agencies bring renewable energy into SIPS and Tribal Implementation Programs (TIPS). Typically, that could be a renewable portfolio standard, which a requirement states have for utilities. Utilities must meet a certain percentage from renewable sources. The office will be a catalyst in helping states take advantage of existing policies and programs.

There are at least four reasons why it is a good time to promote this.

The first reason is states are investing unprecedented amounts of money in energy efficiency. In 2006 it was about \$2 billion, and in 2010 it was about \$4 billion. In all likelihood it will continue to increase.

There has also been significant investment in renewable energy. In 2009 there were 29 states plus the District of Columbia that had renewable portfolio standard policies with binding requirements, and then there were seven additional states with non-binding goals. This is an indicator of significant activity.

Another issue is the revised NAAQS that are coming out, and states are looking to have emission reductions.

There is more transparent information available now than there ever has been before and it comes from several sources. There is a ton of information out there on the impacts of the energy efficiency and renewable energy (EERE) policies and programs and it is readily available. Mr. Stoneman then shifted the focus to the actual roadmap. OAQPS is trying to overcome impediments and accomplish four things with the roadmap.

The first is to clarify existing agency guidance on how to incorporate energy efficiency and renewable energy in SIPS and TIPS.

The second is to provide additional information to states, local, and tribal agencies about four approaches for quantifying impact of EERE in one document. OAQPS is trying to provide several different approaches and options.

OAQPS tries to address a lot of the questions and issues that were unaddressed in the prior guidance.

In the roadmap there is the main body of the document, which is 30 or 40 pages, and then a whole series of appendices. The main body has a flow chart to guide the state, local, and tribal agencies through a step by step process to pick an appropriate pathway for bringing their policy into a SIP. Each agency has to ask themselves certain questions, such as, do they want federal enforceability, do they have policies and programs that are on the books, or are there things that they are contemplating adopting. These will govern which direction the agency ends up going. In the appendices there is a detailed background on a number of issues. The relevant portions of various guidance are laid out. It's helpful that everything is in one document.

Mr. Stoneman continued that there is the energy world and there is the air world, and each has their own language. In this document, energy terms and policies are laid out for the non-energy audience. There has to be a dialogue between the air folks and the energy folks if this is going to succeed. Also, quantification approaches are laid out. Lastly, there are case examples of where EERE has been implemented in SIPS.

There are four pathways available, and the documentation requirements are laid out for when a state, local, or tribal agency brings in an energy efficiency or renewable energy policy or program through one of them.

The first deals with accounting of emission sources in the baseline year, the current year, and the future year. One option is for the accounting to include the impacts and benefits of the policies and programs the state already has on the books.

Another option is to go a more traditional control strategy route. If there is already a baseline, the control strategy can be analyzed on top of that. It has to go through SIP criteria, which includes permits, enforceability, quantifiability, and surplus.

The third pathway is an option that USEPA created some years ago that says if there is a measure with uncertain impacts, it can be included in a SIP. Also, this pathway is for measures that are purely voluntary.

Finally, the fourth pathway is weighted evidence. In an attainment demonstration it is acceptable for a predicted numerical value to be slightly off of the standard if there is information that supports why there was a slight discrepancy.

A draft of the document was made available in March. There have been extensive comments from many stakeholders. Most of the comments have been praiseworthy because people felt the document was fairly accessible. There were also a number of substantive comments. Mr. Stoneman then informed the room that the document had been made a living document, so a new version will be sent out in January. There will be new versions after that.

The document is primarily directed at people who are preparing SIPS and TIPS. However, the Agency has decided that they want to move forward updating the guidance put out in 2006 called the Ozone Flex Guide. In the coming months this plan will be reissued under a new name. One of the 1st opportunities for areas who may want to participate in this policy would be to look at this manual.

Mr. Stoneman then moved on to describing what the ozone flex guide will look like. The Agency is now in a position to encourage reduction of ozone. People may ask why ozone should be addressed in the near term. The foremost issue is to protect public health and to get cleaner air sooner. Also, it is important to respond to state and local government concerns about non-attainment. For the 2008 75 ppb standard, it could help areas make progress that are close to the standard. Also, if the ozone standard is tightened in the future, this would provide areas an opportunity to get a jump on it. Areas are free to do this without involvement from the USEPA. States may want to do this even though there are not a lot of financial resources to give. USEPA can offer a program framework and technical assistance as well. Another incentive for starting early is getting stakeholders involved.

