Clean Air Act Advisory Committee
May 27, 2010
Almas Temple
Washington, D.C.

Opening Remarks – *Assistant Administrator Gina McCarthy*

Robert Brenner, United States Environmental Protection Agency (USEPA), welcomed and thanked everyone for coming. He turned the floor over to Assistant Administrator Gina McCarthy, USEPA.

Ms. McCarthy welcomed the committee and said she was impressed by the awards ceremony and thanked its sponsors. The award winners for this year were outstanding. They have great enthusiasm and give her and others hope. Ms. McCarthy then thanked Mr. Brenner and Pat Childers, USEPA, for pulling everything together, and thanked the applicant reviewers.

Ms. McCarthy briefly discussed the BP oil spill and acknowledged that it is currently the highest priority for the administrator and for people involved in air quality. USEPA has been doing a ton of work to determine what kind of air quality monitoring needs to be done. In this situation, the first thing people are concerned with is air quality. USEPA has been working to make sure the strategy that is being used to burn the oil on the surface does not increase burdens on nearby communities. Ms. McCarthy encouraged CAAAC members to provide comments and suggestions on what actions to take or how to improve current action, and provide information on different types of available monitoring.

Ms. McCarthy continued by discussing recent accomplishments. The endangerment finding, which came out last December, is a wonderfully sound, comprehensive assessment of climate science to date.

USEPA has also moved forward to finalize the light-duty vehicle rule. They coordinate with the United States Department of Transportation (USDOT) on this joint rule, which moves forward with energy efficiency and greenhouse gases (GHGs). USEPA's involvement allows for much stronger standards against greenhouse gases.

USEPA recently released the tailoring rule. This was a difficult rule, but it will allow for future regulation of greenhouse gases in a way that they would not have been able to accomplish previously. They provide trainings, resources, and guidance documents.

The Administration is very pleased that they have another climate bill on the table, the Kerry-Lieberman rule. USEPA is doing economic modeling around that rule right now, and it gives them the opportunity to highlight the need for comprehensive regulation.

Gasoline and aviation fuel is an area USEPA needs to continue to move forward on. They aim to become more efficient in criteria pollutants and greenhouse gases.

President Obama announced a range of new initiatives related to cars recently as well, in effort to forge a visionary statement. He wants the country to begin to look at regulations in terms of 20-30 years into the future, not just 4-5 years. He also spoke to the importance of looking at how we would regulate the mobile sector in different ways. He told USEPA and NHTSA to look at energy efficiency and greenhouse gas standards for existing vehicles. USEPA will work with light-duty manufacturers to see what can be done beyond 2016, and into the future years of 2017-2025. USEPA would like to see a total transition of the light-duty vehicle fleet. The President told USDOT to look at infrastructure to make these vehicles available in the future. He would also like to incorporate Tier 3 greenhouse gases as well as new vehicles in a comprehensive way.

USEPA has been busy on the mobile source side because they are doing work with MACTs. This is going to be challenging with regard to state, local, and tribal governments, but they are going to take another look at MACT standards and at pollutants they have not addressed in a while. They will also focus on monitoring so they can concentrate on areas with maximum vulnerability.

One important issue is to look at not only new vehicles, but also methods to have better reductions from existing fleets. Federal obligations will not be met if they do not start thinking creatively about vehicles that are already on the roads.

USEPA is also coming out with new SO_2 final standards. USEPA is currently proposing a primary standard only, which has a court ordered date of June 2nd. This is a rule to be proud of, but will be challenging. They will also be looking at both primary and secondary standards for ozone.

One major issue for all regulations is funding. It will be a challenge given all of the challenges at the Federal government level and climbing deficits. They looked at how to provide additional resources to state, local, and tribal governments using creative approaches to streamline the ability of states to respond to issues that are being put forward. They are also looking at voluntary programs and have established a new committee to address these programs. It will look at how to utilize voluntary programs while recognizing the changing regulatory landscape.

The Boiler MACT rule came out in April and there are significant reductions associated with that rule. It will hopefully set the stage to move forward with other toxics rules. The cement rule will be coming out soon, and the Utility MACT rule is anticipated to require a lot of hard work.

Ms. McCarthy then thanked staff for allowing her to be involved, and stated her appreciation for their commitment and her desire to help provide them with the resources they need to be successful. She acknowledged that as they attempt to devise rules that hold up to legal scrutiny and meet the requirements to get the necessary reductions to

protect public health, there is bound to be dissention because they are dealing with difficult issues. They need to focus on rules that make the necessary reductions and implementable.

Eddie Terrill, Oklahoma Department of Environmental Quality, recalled the issue of states losing their ability to regulate greenhouse gases, which was discussed when Ms. McCarthy met with NAAQA directors. One main challenge is the lack of funding hindering the ability to implement many rules. Another big impediment is the legal and mindset restrictions on the ability of state, local, and tribal governments to be provided with the same training at the same time. USEPA should provide training for all four entities together.

Ms. McCarthy stated that USEPA listens very closely to the suggestions of the CAAAC. They know the difficulties of working at the state level, and people they talk with at the state level share their interest in meeting the reductions.

Tony DeLucia, East Tennessee State University, expressed concern that the letter of the law and legal precedents are one thing, but as a person in the field of public health, there are other very meaningful issues that are subordinate to that. He emphasized the need to address a different set of priorities. The First Lady has a strong priority to childhood obesity, which they now know ties into other impacts, but they have to be mindful of how other factors tie in (i.e. mental health). He asked what USEPA is doing to build public transportation systems and suggested that a more coordinated effort is needed.

Ms. McCarthy stated that she does not disagree with Mr. DeLucia's comments. While clean air and climate are the top priorities of the Administration, children's health and other concerns are underpinnings of everything they do. The clean air program can deliver more to environmental justice communities than anyone thought possible if they are careful. There are ways to think about vulnerable populations and environmental justice in the rules they are releasing. She encouraged Mr. DeLucia to look at the Kerry analysis. The number of times they collaborate with USDOT, United States Department of Energy (USDOE), and United States Department of Housing and Urban Development (USHUD) is amazing. President Obama has a green cabinet where he forces discussions and looks at ways to build off of one another to get more "bang for the buck" when looking at quality of life issues. The goods movement initiative is one of the most important things they can do for environmental justice. It is a matter of focus and prioritization. If priorities are visible, it will be helpful in realizing the direction.

Gene Trisko, Attorney at Law, identified another major proposed rule dealing with coal ash and combustion byproducts. He wanted to voice appreciation to the agency for proposing what could avoid other byproducts.

Rich Kassel, Natural Resources Defense Council, brought up the issue of diesel retrofits. The original legislation in the Energy Act of 2005 is set to expire and Mr. Kassel wanted to know whether there was a need for reauthorization and whether the level of funding appropriate.

Ms. McCarthy stated that she sees incredible opportunities moving forward. About twenty-five percent of the Administration's new funds are already committed and expended. The next chunk of the funding should go through by the end of September. USEPA is spending money, but there is interest beyond what funding allows. There is a lot of focus on existing equipment, many owned by small businesses that do not have resources available to participate in retrofitting. They have begun focusing stimulus funds in areas that need financing, such as ports.

Steven Hartsfield stated his appreciation that the tribal news and review rule is back on the table. He would like to bring to attention the need for training. He stated that USEPA has omitted the need for training of industry and states on this rule, but they too will be impacted by the rule. Training needs to go beyond only tribes to reveal how the rule will impact states and industry.

Jeff Muffat, 3M, offered the opportunity for 3M to partner with USEPA. 3M has a great track record and staff to be able to partner. He also asked whether the economic assessment for the Kerry-Lieberman bill will be available by the meeting the week of June 7th.

Ms. McCarthy stated that she is not certain whether the economic analysis would be completed by the week of June 7th, and appreciates his offer.

Subcommittee Report Outs

Mobile Source Technical Review Subcommittee Report Out

John Guy, USEPA, thanked Gina McCarthy for opening the meeting. He began the Mobile Sources Technical Review Subcommittee Report out, explaining that they had three panels: ECA, ICAO, and RFS2. Regarding the first panel, Emission Control Areas (ECA) for ocean going vessels, USEPA signed a rulemaking in December 2009 establishing these emission control areas, and the North American ECA was adopted in March of that year. The Subcommittee had speakers from USEPA, Maersk, World Shipping Council, and IronBound Community Corps giving different perspectives on the rulemaking. The ECA is 200 nautical miles around the coastline of Canada and the U.S., and includes the island of Saint Pierre & Miquelon and Hawaii. In this ECA, the ships have to use lower sulfur fuels and operate more cleanly due to the tighter emissions standards. In the ECA, there will be NOx controls representing an 80% reduction, the fuel level will be reduced to about 1000 ppm, and there will be large reductions in SOx and sulphate particulate matter (PM). The impact of this rule is not just felt at the ports, but reaches inland for PM2.5 and NOx.

The other panel was the on the progress of International Civil Aviation Organization's (ICAO) concerning aviation emissions. There were speakers from USEPA, International Council on Clean Transportation (ICCT), and Federal Aviation Administration (FAA). ICAO has agreed to develop CO2 standards for new aircraft, which is especially important because aviation represents eleven percent of U.S. mobile source GHG

emissions. USEPA co-led the CO2 task group, and plans to have notice of a proposed rulemaking for NOx standards in 2010.

Finally, the third panel was the Mobile Sources Technical Review Subcommittee (MSTRS), which heard from representatives from USPEA, DOE, and USDA regarding the Renewable Fuels Standard 2 (RFS2), which is 36 billion gallons by the year 2022. The number of gallons and years are set by statutes, and the final rule set the number that applies for 2010, and provided new definitions and criteria for renewable fuels and the feedstocks that go in them. It also sets GHG thresholds as determined by lifecycle analysis.

One issue that came up at the Subcommittee is the High Emitter Issue. As industry is asked to produce engines and vehicles that meet tighter standards, the question arises regarding the benefit of addressing the dirtiest vehicles in the existing fleet. Discussion touched on concerns with aftermarket/replacement catalysts, the role of gasoline- verse diesel-fueled vehicles and equipment, the very slow turnover of non-road equipment, and how to help states encourage fleet turnover.

Mr. Guy closed with an acknowledgement of the departures of four long time members, as May 4 was their last meeting: Mike Walsh, Tom Cackette, Rich Kassel, and Don Clay. Dennis McLerran additionally left the subcommittee because he became EPA Region 10 Administrator. All presentations are posted at epa.gov/air/caaac/mobile_sources.html.

Economic Incentives and Regulatory Innovation
Keith Mason, USEPA, presented the report-out of the Subcommittee on Economic Incentives and Regulatory Innovation. The Subcommittee continued its discussion about multi-pollutant sector-based air pollution control strategies. In February, the Subcommittee had a robust discussion about how to coordinate air pollution requirements after state and local regulators at that meeting identified the necessity for more coordination. Industry representatives also stated that single-pollutant regulations lead to single pollutant technology investments, and tribal leaders expressed the importance of improving local air quality and the multi-pollutant strategies that could assist in doing so.

Mr. Mason said that the Subcommittee meeting yesterday continued this discussion, and he also spoke about the manner in which the Office of Air and Radiation (OAR) has worked these past two years. Matt Witosky of the Sector Policies Division with Office of Air Quality Planning and Standards (OAQPS) described how OAR has consolidated its efforts around major source categories, and outlined challenges of promulgating major multi-pollutant strategies and the periodic necessity that the Clean Air Act calls for in looking at the standards on a periodic basis. Mr. Witosky pointed out some benefits of a more holistic approach: more efficient use of resources and regulated communities resources; an elimination of redundancies; and a boost for new technologies in areas of energy efficiency investments. He also explained how a coordinated rather than separate rulemaking effort could ultimately lead to this holistic approach.

Mr. Mason reviewed that they then heard from Brenda Shine, USEPA, who leads USEPA's refinery sector efforts at OAQPS. Ms. Shrine identified challenges of moving to a more coordinated approach in refining industry. Members of the Subcommittee agreed that a coordinated, multi-pollutant strategy has advantages but also challenges. They must identify the benefits of conducting this regulatory policy in a different way, through monetizing and quantifying the differences between the current way of business and regulations within large industrial source categories, and what may be gained through an alternative approach. These benefits must be communicated to the local community as well. Mr. Mason explained that the Subcommittee was well aware that inherent tradeoffs usually are brought up quickly when discussing a change in policies. The Subcommittee agreed to establish a workgroup, draft a charter, solicit interest for potential subcommittee members, and select key projects that will assist USEPA as it continues to coordinate its stationary air quality programs.

Some possibilities that the group discussed included the manner in which the coordination of a regulatory timeline should begin within a sector; how compliance challenges should be addressed; what capital and investment resources issues are associated with addressing multiple requirements simultaneously; which advanced technology is best; how USEPA can better incentivize facilities to replace outdated/poorly performing equipment; and how to improve energy efficiency while addressing malfunctions. While the group will not be able to address all of these issues, they hope to select a few that will add value. Mr. Mason welcomed potential involvement in this activity, and expressed their interest in establishing a capacity within CAAAC to advise them as they go forward.

Rob Brenner stated that they expect these issues will come up in all sorts of contexts within regulatory process. There will be a need for a diverse stakeholder group to provide help, and he hoped that they would be able to pull both committee and non committee members for assistance. He suggested anyone who has an interest in joining contact Pat Childers within the next few days.

Meet 2 of the Clean Air Excellence Award Winners
Bridging the Gap –*Kristin Riott*

Rob Brenner introduced two of the award winners from the previous night's ceremony, Kristin Riott and Mayor Mick Ireland.

Kristin Riott, Bridging the Gap, thanked Pat Childers for the opportunity to speak to the committee about her organization and the work they do. Ms. Riott said that she originally moved to Kansas City thirty years ago to work for Hallmark cards. In 2000, Hallmark sent Ms. Riott with her husband and children to live in Hong Kong. It was here that they saw first-hand what she describes as the future for the planet. Hong Kong was flat, hot, crowded, and denuded of vegetation. Ms. Riott said that within the two years they lived in Hong Kong the degradation of the environment was visible, especially in the case of worsening air quality conditions.

Ms. Riott explained that when she came back to the United States she became an environmental educator. She described her job as asking people to look into the future and think about the aggregated impacts that their daily behavior will have on all of the earth's systems. She then asks people to change those daily behaviors in order to help these natural systems, as well as ignore the efforts of those trying to create confusion around climate change and other environmental issues. The real effort must be a tripod force, which involves changing public sentiment, law, and industry and technology. She went on to describe Bridging the Gap's philosophy of keeping things as simple, real, vivid, and specific as possible, and helping people take immediate action. She spoke about the more than a dozen different programs they have that engage over 2,700 volunteers in Kansas City per year, and further said that every issue she mentions in her "Five Green Things" presentation has an accompanying program to deal with it, except for population growth.

Ms. Riott spoke about the numerous programs they have geared toward climate change. First she mentioned Five Green Things, which aims to avert close to 10 million pounds of carbon emissions and other pollutants each year through voluntary action. Next she spoke about falling water tables, and how they are an issue both abroad and domestically. She specifically pointed out that the Ogallala Aquifer in West Kansas is being rapidly depleted by coal fire power plants. Through the local chapter of Keep America Beautiful, they plant rain gardens to combat this, as well as teach teenagers about water conservation. Furthermore, they put on rain-barrel workshops, as 500 rain-barrels were put into the Kansas City area the year before.

Ms. Riott next spoke of the efforts they have made regarding species extinction. Their program Kansas City Wild Lands enables volunteers to remove invasive species from undeveloped areas around the city, as well as supports the development of indigenous species. Further, Bridging the Gap is the organization that manages three of Kansas City's recycling centers, and has removed waste from the area to responsibly recycle it. The organization has taken on air pollution by involving themselves in 27 school districts in the area to encourage children to walk or bike to school under supervision of an adult. They also have a biking program that established a permanent biking program on the University of Missouri at Kansas City's campus. Lastly she mentioned the various business ventures they have set up. They coordinate about 457 business people to meet, share their green knowledge and inspire each other with tips on how to go green in the business environment.

Ms. Riott then began a discussion about the Five Green Things program for which they had won an award in the previous night's ceremony. She emphasized that confusion and apathy still remain regarding the environment, and that this is especially true in the Midwest. Ms. Riott pointed out that environmental damage is very specific to an individual's age group, gender, and other lifestyle issues, and therefore tailoring the Five Green Things program has been incredibly beneficial. She illustrated by mentioning the drastic amount of soda pop and large percentage of beef that teenage boys consume, which have significant environmental impacts. Ms. Riott then pointed out that the Five

Green Things for teens are completely within the grasp of a teenager to do on their own, and that they have done the same thing for little kids. Ms. Riott said that she believes there is much more that an organization like Bridging the Gap can do to educate the public and that they would like to go on to create programs like Five Green Things for Groceries, and Five Blue Things for the ocean.