This program is for areas before they are designated non-attainment. In terms of eligibility, this program is for attainment areas, areas that are violating but have not yet been designated, or maintenance areas that need improvement.

There is a plan to streamline the program elements from the 2006 guidance. The focus will be a letter of intent stating that an area wants to participate. Next, a letter of commitment will say exactly what the area intends to do and the schedule it would be done on. The expectation is that the region would stay in touch with the state.

Emissions and modeling analysis would be encouraged. There needs to be a way to figure out the appropriate measures that should be pursued.

Another focus is encouraging areas to identify a set of supplemental measures if the core set of measures don't clean their air to the level desired.

Finally, the guidance doesn't make any guarantee up front about SIP credit. There will be a discussion on including how states may get credit as part of the baseline.

The first opportunity for the manual to be of use to states is in context of this ozone flex. A list of measures will be provided to reduce emissions in the nearer term. The manual will be available in January and the Flex guidance should be available in the coming months. Mr. Stoneman then turned it over to Robyn DeYoung.

Next, Robyn DeYoung, USEPA, began her presentation. She started by listing the topics to be covered. First, she would highlight some good reasons for using energy efficiency and renewable energy programs to improve air quality. Next, she would go over the climate energy program. Then she would talk about an analysis of quantifying emission impacts from EERE policies and programs and how that can be incorporated into SIPs. This would all be linked back to the manual next. Last, she would go over outreach efforts.

As Chris mentioned, states are leading the front on adopting energy efficiency and renewable energy programs. \$4 billion dollars invested in 2010 is a testament to this. There are reasons why they are doing this, such as improved electricity reliability, lower bills, and cleaner air. There are emission reductions across the board. This is an essential multi-pollutant strategy that can be adopted.

Energy efficiency is a credible resource and state air regulators can use this to get emission reductions. These reductions can be incorporated into the SIP regulatory framework. There are things being done to help advance this. Resources are being developed and analysis is being done so EERE can be a part of a broader compliance toolbox for air regulators. Also, outreach efforts are advancing this through trainings to facilitate cross agency collaboration.

Ms. DeYoung continued that there are six people who work on state issues in her office. They provide tools, resources and case studies to show best practices on the energy efficiency and renewable energy front. Also, they show what action steps are needed to adopt the policies, and to measure the impacts to emissions, climate, and jobs. State to state peer exchanges are offered through technical webinars, and direct assistance is offered through trainings and workshops.

Next, Ms. DeYoung went into an analysis that looks at projected emission impacts of energy efficiency and renewable energy policies. The impacts were shown on a state by state basis. Ms. DeYoung's office had been working with Mr. Stoneman and the OAQPS on developing the EERE SIP manual. They looked at how certain policies would best fit the pathways. It was recognized that there was a missed opportunity to reflect state policies that are on the books today but are not currently incorporated into the Energy Information Administration's (EIA) annual forecast. Information from the EIA's forecast is included in the USEPA's electric power

sector forecast. Policies in existence were investigated to add into the baseline forecast. A straightforward approach was established to capture the energy impacts, and a plan to analyze electric power sector emissions using integrated planning models was made. The ultimate goal was to help states incorporate EERE policies that are already on the books into SIP emission projections.

Next, she moved onto the annual energy outlook from 2010 and further discussed her PowerPoint slide. Policies that are already accounted for were located in the top right box, while existing state policies not accounted for were in the bottom right box. These programs include energy efficiency resource standards, along with other programs that fund energy efficiency. Some programs are funded through the Regional Greenhouse Gas Initiative. Analysis was done on these. There was some criteria applied for analyzing these. The first was to make sure there was no double counting. The second was that the policy had to be adopted in the state's legislation or commission order. Next, Ms. DeYoung showed a list of states that were part of this analysis.