Ms. Riott noted the many opportunities to do more, and emphasized the funding issues Bridging the Gap will face. She asked for support in Bridging the Gap in any way the CAAAC is able to help, and provided her contact information around the room. Ms. Riott closed the presentation by thanking Pat Childers, and saying "step lightly on the earth, lest you tread on the faces of the unborn".

ZGreen Certification Program – *Mayor Mick Ireland*

Mayor Mick Ireland, City of Aspen, then presented the ZGreen program. Mayor Ireland explained that Aspen is a town with a census population of about 6,500, and located in Pitkin County, which is the second most educated county in the country. Aspen is also a town that attracts the elite, as they have four mountains to ski on and serve as a world stage for world leaders. Mayor Ireland said that the town is inclined towards environmental politics. He noted that where they are short on economic and public opinion impact, they have a world stage, making other people interested in what goes on in Aspen. Mayor Ireland said that within his lifetime the number of ski season days have decreased by 28, making climate change a central issue of interest to everyone in Aspen.

Mayor Ireland described ZGreen as a localized program that is primarily aimed at public awareness. Many people in Aspen come forward and ask what they can do to be an active environmental leader, and so they have developed a three-point program which addresses special events, businesses and citizens.

Mayor Ireland said that the events program is special, as Aspen has become a very desirable place to host events. Through the ZGreen Program, it is required that events have zero environmental impact. He explained that this is not simply throwing away all trash from an event, but rather ensuring all trash is recyclable, being carbon neutral on energy use, and providing proof this can all be done with zero carbon impact. He noted that this is an example of government intervention that reduces impact in a way that would not happen in the marketplace. He described the critical feature of this program being the availability of the city staff to help, meaning they are on the scene and site with event coordinators and will plan methods to meet the city's standards.

Mayor Ireland said that the business program also has very tough standards to meet. Businesses in Aspen want to be known as green, and the city has the power to grant certificates of green-ness. There are strict standard to meet to get into the program, and once accepted, the city will track monthly consumption and help companies reduce theirs. He said that companies wish to be green because it demonstrates to the public their real commitment, and is a change in the way people conduct business. The city looks at

everything from energy consumption to materials efficiency, and has a corresponding points system to ensure that a business is comprehensively green.

Lastly, Mayor Ireland discussed the citizens' program. One hundred and fifty citizens of Aspen have been certified green, and the program encourages individuals to take ownership of reducing their consumption rates. Mayor Ireland said that his reason for being in Washington D.C., beyond the award ceremony, was to talk to his Congressional Delegation about problems that have arisen in the program. He said that Aspen offers low interest loans to people who install solar or utility changes to make their house less consumptive, yet this has allowed people to impose upon themselves a mill levy. He described this as an issue because it allows one to tax themselves by putting the tax on the house and paying it with other property taxes over the life of the improvement. This allows people to painlessly pay for the utility improvement over the lifespan, which is important because the payment can be stretched and become less than how much is saved by the utility improvement. The payment requirement as well as the improvement stay with the house though, so many people who do not stay with the property long term or who are renters are reluctant to make improvements, as they would not get the ultimate payoffs. He said that Fannie Mae has been a primary obstacle and so they have been working with their congressional delegation surrounding that.

The citizens' program checklist also allows citizens to look at their utilities bills and receive a free energy audit, which shows them what steps to take to save money. The individuals who do this and then adapt these steps become certified green citizens.

Mayor Ireland mentioned that they have a lot of ambitious goals in Aspen. They have a goal of becoming carbon neutral by 2015, have joined the climate exchange, and encourage people to buy carbon offsets when they choose to arrive by private or commercial jet, as this makes up the largest percentage of Aspen's carbon footprint. He spoke about the Renewable Energy Mitigation program, which charges a levy for people to use luxuries like heated swimming pools and heated driveways, then uses that money to create carbon savings elsewhere to offset the programs. He said that Aspen requires trash haulers to service recycling, which helps reduce the surcharge that waste municipalities want to charge which would discourage people from recycling. The bus system allows 35-40 percent of people entering Aspen on a given work day to use the bus. There is a free trail system, which means it is possible to commute six months out of the year by bicycle.

Mayor Ireland lastly spoke about Aspen's plan to double their hydro plant. Aspen was one of the first cities west of the Mississippi to have electric power, and they would like to return to that idea and double the plant's production. He closed by encouraging everyone in the room to steal from the areas that are "idea rich". Since they are a small town, attending conferences where ideas can be shared is extremely beneficial for both the innovative ideas as well as gaining knowledge about works and what does not. Mayor Ireland then thanked everyone in the room.

Mr. Brenner then thanked both speakers for their presentations. He said that what stuck him about both programs is that they tackle a number of areas, and are able to reach the public, which is crucial in the long run.

Mayor Ireland responded by saying that Aspen has a different public to deal with than most places, as the population is 30,000 at Christmas 6,000 for the rest of the year. Connecting with visitors as well as residents who do not live in Aspen primarily is difficult. They have tried to design their program to engage those winter visitors, because they have the resources and the will, but often do not have a grasp on what to do. Mayor Ireland said it is critical to engage their imaginations so that they go to their property manager and tell them they want to participate and get involved.

Jeff Muffat, 3M, thanked Mayor Ireland for his presentation and mentioned how impressed he was that permits for special events are now required. He commended the Mayor for such an amazing step forward. Mr. Muffat asked to hear more about the process involved in implementing an ordinance change, what the public input was, and whether or not there was a lot of push-back from those being affected.

Mayor Ireland explained that there actually was not a lot of push-back, and explained that because Aspen has such a broad acceptance of environmental issues, from the economic to the ideological, it was able to pass without any real resistance.

Mr. Muffat followed up by saying that requiring that type of an offset or consideration in a permit issued by the city is a very innovative idea.

Mayor Ireland responded by saying that Aspen's economy is dependent upon tourism and special events, and once people were able to see the potential for zero impact events, they wanted to do it and boast about it to their guests.

Mr. Muffat exclaimed that he is going to take this idea back to his hometown and make these types of suggestions.

Janice Nolan, American Lung Association, said that she was very interested in what the city of Aspen is doing for its own fleet of buses and equipment, particularly in terms of particulates from diesel. In addition she said she was interested in hearing more about Aspen's building codes, particularly indoor air balances to the energy efficiency building codes requirement.

Mayor Ireland replied that the main source of carbon in their fleet is the bus system. Aspen is part of RFTA (Roaring Fork Transit Agency), which originated in Aspen and has expanded outward. Mayor Ireland explained that even though they are more expensive, Aspen has hybrid buses, and has sought out and received grants to make their entire fleet hybrid. Mayor Ireland said that one of their tax questions was about allowing the city to keep mill levy taxes in exchange for using the money to buy hybrid buses. He said that he knows less about city vehicles because he does not use them, but said that all staff cars are hybrid, low impact cars. Mayor Ireland said that he is not sure whether the

building codes they adopted address indoor air quality. In Aspen they are primarily concerned about radon, and provide free radon testing kits and provide analysis of the results. The city also gives away carbon monoxide detectors.

Ms. Nolen added that she has been in meetings on making homes more energy efficient where the primary concern is how to do so while maintaining air flow through the house. Ventilation and good indoor air quality is crucial. She wanted to raise this issue to the Mayor's attention and applaud his efforts with radon and carbon monoxide.

Mayor Ireland responded that the indoor air quality and ventilation problem is not as big of an issue for Aspen buildings because people are very aware of mold. The climate creates a severe potential for mold if buildings are sealed too tightly, so the issue has not been that bad.

Stephen Hartsfield, National Tribal Air Association, thanked both presenters for their efforts. He added that he is from the Midwest, and is therefore very excited by all the green efforts he has witnessed. Work has taken him to Kansas City, and he has first hand experience with many of the efforts talked about during the presentation and is really grateful. He said that Aspen is a place he and his wife love to visit for vacation, and it is wonderful to be able to benefit from the efforts the city is making. He also added that a friend of his who calls Aspen home 365 days out of the year is ecstatic that his mayor and city were being honored by this award.