In terms of the process, currently all 50 states have been screened. Details have been collected about the EERE policies. A methodology has been developed to quantify the impacts of these policies, and this was put out for comment. Also, impacts were projected through 2030 based on what the law requires. On the energy side of things, existing energy efficiency policies reduces demand by 3% by 2020. During the comment period earlier this year, good feedback was received from states and energy experts on how to improve the methodology.

Bill Becker asked Ms. DeYoung whether or not the EIA approves of what they've done so far.

Ms. DeYoung replied that the EIA are in agreement with what they've done. DOE has also reviewed what has been done. There is draft documentation available on the website, along with background information, draft methodology, excel sheets with numbers and projections, and a state by state summary.

Now that there is information on energy impacts, this will be translated into emission impacts over the next couple of months using the integrated planning model. The idea here is that the emissions projections from the Integrated Planning Model (IPM) will be in a format that can be used in SIP baseline emission projections or in an air quality model. The raw data could also be used for independent energy projections. The Eastern Region Technical Advisory Committee is working on methodology, and the energy impacts will be incorporated in their emissions analysis.

Next, Ms. DeYoung linked everything back to the roadmap. There are many examples of added value that has been contributed to the roadmap. Energy efficiency and renewable energy policy opportunities have been illuminated for states that are interested in pursuing the SIP baseline emissions projections pathway. A methodology has been provided for estimating energy impacts. Through the emissions analysis, states will be able to understand the magnitude of the impact on emissions reductions from existing state EERE policies. This is a question that's asked very often.

The ultimate goal is to save states resources. States will not have to pay contractors because the USEPA will give it out for free.

In terms of outreach efforts, the ultimate goal is to increase state air regulators' capacity by helping them understand the policy options, address technical and administrative barriers, bolster the implementation, and collaborate with state energy agencies to explore goals and efficient data sharing. Coming soon is a webpage that intersects clean energy and air quality. There will be a lot of information on there, including analysis, case studies, and links to the manual. There will also be workshops in 2012 for state energy and air regulators.

The floor was then opened up for questions.

Mr. Kaufman was first to speak. He stated that his company has several subsidiaries that are big electricity users and Robyn's presentations were very utility-centric. He then asked if Robyn had thought about a way of getting credit on industry side for voluntary use of CHP.

Ms. DeYoung replied that yes, information will be added in the manual that will address combined heat and power, and the quantification methods to account for emission reductions in SIPS will be addressed also. CHP is a different animal, so total plant emissions must be looked at, as well as the change in demand for electricity.

Mr. Kaufman replied that it is complicated because assumptions must be made about how the electricity used is generated. He then asked if Ms. DeYoung had thought about how to make them more specific to industry sites.

Ms. DeYoung replied that when looking at change in demand, the first thing to do is look at the dispatch order and the order of EGUs that are distributing the energy. There are emission quantification approaches that go from basic to sophisticated to help address that.

Mr. Goff stated that he was pleased CHP was being thought about. It is an underutilized technology in the U.S. Are the actions in the yet to be named program limited to energy efficiency or are they broader?

Mr. Stoneman replied that the actions are much broader. They would include stationary sources, transportation, mobile sources, and area sources.

Will Driscoll, Ozone Transport Commission, noted that the ozone transport commission is looking at policies to reduce summertime NO_x emissions by reducing air conditioning demand. A real eye opener was the empire state building project which reduced energy demand by 38% with a return on investment of 25%. The windows were replaced with high efficiency windows before the HVAC was replaced, and this resulted in it being half the size it previously had been. There are potential NO_x reductions from Virginia to Maine through energy retrofits of large commercial buildings. The ozone transport commission is looking at potential policies that state air divisions could encourage their energy colleagues to adopt.

Mr. Stoneman replied that that is very exciting. They have been working closely with NESCOM, and it would be great to coordinate with the ozone transport commission.

Mr. Driscoll stated that he is familiar with NESCOM's work, but the ozone transport commission is focusing on achieving NO_x reductions.

Mr. Feldman spoke next, and stated that the question was for Chris. Has there been indication from any attainment areas that they are interested in jumping in?

Mr. Stoneman replied that some states have come forward who are interested.

Joy Wiecks then suggested that there be tribal outreach.

Mr. Stoneman asked Ms. Wiecks if she had ideas of specific people to talk to from tribes.

Joy Wiecks suggested that Laura would be a good first stop.

Mr. Jones then asked where the materials would be available and when.

Mr. Stoneman replied that the draft manual is online now, and it will be updated in the same place.

Mr. Jones replied that he was working on some voluntary programs in the printing industry in Nebraska, and they will want to be aware of this program.

Ms. Davis then asked about the 3% reduction in energy demand, and whether it was for electricity or natural gas.

Ms. DeYoung replied that it was electricity.

Next, Ms. Davis asked if there would be double counting issues going forward because EIA updates its baseline every year.

Ms. DeYoung replied that they have had regular communication with EIA, and they will be looking at an analysis in the future for AAO 2011. The analysis will be adjusted based on new information EIA provides in their forecast. With new updates there will have to be new analysis.

Ms. Davis replied that RGGI states sometimes feel pressure to redirect their energy efficiency funding, but if there is a way to incorporate this into SIPs it could be a good rational.

Ms. Schmidt concluded the section by thanking Mr. Stoneman and Ms. DeYoung.

CAAAC Operation/Next meeting/Close

Ms. Schmidt confirmed there were no public comment sign ups.

Before moving on to the closure discussion, Ms. Schmidt mentioned the importance of getting outside views into the agency and getting outside stakeholders to exchange views with each other. One of the most important functions of the committee is to provide a forum for this idea exchange to occur. Moving forward, Ms. Schmidt welcomed all suggestions on how to improve the committee and encouraged all meeting members to contact her to discuss ways to improve the committee.

Ms. Schmidt stated one of the topics that will be addressed at the next CAAAC meeting is one of the USEPA Administrator's priorities of incorporating sustainability into all USEPA programs. The Administrator commissioned the National Academy of Sciences report, entitled "Sustainability and the USEPA," which includes recommendations of ways to incorporate sustainability into all USEPA programs. The next CAAAC meeting will be tasked with discussing how to incorporate sustainability into the USEPA air offices.

Mr. Childers reiterated the upcoming CAAAC meeting will address the sustainability and the implementation of greenhouse gas emission standards. He acknowledged the topics discussed at the first day of the conference were substantial, but noted the agenda was too full. In moving forward with planning the next agenda this factor will be taken into consideration. Mr. Childers suggested attending the first day of the meeting to get the full experience of topics discussed. Mr. Childers opened discussion for input on topics that would like to be heard at the next CAAAC meeting.

Mr. Feldman provided input on the CAAAC conference by suggesting the committee convene as a group to provide input to USEPA on the monitoring verses modeling issues. Mr. Feldman believed this discussion would be valuable to USEPA to hear views from different levels and stakeholders. He noted that from a policy perspective, CAAAC should be providing input to USEPA on this issue.

Ms. Schmidt thanked Mr. Feldman for his contribution.

Mr. Paul offered the suggestion of creating an agenda committee, consisting of 2-3 people from the full committee. Approximately a month before the meeting, the agenda committee would work with USEPA to send out an agenda of four potential topics for the next meeting to all members. The agenda committee would receive feedback from stakeholders for two weeks, adjust the agenda accordingly, and send out the final information to the group.

Mr. Childers responded by explaining the agendas require a large amount of time to create and finalize. Mr. Childers agreed with Mr. Paul that this was a smart idea to involve the full membership when deciding what topics will be on the agenda. Perhaps the reverse idea can be used; to start with the full membership and break it down by a select few to pick the final 2-3 topics. Mr. Childers noted this can be a workable solution, but explained the agenda process would need to begin a week after the conclusion of the last meeting. A challenge to CAAAC meeting quarterly is that it becomes difficult to incorporate timely issues into the agenda. Mr. Childers confirmed he will bring this idea back and discussed with the planning team.

Mary Turner, Waste Management, inquired if the topic of data quality regulations, addressing integrity and data standards, could be added to the discussion of the committee.

Ms. Schmidt agreed this is an important topic and confirmed she will look into data quality as a future topic.