BACT Workgroup Update – *EPA initial response to Phase 1 BACT Report and status update on Phase 2 of workgroup – Workgroup chairs*

Anna Wood, acting director of OAQPS, provided CAAAC with an update on the progress that has been made in moving forward with guidance to address GHGs under the Prevention of Significant Deterioration (PSD) program. She explained how CAAAC was instrumental in their efforts to better understand what might be useful to states, permitting authorities, and sources.

Ms. Wood gave an overview of what she will cover, which included a review of Phase 1 recommendations to USEPA and topics for which the workgroup requested USEPA policy guidance; an update on the development of GHG technical information and HG policy guidance; and anticipated plans for providing training for GHG permitting. USEPA's charge to CAAAC in Phase 1 was to discuss and identify major issues and potential barriers to implementing the PSD program under the Clean Air Act for GHGs, with a focus on the BACT requirement. The workgroup provided them with a number of recommendations. There were a couple areas of focus in the final report, such as technical information and policy and guidance. With regard to technical recommendations, the workgroup put forth that USEPA should provide information about GHG control measures, including technical, economic, and environmental performance data for these available and emerging measures. The communication aspect is key, and proactivity is important as well, in addition to USEPA ensuring that there is

adequate funding for establishment and maintenance of technical resources beyond the January 2011 timeframe.

Phase 1 provided two sets of issues with respect to guidance recommendations. One focused on the need for USEPA to provide guidance on certain aspects of applying the PSD program to GHGs. It also pointed out the need to determine the types of information and methods that are needed to do this in a consistent way. The workgroup suggested that the USEPA provide guidance on pollution prevention measures, efficiency improvement technologies, emissions factors and calculations for GHGs, monitoring requirements, control technologies for GHGs other than CO2, and ranking of GHGs with regard to climate change impact. Ms. Wood stated that they are moving ahead in developing this guidance. The second set of recommended issues concerned policy issues, with the workgroup consensus that USEPA should address what it means for a control option to "redefine the source", how to evaluate energy efficiency in a BACT analysis, how to promote new control technologies, how to consider carbon capture and storage (CCS) within BACT, and carbon neutrality of biomass.

Since receiving this information from CAAAC, OAQPS has been working on some technical guidance documents and resources for states, permitting authorities, and sources. They began by working with the workgroup to identify states with technical data needs. They have a GHG mitigation database that their Office of Research and Development (ORD) is creating, which will include performance and cost data on current and developing GHG control measures. Their current focus is on EGUs and cement plants. The other specific aspect that developed was the need for USEPA to enhance the RACT/BACT clearinghouse, with formatting improvements to include GHG control and test data, links to state permits, GHG message boards, etc. Ms. Wood explained that the next key item of focus in terms of technical data will be GHG control measures white papers. The purpose of these papers will be to provide all the available technical, economic, and performance information for certain sectors so that states and sources will have equal access to USEPA's current thinking based on latest available information. The rollout of this will begin in June.

Ms. Wood moved from the technical update to the policy update. Key policy issues were assembled and prioritized, such as how to use the existing BACT framework for GHGs and calculations. They will follow the framework for top-down BACT and will provide useful and practical insight. The second set of issues in Phase 2 is more difficult, but they anticipate having these issues addressed and resolved by the time they release guidance. Ms. Wood lastly explained that they have a separate effort underway based on commitments made in the tailoring rule to assess and evaluate streamlining techniques that permitting authorities can use to address administrative burden.

Ms. Wood subsequently provided a GHG policy guidance update. Their timeline is between now and January 2011. She stated that they will work closely with states who have permits pending that will included GHGs to address issues related to PSD GHG implementation questions. They intend to seek input from stakeholders on the guidance as well. Once USEPA release the guidance, they will closely monitor its implementation

after January 2011 and provide clarifications as needed, and will assess whether further guidance is also needed.

Ms. Wood concluded with a GHG permitting training update: OAQPS is developing training models that will have example permits, BACT analyses, and technical references for a training course that will be synchronized with guidance development efforts. Their priority is to provide training for USEPA regions/states before end of 2010.

Lisa Gomez, Sempra Energy Utilities, stated that she appreciates what the Agency is doing to provide clarity on questions of BACT. One thing she urged the Agency to consider is a question related to workshops and training: once GHG BACT has been triggered, what is it and how is it determined? Now that the tailoring rule has been issued, she has heard many questions from industry such as "when have I triggered BACT?"; "how is the Title V timing working?"; "if I have a boiler that does not have a federal enforceable permit, and could exceed the 100,000 tons/year, should I ask for a federal permit?". She encouraged a webinar training to clarify when industry has triggered BACT and strategies around Title V and PSD.

Ms. Wood thanked Ms. Gomez for her insight. She said they are also working with NAAQA and regions, and collecting questions. A lot of the questions mentioned by Ms. Gomez are on the list already, which they will make available to the public. OAQPS is actively looking for PTE guidance for GHGs; the guidance will not be part of the webinar effort, but could be part of a separate guidance effort.

Jeff Muffat, 3M, thanked Ms. Wood and commended the tremendous amount of work. He said he was impressed with the speed with which this is moving.

Ann Weeks, Clean Air Task Force, additionally expressed her thanks. As a member of the Subcommittee, she applauded Ms. Wood's summary of their long set of deliberations. Another issue that keeps coming up is the way BACT typically works, which is to start out with an NSPS as the baseline so that BACT technologies are evaluated in a way that meets an NSPS. In this case, there is no NSPS for GHGs for any of the major industries. It is vital that USEPA makes a commitment to working on this to determine the baseline for BACT. This would help to ensure the most success in promoting the more advanced technologies and in attaining the reductions by 2050. They must attain deep reductions by 2050 and maintain the health benefits that they have been achieving in air quality programs simultaneously. Therefore, the Agency must commit on the BACT front and on the NSPS front.

Gary Jones, Printing Industries of America Graphic Arts Technical Foundation, asked whether the training will be available to the regulated community.

Ms. Wood replied that they plan to initially focus on states, locals, permitting authorities, and tribes, since they have not yet thought through other elements. A more clear answer to Mr. Jones's question will be able to be provided as they move forward in the process.

Mr. Jones said that webinar programs typically can be archived so that people can access them at their convenience.

Ms. Wood stated that at a minimum that would be the case in this situation, but she did not want to over-commit to anything.

Mr. Jones next encouraged USEPA to not only focus on the emission factors for the industries already identified in Phase 1, but also on emission factors from a broader perspective. This is because the threshold for GHG emission reporting is much lower than that of the tailoring rule; therefore, there are some large facilities that likely will need to report. He mentioned that he spoke to an employee of his company who was trying to determine an emissions factor for an ink solvent. This question brought up the issue that USEPA's current emission factors do not address this particular application, and likely many other applications. While it would be infeasible to have emissions factors for every conceivable fuel, it would be useful to have a methodology that states can use to approximate emission factors. This is a critical part of the whole process of releasing additional guidance.

Ms. Wood thanked Mr. Jones and said his advice would be helpful. They are keeping track of each comment that raises a methodology question, so his suggestion will be included.

Bill Becker, National Association of Clean Air Agencies, expressed two general observations. He first thanked USEPA for acknowledging the daunting challenge for state and local agencies, and for the regulated community, to meet the requirements of the tailoring rule and BACT; any guidance that can be provided in a timely manner will be beneficial. He secondly stated that everyone should expect some "growing pains" in the new Title V permit program. Things will take a while to get going. While he predicted the result would be successful, the launch would not be perfect, and they would have to learn together. The USEPA's guidance and the increased experience of state and local agencies will certainly help.

Mark MaLeod, Environmental Defense Fund, added his thanks as well. He said that there was discussion in their subcommittee meeting yesterday about making the BACT permitting process easier. He was glad to hear Ms. Wood say that there would be a separate process to look at BACT, since there was some frustration in the workgroup discussion yesterday regarding a lack of focus. He asked whether the Agency could provide detail on how stakeholders can participate in this. This topic is one that the workgroup members may take up.

Ms. Wood confirmed that there is indeed a separate process. Part of the rulemaking that Step 3 of the tailoring rule commits to by 2012 will look at whether the system can administratively handle a lower threshold. Another part will push forward thinking about streamlining measures and how they might work. Important pieces that need to be made public as soon as possible, like PTE guidance, will probably come as a separate piece but still as part of the streamlining effort.

Mr. MacLeod asked how stakeholders who have views on this would be able to participate.

Ms. Wood answered that there is no mechanism currently set up for people having strong feelings about an issue, but she extended an offer to call the Agency to speak about any streamlining measures of concern.

Ms. Gomez emphasized how critical it is that all interested stakeholders have an opportunity to get trained. July Phase 2 is coming quickly for purposes of strategic planning. If, for example, someone has 35 new facilities that need Title V permits, they must know all about Phase 2 issues in order to effectively plan, or know that another alternative is to voluntarily submit to a federally enforceable permit. They must be able to make that decision and set up necessary resources. She asked that OAQPS recognize the importance that all interested parties are invited to the training sessions. This would also help states, who would otherwise be inundated with questions from those who were not invited to the training sessions.

Mr. Jones asked whether there would be a draft released on PTE guidance with comment potential.

Ms. Wood replied that they are still deciding on this. She gave him a point of contact who he could send questions to. Juan Santiago (lead on the tailoring rule).
Santiago.juan@epa.gov 919 541 1084.

Eric Svensen, Public Service Enterprise Group, a co-chair on the Phase 2 group, congratulated Ms. Wood on USEPA's responsiveness to the workgroup and the seriousness with which they took their Phase 1 report. From Phase 2 they had identified about seven ideas for a Phase 2 focus, and had asked Ms. McCarthy and the Agency for guidance on what would make sense and would be most beneficial for focus. Ms. McCarthy asked Mark MacLeod and himself in April to co-chair the Phase 2 effort, which would focus on: 1. How can the BACT process be used to encourage the development of energy efficient processes and technologies, and 2. How can development and permitting for innovative emissions reductions measures be encouraged, and how can innovative control technology waivers be used to change or promote technological applications. They held several discussions regarding these topics, and reached back out to original workgroup members of Phase 1, who agreed to help with Phase 2. They laid out a timeline of when to finish their work; originally Ms. McCarthy asked that they could complete all work by this meeting, but they have agreed on a mid-July timeline for work product completion. To date they have had three conference calls and in-person meeting; they anticipate more this month.

Mr. MacLeod provided an overview of the progress of the workgroup on the substance of the two charges. Yesterday they developed an energy efficiency charge of establishing an overall framework with which to look at energy efficiency in the BACT offset process.

The overall framework is analogous to the top-down BACT process itself, with the idea of mirroring many of those steps in an energy efficiency process. They are looking into whether it is possible to know available alternatives, rank performance, and assess context-specific alternatives for various facilities. Mr. MacLeod explained that they are also trying to help develop the questions within that framework that an applicant needs to respond to, and what the state and permitting agency need to ask. States thought it was valuable to develop a list of question and real-life examples of permits in order to ground the process in concrete and not just in theory. They will continue to work on improving the framework and developing a list of questions and examples for different source categories.

Mr. MacLeod continued with a third observation from yesterday's meeting: his surprise with the extent of information available about energy efficiency, especially for many of the industrial processes. One of the challenges is how to collect, manage, and make available this information to stakeholders and states as they review permits. They are also investigating how to develop an interactive program that builds on the RACT/BACT database; the process should be a living and breathing process where people learn as they go.

Mr. MacLeod recalled that Ms. Wood mentioned the issue of scope in Phase 1. He said the framework that was developed contemplates USEPA making the determination of focus in whatever manner they decide. An interesting comment he heard from one of the states, however, was that USEPA should not make that determination, and that states should be the deciders of scope, since the proper level of analysis may change based on sectors and states.

Regarding the second charge relating to the innovative control technology waiver, Mr. MacLeod stated that the workgroup realized that this is not the first time that the CAAAC has taken up the issue. Therefore, they are reexamining the record and recommendations from the 1996 process.

Anthony DeLucia, East Tennessee State University, followed up with what Mr. Becker said regarding the fits and starts of the process, and wondered whether overarching federal legislation would have the ability to impact the initial bumpy starts of the process. If this is the case, he added that it may be useful to have more discussion about how the process should be guided.

Ms. Wood said that the Agency has stated that legislation is the preferred course of action to address GHGs, but that in the meantime they must respond to the Supreme Court decision in Massachusetts vs. EPA. Their hope is that whatever happens on the legislative front will complement the regulatory front.

Gene Trisko, Attorney at Law, complimented the Agency's management of the process and discussions within the process to stay within the scope of the law. He noted the importance of recognizing the boundaries of the law, and the temptation to explore all the options that may produce beneficial outcomes but which in fact may not fall within the

law (and would therefore be a waste of time). He recalled Bill Harnett's words in the first conference call he heard regarding the Agency's position: that they will develop this process within the confines of the Clean Air Act and not pursue options outside of this. In reference to Ms. McCarthy's request for advice on using the BACT process to promote energy efficiency, Mr. Trisko observed that the NSR and BACT process are themselves inherently discouraging of investments in energy efficiency, within utilities sector and probably in other major affected source sectors. Until a legislative relief is devised, NSR itself is the problem, and they need to find a way—either through regulatory or legislative means—to remove those constraints on investment. Otherwise they will continue to slide down the slippery slope of an aging industrial infrastructure that is not being modernized and replaced, and is not competitive in the work marketplace.

Jeff Muffat thanked Mr. MacLeod and Mr. Svenson for their great leadership.

Mr. Becker said that there are a few options that may allay some of the concerns Mr. Trisko has expressed with regard to NSR. First, when a plant becomes more energy efficient, by definition, it will have fewer emissions and does not have to increase its emissions above significant levels to trigger NSR. Therefore, the choice to extend operating circumstances to trigger NSR is within the sources' control. NSR is not automatically triggered unless the source increases its emissions significantly. Another way to alleviate Mr. Trisko's concerns is to get behind the legislation that does away with a large part of NSR and push it through this year.

Ms. Wood followed up on what Mr. Becker said, stating that the reason they had the NSR reform in 2002 was for energy efficiency. They dramatically changed the applicability test and look-back period. She is interested in if and why that is not working, and in examples that suggest NSR is a barrier. Ms. Wood expressed her thanks to Mr. MacLeod and Mr. Svenson for their efforts.

Mr. Brenner echoed Ms. Wood's thanks, and noted the extent to which the hard work occurring in the workgroup is truly being incorporated into Agency policy.

Voluntary and Community Programs – *Jay Benforado, USEPA*

Jay Benforado, USEPA, discussed the charge charter for the Clean Air Advisory Committee workgroup and background on analysis that USEPA has already done regarding voluntary programs.

They used CAAAC vision and ideas from last year as the starting point. Ms. McCarthy asked Mr. Benforado to help understand the portfolio of voluntary programs: what they are, how they work, who the partners are, and how they work together.

Ms. McCarthy posed the following questions to the CAAAC:

- What general principles should guide OAR investments in partnership and community-based programs? (have suggestions for improving the proposed principles?)
- What types of best practices should be considered when designing, implementing, and operating partnership programs? What best practices are relevant for community-based programs?
- What improvements would create synergies and improve coordination across OAR's and other EPA partnership and community-based programs, including grant programs?
- How can OAR better leverage opportunities to partner with others (e.g. other federal, state, local, and tribal organizations, NGOs, industry associations, and others) to implement, operate, and evolve its partnership and community-based programs? What partnership models could enable OAR to significantly expand progress towards its goals in light of limited resources?
- How can OAR best understand if its partnership and community-based programs are achieving results commensurate with the scale of investment?

Mr. Benforado wanted to make sure that CAAAC members understand that Ms. McCarthy is asking them for advice on how to manage, design, and operate these programs. There is a fairly short timeline for the task group; the Administrator would like a report to be out by CAAAC's next meeting.

Mr. DeLucia, East Tennessee State University, stated that there would be great opportunities for regional programs to be right there every step of the way (i.e. the new partners for smart growth meeting in Charlotte).

Mr. Benforado stated that Ms. McCarthy would like the task group to think more broadly than which programs can enable OAR. She already commissioned a staff work group over three months, which found that OAR has a lot of different programs. There is no easy definition to separate the programs, but there are partnerships related to communities, information and research, and international programs.