Mr. Becker contributed to the discussion with his suggestion to establish a discussion with a debate-like structure. He voiced concern that there should be more excitement in order to increase the number of participants. Mr. Becker wanted to learn more from the industries that are going through the regulations being discussed and would like to provide more explanation on how implementation is being done on the state and local levels. He suggested keeping USEPA out of the main discussion. Mr. Becker, personally, voiced disappointment with the legislative pieces addressed at the meetings and would like to see discussions on the provisions from each stakeholder's point of view.

Mr. MacLeod commented rather than having an agenda consisting of current topics or predetermined topics, Mr. MacLeod proposed a hybrid of topics be implemented.

Mr. Childers responded the agenda is aimed at being a happy medium. CAAAC is part of the FACA and are subject to its rules. He noted the importance of utilizing the first day of the meeting to discuss current affairs. The CAAAC agenda is not an either/or situation, but rather a hybrid of topics. He mentioned the importance of allowing USEPA to hear those stakeholders that do not have the opportunity to voice opinions in other settings, such as the tribes and environmental justice groups. In addition, Mr. Childers mentioned that not all stakeholders will be pleased with the topics, but if they vast majority is involved then the discussion is considered beneficial.

Mr. Jones offered the suggestion of including emission inventory data as a discussion topic. By looking at this issue, disagreements between states and USEPA on emission inventory data issues may be resolved.

Ms. Schmidt posed the question to the group on whether or not others would be interested in discussing emission inventory data issues.

Mr. Jones followed up adding the discussion would include both point source and area source issues.

Ms. Giblin responded that the importance of emission inventory discussion relates to its presence in the confidence people have of the rulemaking when it comes out. This discussion would help various constituencies be able to reassure the legitimacy of rules.

Mr. Feldman offered input stating the focus of the CAAAC meetings is to provide advice to USEPA. In most cases the discussions are issues that USEPA asks for CAAAC advice on. Mr. Feldman pointed out that the meeting is also the place to provide information to USEPA on topics that USEPA has not yet asked for. Debate does not belong in the CAAAC meetings. Instead, Mr. Feldman recognized the limited and privileged opportunity the committee has to

provide information directly to USEPA members. He noted that industry is responsible for thinking of places that warrant advice to be given to USEPA.

Mr. Becker responded by explaining that the group should not be limited to discussions on issues that will reach a consensus. He stated that USEPA benefits more by seeing dynamic views on topics.

Mr. Childers concurred with Mr. Becker. He confirmed that USEPA is not looking for watered-down consensus. Mr. Childers pointed out capturing the current critical issues is key. Gathering this information through the establishment of the most efficient forum is the goal of USEPA.

Mr. Paul suggested discussing the topics that are open for public comments. Mr. Paul noted that most public comments are submitted on the day it closes, preventing comments from informing other commenters. Mr. Paul provided the SO₂ guidance as an example of a topic that would have been beneficial to discuss. There are various issues open for public comment that are hot issues and can be debated within CAAAC.

Mr. Childers agreed with Mr. Paul.

Mr. Paul voiced concern that although USEPA is in agreement with his opinion, the conversation has happened before and the results still have not been seen.

Mr. Feldman added the issue of modeling had been suggested as a discussion topic and noted that adequate discussions on this topic have not yet taken place.

Mr. Childers responded he is not in disagreement. Mr. Childers noted that the meeting today addressed modeling issues and reminded the meeting attendees that it takes time before a suggested topic is addressed adequately. The committee is still subject to FACA rules and works to serve the Administrator's interests. Mr. Childers continued by explaining the challenges surrounding timely issues because there are many interests that need to be met. Mr. Childers stated that there are 15 members remaining because they are the ones who are interested in having the discussion on suggested topics and next steps.

Ms. Schmidt added that she is new to the process. Ms. Schmidt stated that she is more concerned about how the committee works in moving forward because the committee has played an invaluable role in many issues the agency has worked on. The issue with debating Congressional issues surrounds the purpose of a FACA committee which is to advise USEPA. Ms. Schmidt explained that the timing is usually off preventing enough advanced notice to have a discussion before a vote occurs. In addition, Ms. Schmidt noted that there are enough topics to discuss and give views on that will assist USEPA that should remain priority. Ms. Schmidt did not dismiss the Congressional debate idea completely, but does see some issues with the debates.