Regions play a very important delivery role. Often national programs set up initiatives, but regional leaders do most of the work and provide one stop shopping. There are a wide range of types of opportunities in regional activities. Regional groups also have the benefit of having a relatively quick start-up, and often wind down quickly as well. One example of this is a program in the New England region which created a community energy challenge, in which they asked every community if they wanted to increase energy use, and offered help from USEPA on those projects. This was a great way to contribute to different communities' needs, and was a very effective model that uses economies of scale.

One issue to note is that each program is designed a bit differently and each targets different sectors and different regions. One important question is why these programs existed, and why they were created. The initial work group found that most were created in the absence of regulation on a particular environmental problem, were created to

compliment/support a particular regulatory objective, or were created to deal with local issues.

These programs align well with OAR's strategic goals and strategies, but there are opportunities to redefine them. Ms. McCarthy would like to find alignment with OAR priorities. One value of partnership community programs that isn't easy to measure is the capacity building dimension. Programs often build capacity, but do not necessarily achieve actual outcomes.

Mr. Benforado stated that the task group should also focus on whether there is overlap among the programs, or gaps between the programs. In terms of gaps, the group should determine whether any programs did not have coverage in a regulation, whether there are gaps in implementation or no capacity for implementation, or whether there are gaps in institutions at the local level.

Jeff Muffat, 3M, stated that he is familiar with what has just gone on with voluntary programs and wondered what the difference is between what that group was doing and what this group will be tasked with.

Mr. Benforado responded that Ms. McCarthy is trying to manage the portfolio of work she is responsible for in OAR, and this exercise is one of a particular program. With the proposed group, they are asking questions that are more specific to the actual work of the Agency. The previous group looked at programs as more of an aggregate, and did not assess real programs individually. The proposed group should look at real programs to advise Ms. McCarthy in how to manage the programs and how to make them work for our partners.

Terry Goff, Caterpillar, stated that there is a key value in building capacity within programs. For example, SmartWay has the ability to build capacity within the Agency to better understand how regulation can be developed within the Agency, but it also has the capacity to understand how SmartWay can touch larger aspects, such as changes to infrastructure and systems that integrate with the regulatory component.

Mr. Benforado said that the point about USEPA using these programs as learning opportunities is important. It would be helpful to have suggestions about how to link programs together in an efficient manner.

Michael Formica, National Pork Producers Council, stated that he would have liked to have seen their program listed. He also encouraged reaching out not just to industry, but also to representatives of agriculture and people from the Department of Commerce. He brought up the example of when National Pork Producers Council attempts to control water control programs, it creates air issues, and vice versa. He said that there needs to be some understanding within USEPA of how to balance those risks and the costs involved. A program like this with a broad stakeholder group could help industry partners with this and help USEPA set priorities.

Mr. Benforado stated that Mr. Formica's comments are very helpful. USEPA struggles with the fact that they have a large number of projects, and tend to look at programs instead of projects, but they understand the need to look at both.

Mr. Becker wondered how much money is being spent on those programs in total and if USEPA has done analyses of benefits of these programs. Some programs are very good, but difficult to measure. The issue is whether, given priorities, these voluntary programs more important than providing other guidance like BACT guidance to states to meet permitting requirements.

Mr. Benforado agreed that this issue is the heart of the question. They deliberately did not have the first workgroup focus on budget and instead only on characterizing programs. Regarding evaluating benefits or programs, USEPA has looked at the programs to see how to evaluate them, and found that they can quantify some single endpoint programs with some degree of precision. They discussed the other kinds of benefits yesterday (i.e. capacity building, community engagement, and linkages with other agencies). For these other types of benefits, they do not have good evaluation data and the programs may not be quantifiable for those reasons. Ms. McCarthy would like the task group to provide feedback on how to make those sorts of decisions.

Mr. Becker stated that it is sometimes difficult to distinguish between benefits from voluntary programs and the issues they advocate. For example, 3M is going to make decisions in the future to make product changes to be more energy efficient, and they may get the gold star from USEPA for doing so, but the question is whether the company would have thought of making these changes as merely "smart business" changes, or whether it really was ENERGY STAR that deserves credit for the changes.

Mr. Benforado stated that giving examples like that is helpful. USEPA wants to look for non-USEPA funding for programs. There are many ways for programs to be effective while minimizing USEPA's funding.

Kathryn Watson, Indiana Department of Environmental Management, questioned whether this review will encompass grant programs.

Mr. Benforado responded that USEPA is open to hear ideas about where members believe the most valuable advice would be, but their thought was to limit it to the programs on the list. The list excludes state grant programs even though they may include partnerships.

Stephen Hartsfield, National Tribal Air Association, stated that Agency flexibility is important and that it is important to look at programs impacting individual homes and homeowners, especially in tribal and low income communities. The woodstove changeout program is an outstanding program for tribes, and he is contacted daily with inquiries about changeout funding.

Mr. Benforado agreed and stated that a benefit of partnership programs is that they can change quickly and meet the needs of the community.

Lisa Gomez, Sempra Energy Utilities, stated that especially now, when the government is resource-strained, it is vital to make sure they are doing things in the most optimal way. It would be helpful to pull information together on benefits before the first workgroup meeting to be able to discuss whether the benefits reflected are complete. She also expressed some concern regarding the timing because many CAAAC members that could have a lot to contribute are currently completely consumed with the climate workgroup.

Mr. Benforado stated that USEPA could pull together benefits with not too much work and share that in first couple of meetings. Regarding to timing issues, Ms. McCarthy wants to make sure this effort is not a year long process and she would really like to have initial ideas by October.

Mr. Brenner stated that he would take back concerns with timing to Ms. McCarthy to try to work out conflicts.

Mr. Benforado stated that representatives for CAAAC members may be a solution.

Mr. Jones stated that he was impressed with project list and would suggest having some criteria in which potential projects and existing projects are judged. He also suggested having a communication strategy to let people know that these programs exist, and using this group as an opportunity for USEPA to reach out to industry and contribute to sustainability.

David Foerter, Institute of Clean Air Companies, stated that USEPA seems to have taken a bottom-up approach. He suggested it may be useful to take another broader perspective. In using a bottom-up approach, he suggested looking at how many full-time employees are working for the programs and whether some partnerships have fulfilled their purpose, or whether programs have altered their purpose. If using a top-down approach, he suggested that they look at whether there are some environmental issues that are not being addressed.

Mr. Benforado clarified that Ms. McCarthy is not looking to evaluate individual programs, but would prefer to be one level up. There is simply not enough time to address all programs individually, but there do seem to be natural groupings of certain programs (i.e. climate programs).

Mr. DeLucia suggested looking closely at what communities are doing. Communities want to have clarity on the broad set of issues that everyone is dealing with and information on tools and measures that can be utilized. Communities want tools to measure not just traditional outcomes, but nontraditional outcomes as well, such as a health impact assessment technique. He also stated that consumers do not want to pay extra for anything that is green, but want the cost to be absorbed into the changes that utilities will be conducting.

Mr. Benforado acknowledged that USEPA has not done enough on the community dimension and that one priority is changing the conversation about environmental programs.

Mr. Becker suggested assembling a toolkit intended to inform people who might like some of these programs and want to participate in initiatives.

Mr. Hartsfield said that the woodstove changeout program had an excellent guidance document that provides step-by-step instructions, which could be used as a model document for other program guidance.

Mr. Benforado agreed that this was a good thought. He then discussed the five questions in the charge and stated that the questions are general enough so that the group does not have to explicitly answer the questions directly in the report. He suggested holding two to four conference calls and one face-to-face meeting. He then gauged interest in members who would like to be involved in the task group and stated that it would also be nice to have a small USEPA contingent participate.

People interested in participating included Mr. Goff, Ms. Gomez, Mr. Goldman, Mr. Formica, Mr. Jones, Mr. DeLucia, Mr. Muffat, Mr. Hartsfield, Ms. Watson, and Mr. Terrill.

Case Study for Incorporating Reductions from Renewable Portfolio Standards and Energy Efficiency measures in SIPs – *Chris Stoneman, EPA*

Chris Stoneman, USEPA OAQPS, introduced himself and explained that both he and Bob McConnell would be presenting a case study they have been working on for a year with John Moscoe, who is the Region 1 energy expert. He said that they were very interested in gathering feedback from the group.