Ms. Schmidt continued by welcoming all participants to discuss offline the issues the committee should be looking at. Ms. Schmidt stated she would be interested in listening to participants' ideas on ways to continue making the committee more valuable. Ms. Schmidt offered her

surprise at the overwhelming positive reaction participants had to the monitoring presentation and discussion.

Ms. Schmidt noted the meeting is almost over and there are more logistic issues to be addressed.

Ms. Giblin stated that upstream issues are extremely important because the CAA will be rapidly entering into regions where the Act was previously not applicable. The committee has the opportunity to shape these new regions, which can serve as a topic that will serve USEPA with valuable input.

Ms. Schmidt reiterated she is reachable by phone to set up a meeting to discuss meeting process and purpose issues, as well as to discuss topics for the next meeting.

Mr. Childers stated he is looking for members for the awards review panel. The review panel is a chance to look the Clean Air Excellence awards applications and offer advice on the applications. Mr. Childers explained the panel was a recommendation that came from the committee 12 years ago. Mr. Childers will take approximately five members on the panel to review applications.

Mr. Childers addressed membership, which will take on October 12th. The process of membership takes approximately 8 months to complete, therefore the process will begin in the next month. Mr. Childers asked for names of those who would like to remain on the committee or for names of those who would make strong committee members. This committee is composed of the full committee and the Mobile Source Sub-Committee; both entities make up CAAAC. Mr. Childers is the point of contact for membership

Mr. Childers noted the next CAAAC meeting will likely be late April or early May. An email will be sent out. Mr. Childers inquired the dates of other organization's meetings. More information will be provided on the dates of the next CAAAC meeting

Mr. Childers and Ms. Schmidt closed out the meeting.

Clean Air Act Advisory Committee

November 17, 2011

Crowne Plaza Old Town Alexandria
Alexandria, VA

List of Attendees

Praveen Amar	USEPA
Maria Alvarez Amaya	University of Texas – El Paso
Bill Becker	National Association of Clean Air Agencies (NACAA)
Pat Childers	USEPA
Lisa Connor	USEPA
Stacey Davis	Center for Clean Air Policy
Robyn DeYoung	USEPA
Will Driscoll	Ozone Transport Commission
Howard Feldman	American Petroleum Institute
David C. Foerter	Institute of Clean Air Companies (ICAC)
Pam Giblin	Baker Botts L.L.P.
Terry Goff	Caterpillar
Carolyn L. Green	EnerGreen Capital Management
Kelly Green	Texas Cotton Ginners' Association
Bill Harnett	USEPA
Vince Helwig	Michigan Department of Environmental Quality (DEQ)
Steve Lee Hensley	USA Rice Federation
Susana Hildebrand	Texas Council on Environmental Quality (CEQ)
Dan Johnson	WESTAR Council
Gary Jones	Printing Industries of America Graphic Arts Technical Foundation
Robert Kaufman	Koch Companies Public Sector, LLC
Lee Kindberg	Maersk Line
Jerry Kurtzweg	USEPA
Tim Larson	Ross and Associates
Gay MacGregor	USEPA
Mark MacLeod	Environmental Defense Fund
Keith Mason	USEPA
Janet McCabe	USEPA
Liz Naess	USEPA
Don Neal	Calpine Corporation
Robert O'Keefe	The Health Effects Institute
John Paul	Regional Air Pollution Control Agency

Lorie Schmidt	USEPA
Conrad Schneider	Clean Air Task Force
Julie Simpson	Nez Perce Tribe
Chris Stoneman	USEPA
Eric Svenson	PSEG Services Corporation
Elineth Torres	USEPA
Gene Trisko	International Brotherhood of Electrical Workers (IBEW)
Mary Turner	Waste Management
Philip Wakelyn	Texas Cotton Ginners' Association
John Walke	Natural Resources Defense Council
Jason Walker	Northwestern Band of Shoshone Nation
Matthew Watkins	National Association of Home Builders
Chet Wayland	USEPA
Lewis Weinstock	USEPA
Joy Wiecks	Fond du Lac Reservation