Mr. Stoneman provided an overview of the presentation, and explained that he would cover the purpose and background of the case study before turning it over to Mr. McConnell to go over the substance. From there they would discuss where they intend to take the Connecticut study and gain feedback from the committee. He said that the purpose of the presentation was to discuss the incorporation of energy efficiency and renewable energy measures into state implementation plans (SIPs). Mr. Stoneman explained that this is a priority for the Office of Air and Radiation (OAR), and as the NAAQS are tightened, the need to find additional reductions emerges. He emphasized that all of these new NAAQS are going to put more pressure on states and industries and others to find additional reductions, so OAQPS has been trying to help with this process. In addition, the states are expanding their renewable energy and energy efficiency programs, and it would be beneficial to capture some of those reductions and bring them into the SIPs in a more significant way than has been done in the past. Finally, the American Reinvestment and Recovery Act has devoted a substantial amount of money to

energy efficiency and renewable energy, and a lot of money will be sent out to the states primarily from the Department of Energy.

Mr. Stoneman referenced the EPA guidelines that came out in 2004 that were specific to energy efficiency and renewable energy measures and how to bring those into SIPs. He said the three options available to states today were SIP control measures, weight of evidence demonstration, and a SIPs emissions baseline. He explained that to be approved as a SIP measure providing emission reductions, the measure needs to be quantifiable, surplus, enforceable, and permanent. He said that by quantifiable, one must be able to figure out what the emission reductions will be and evaluate the measure and verify those reductions over time. Surplus means that reductions cannot be double counted, enforceable means the measure can be enforced against the state or other entity, and being permanent entails that it has to be in place and permanent for the period of concern.

Mr. Stoneman talked about the underutilization of the EPA guidance, in addition to the fact that there has been a lot of activity on the energy efficiency and renewable energy side. He explained that 29 states and Washington, D.C. have Renewable Portfolio Standards (RPS) policies in place, and that they all vary in their stringency. The policies range from 10 to 40 percent, and typically have a fee associated with non-compliance. Additionally the majority of the states have adopted energy efficiency programs, which are also highly variable from states in the northeast and west spending at least $25 per capita on energy efficiency programs, to some that spend less than $1. He reiterated that since the 2004 guidance came out there has been a growth in energy efficiency and renewable energy programs, but also concern that the states have not done enough with it. He explained that they decided to take a practical approach to this concern, and that is why the case study seemed practical. They decided to take Connecticut's RPS program, and figure out how to bring it into a SIP. OAQPS and Region 1 began scoping out what it would take to bring Connecticut's RPS program into its SIP and found very promising results that seemed worth pursuing.

Here Mr. Stoneman turned the presentation over to Mr. Bob McConnell, USEPA Region 1. Mr. McConnell said that he works primarily with the Clean Air Act and SIPs, helping states develop the rules they need to meet their obligations for the criteria pollutants. He was particularly interested in working with this work group because of the notion that greenhouse gas and criteria pollutant worlds were divergent, and that it would be more efficient if bridges between them could be formed. In effort to do this, they decided to focus on one program in one state, which was Connecticut's Renewable Portfolio Standards (RPS) Program. The managers at EPA charged them with trying to quantify the emissions reductions of criteria pollutants that state RPS and clean energy programs were getting. Connecticut's RPS program seemed ideal to lend itself to that sort of analysis.

Connecticut's program is similar to many others, as it requires a minimum percentage of their retail load be from renewable energy sources. In 2005, 4.5% of electricity had to come from renewables, and the maximum is reached in 2020 with a mandated 27% of electricity from renewables. Connecticut's program was strong for a multitude of reasons, the first of which was that Public Utilities Control annually evaluates whether electricity

suppliers actually purchased the required amount of electricity from renewable resources; if not, they are charged a fee. Since 2005 the electricity suppliers have met those requirements every year except one.

Switching from renewables to energy efficiency, Mr. McConnell spoke about the impact of Connecticut's mandatory program. There is state legislation requiring the Public Utilities Commission to assess a fee to residential and commercial utility bills. These fees are used to raise revenues to assist home owners and businesses with energy efficiency programs. These fees have amounted to about $90 million per year, which is now being supplemented by additional revenues streams. Connecticut is one of the states that participates in the Regional Greenhouse Gas Initiative, and has begun allocating allowances for this program which raises revenue. He said that a significant amount of money is available to the state to use for energy efficiency improvements, both in the residential and commercial and industrial sector. Just as the renewables program does a review each year to see how well the program is working, they do a similar review to see how the energy efficiency program is doing. He restated that Connecticut does spend a lot of money on a per capita basis on energy efficiency, and they evaluate the program each year.

Mr. McConnell then moved on to talk about the longer history of Connecticut's energy efficiency program. The program started in 1998, and when comparing Connecticut's growth and electricity use to the whole nation's over the ensuing decade, Connecticut's has been slower. The numbers are rather dramatic, but fail to take into account that the population of the nation has increased much more rapidly than Connecticut's. Mr. McConnell explained that they set out to quantify the magnitude of emissions reductions that some of these programs have had on reducing criteria pollutants. They examined NOx reductions because Connecticut has been in non-attainment for ozone for awhile. Real data exists for the amount of electricity that Connecticut's electricity providers had to procure from renewable means in 2005. They did calculations with NOx emission rates to produce an estimated figure of what the NOx reductions would be with the newly available renewable energies displacing fossil fuel fire generation. The other approach they considered was to use an electrical supply dispatch model. Though they did not have the resources to do the modeling, he explained that they did look at how the existing models could work.

Mr. McConnell continued by explaining the calculations they conducted. In 2005, when Connecticut only needed 4.5% of their electricity from renewables, they used two different NOx rates and multiplied them by the amount of electricity that Connecticut's electricity suppliers needed to get from renewables to come up with the range of NOx emissions. They came up with a lower range, which comes from only considering the clean renewables that have no NOx emissions, and a higher range which takes into account adding back in half of the renewables. They considered this formula for the year 2016, with Connecticut maintaining to its program and achieving a 21% emission reduction. He said that the significant reduction of emissions gave them hope that these programs can have a positive impact on the criteria pollutant world as well.

Mr. McConnell next discussed dispatch modeling, and said that here they would select a model and see how well it can predict what EGUs will be running in the future. It is important to see how well the model takes into account factors like the increased use of renewable energy and the increased programs on energy efficiency. These models have shown to have difficulty doing this, and the states are aware of their shortcomings. This modeling will include an estimate of future year NOx emissions from EGUs, and Connecticut will need to know what went into this prediction.

In terms of the open discussions that have taken place with Connecticut, Mr. McConnell said that they are developing a rough outline of what Connecticut would need to include in their SIP for energy efficiency and renewable energy programs. Region 1 will probably develop an outline of what they believe Connecticut needs to do in terms of gathering information, documenting the reductions that accrue from their programs, and submitting them to Region 1. Connecticut will also need to work with OTC to figure out what impact the energy efficiency and renewable energy programs will have on future year EGU emissions.

Lastly, starting June 1, 2010 the Independent System Operator (ISO) in New England is going to allow energy efficiency to bid into the forward capacity market in addition to electricity providers. He explained that this is based on the idea that good conservation programs will reduce demand, such as reducing the demand for fossil fuel EGUs. ISO New England will essentially pay Connecticut for their energy efficiency programs.

Mr. McConnell spoke about the predicted initial magnitude of Connecticut's energy efficiency emissions reductions. Connecticut estimates about 60 MW of peak load reductions to occur annually due to existing energy efficiency programs, which are assumed to last for 10 years. Further, Connecticut believes it can boost this to 160 MW per year if additional funding is provided. He said that they translated this into a NOx emission reduction of 10 tons per day by the year 2013, by using historic data from the ISO. He illustrated this with a graph and added that reductions on peak days are substantial because the last EGUs called up are usually high emitting units.

Mr. Stoneman finished up the presentation by discussing the goals of the case study. Sharing the Connecticut study with other states is important, because it allows them to see an example of a study that worked. They also hope to develop other examples, as well as a workbook manual that shows practical ways to implement the 2004 energy efficiency/ renewable energy guidance. Additionally, OAR is developing a road map for states and regions to incorporate energy efficiency/ renewable energy measures into a SIP. The intention behind this roadmap is to clarify the core requirements and address any issues the states may have in particular.

He put out some questions to the group for their consideration. In particular he asked if there was any best way to instigate efforts to take advantage in SIPs of energy efficiency/ renewable energy-generated emissions reductions. He asked the group what they saw as the biggest obstacles facing the states, what are actions USEPA could do to help states, tribes and local agencies account for energy efficiency/renewable energy measures in

SIPs, what states would serve as best examples to feature in a workbook, and what issues concerning the application of USEPA's energy efficiency/renewable energy guidance the workbook should address.

Ann Weeks, Clean Air Task Force, thanked Mr. McConnell and Mr. Stoneman for their interesting presentation. She said that in the context of criteria pollutants, the question of permanence should be thought of in much longer terms. She commented that there is the question of how to integrate the thinking done on the SIPs into the PSD and BACT analysis contexts. She also wanted clarification on how permanence can be proven.

Mr. Stoneman stated that he does not feel qualified to talk about PSD. They are trying to share information across programs and will pass this question along. He commented that when he spoke about permanence for the relevant period, this means that predicted efficiency programs need to be made up if they do not actually yield the expected reductions.

Mr. McConnell added that Connecticut legislation requires collection of the fee each year. If they were to resolve that in SIPs, they would need to make this up. In greenhouse gas planning the same principle should apply even with the longer timeline.

Ms. Weeks followed by saying she was very worried there was a break in communication, and that the presenters were not understanding her clearly. Her concern is the permanence of aspects such as the energy efficiency light bulbs, the process changes, the fuel change, etc. She emphasized that she would like to know how they will show the permanence of the energy efficiency measures that are put into place.

Mr. McConnell responded that they asked this question directly to the Connecticut DEP, and they seemed to respond that most equipment will last for a certain number of years, but in general they believe energy efficiency progresses with time. He acknowledged that this is not a complete answer, but that they have considered this and been pushing Connecticut to come up with a response.

Susana Hildebrand, Texas Commission on Environmental Quality, said that they had incorporated energy efficiency into their weight of evidence, but that it has not been possible to incorporate it into the other two elements. They are unable to incorporate it into the future base or permanent reductions because Texas is a very large state, and therefore a reduction in one area does not mean that area will actually see a reduction in pollution that will affect its emissions. Additionally, Texas is on its own grid, which complicates things. Ms. Hildebrand said that it is necessary to find a way to address the differences between grids and states, in that while Texas may not derive energy from the thing for which they have energy efficiency or renewables, it does not mean that the power plant is still providing the same level of energy to the grid.

Mr. Stoneman replied that one of the perennial questions is where and when the emissions reductions will occur. It can be quantified on paper, but the question of where and when they will occur still remains. The idea of doing modeling is one method.

Ms. Hildebrand replied that modeling does not work for Texas, because separate areas have to be modeled. A reduction in east Texas will figure differently in the Dallas area, and may not figure at all in the Houston and San Antonio areas.

Mr. Stoneman asked Ms. Hildebrand to clarify if she was referring to air quality modeling or dispatch modeling, to which Ms. Hildebrand responded air quality. He explained that he had been referring to dispatch modeling, which is a tool that enables states to look into the future and predict what will happen to EGU emissions units.

Ms. Hildebrand then said Texas has seen a significant growth in energy demand, and that they have to look at the existing energy suppliers to grow these emissions. The assumption is then that Texas can take whatever demand is coming.

Mr. Stoneman replied that the bottom line is that this is a live issue. They have been involved in the discussions for the northeast and in trying to determine the best tool. He acknowledged that Ms. Hildebrand raised a very good point.

Ms. Hildebrand cautioned them not to assume that what happens in the northeast is applicable to rest of the country. Also, when looking at energy demand there is a big difference for states in the same grid versus states on their own grid.

Carey Fitzmaurice, USEPA, stated that a lot of the work in setting up the original guidance for use of energy efficiency in SIPs was actually done at Texas A&M. Therefore, the opposite problem actually exists, and the work that had been done there was deemed inapplicable to the rest of the country. All the emissions in Texas are being generated there, which is the opposite of the conditions in the northeast. Ms. Fitzmaurice assured Ms. Hildebrand that the differences that exist in Texas have been identified and are being considered as the efforts move forward.

Mr. Brenner urged the group to step back and refocus on the questions surrounding the Connecticut example. There are definite uncertainties but there will be air quality benefits. The difficulty is figuring out where and how large they are, because it is important to avoid treating them as zero, as well as granting them to areas that are not receiving them. He said the goal was to assess whether this model did a good job or if there was a completely different method that would be more appropriate. He characterized the track they were on as one that tried to use tools such as modeling and past figures for future predictions. The goal is to determine whether this will provide a good assessment for what the SIP credit should be.

Mr. Stoneman agreed with Mr. Brenner, and said that the goal is to feature other examples in the roadmap USEPA develops. Texas could certainly be one of the other examples. Also, he explained that the goal is to help states determine the best ways to implement the guidance.

Ms. Hildebrand said that they have gotten a lot of push-back while trying to implement this, and she encourages them to keep working on it. She also said that it is critical to account for reductions in modeling, because the challenges with the new ozone standards are going to be vast.

Mr. Stoneman added that they were trying to find a path forward that requires neither too much, nor too little documentation.

Barbara Bankoff, Siemens Power Generation, said that the approach presented was very interesting, and stated her interest in knowing what is considered renewables in the Connecticut program. She was particularly interested in whether nuclear were considered, and if not, how future renewables would come into play and be calculated.

Mr. McConnell said that Connecticut does not consider nuclear to be a renewable.

Mr. Stoneman said that Connecticut does include hydro as a small part of their program. This study tried to discount the renewables that included some NOx emissions. Approach number 1 included the range that reflected the pure renewables and the not pure, but the approach recommend that all states that attempt this take into account which renewables are being included.

Mr. McConnell added that Connecticut does include a classification system for the renewables based on their purity. The suppliers have to meet a certain percentage of class one, and class two and three.

Stephen Hartsfield, National Tribal Air Association, asked if they look at the total production of energy. For example, if a nuclear power plant exists and is emitting clean energy through a smokestack, there is uranium in relation to that power plant on tribal lands that is arguably not clean.

Mr. McConnell said that he did not know of state programs that consider nuclear power as clean.

Mr. Brenner added that energy obtained from a nuclear power plant is automatically considered zero for criteria pollutants. It would be incorporated into the SIP.

Mr. Hartsfield asked if this study is looking at the production of energy and not everything else that goes into the cycle, such as the mining and resources.

Mr. Brenner responded that they were considering the production.

Mr. Childers closed the meeting by discussing the next meeting in October. He informed the committee that membership will expire June 1st and that those who have been members for six years will receive a thank you for their contribution, but they are still welcome to continue working on work groups. There will be many new members in the October meeting and he will send out new topics to discuss. They currently have three

working groups, BACT, Voluntary Programs, and Sector-based Multi-pollutant. Members should inform Mr. Childers about their availability for the October meeting or topics they would like to discuss. He would appreciate feedback on the awards ceremony and suggestions for how to increase ceremony attendance.

Clean Air Act Advisory Committee
May 27, 2010
Almas Temple
Washington, D.C.

List of Attendees

William Becker	National Association of Clean Air Agencies (NACAA)
Jay Benforado	EPA OAR
Rick Bolton	Center for Toxicology and Environmental Health (CTEH)
Robert Brenner	United States Environmental Protection Agency (U.S. EPA)
Pat Childers	U.S. EPA
Anthony DeLucia	East Tennessee State University
David C. Foerter	Institute of Clean Air Companies (ICAC)
Michael Formica	National Pork Producers Council
Terry Goff	Caterpiller, Inc.
Lisa Gomez	Sempra Energy Utilities
John Guy	U.S. EPA
Stephen Hartsfield	National Tribal Air Association
Christopher Hessler	AJW, Inc
Susana Hildebrand	Texas Commission on Environmental Quality
Gary Jones	Printing Industries of America Graphic Arts Technical Foundation
Mark MacLeod	Environmental Defense Fund (EDF)
Keith Mason	U.S. EPA
Gina McCarthy	U.S. EPA
Jeff Muffat	3M
Don Neal	Calpine
Eric Svenson	PSEG
Eddie Terrill	Oklahoma DEQ
Eugene Trisko	United Mine Workers of America
Phillip Wakelyn	National Cotton Council
John Walke	Natural Resources Defense Council
Kathryn Watson	Improving Kids Environment
Ann Weeks	Clean Air Task Force
Anna Marie Wood	U.S. EPA