

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

APPROVED MINUTES

Air Quality Planning Committee
9:30 a.m., Wednesday, October 11, 2006

- 1. Call to Order – Roll Call.** Chairperson Stan Hayes called the meeting to order at 9:49 a.m. Present: Stan R. Hayes, Chairperson, Ken Blonski, Harold Brazil, Emily Drennen, John Holtzclaw, Ph.D., Kraig Kurucz, Ed Proctor. Absent: Fred Glueck.
- 2. Public Comment Period.** There were no public comments.
- 3. Approval of August 9, 2006 Minutes.** Mr. Proctor moved approval of the minutes; seconded by Dr. Holtzclaw; carried unanimously.
- 4. Discussion of California’s New AB 32 Greenhouse Gas Legislation:** *The Committee heard a presentation regarding AB 32 and its requirements and implementation schedule. The Committee discussed the possible implications of AB 32’s passage for the Air District’s Climate Protection Program and future Committee and full Advisory Council actions.*

Chairperson Hayes stated that there are two pieces to the climate change agenda before the Committee. 1) AB 32 which California has passed and the Governor signed approximately two weeks ago. This is landmark legislation with respect to climate regulation in California. 2) The second portion of the agenda deals with the implementation of the Carbon Footprint resolution passed at the last full Advisory Council meeting.

Chairperson Hayes stated that AB 32 mandates that California’s greenhouse gas (GHG) emissions be reduced to 1990 level by 2020. There are six different types of GHG emissions, carbon dioxide being the most abundant, and each of them has a different global warming potential. By January 1, 2008, the California Air Resources Board (CARB) must determine California’s 1990 emission level. CARB will then go through a process to implement regulations to reduce emissions to 1990 levels by 2020.

In response to a question from Mr. Blonski, Chairperson Hayes stated that the Kyoto Protocol set 1990 as the base year. The climate scientists have estimated that in order to abate the rate of increase in carbon dioxide, and reduce it to a level where they would like it to be, would take a much greater degree of reduction. It would only be achievable in the far future, such as 2050.

Continuing with the presentation, Chairperson Hayes stated that the legislature’s intent is that GHG emissions are to be reduced beyond 2020 and go beyond the 1990 levels. CARB is required to come back to the Governor and the legislature on ways to accomplish this.

Mr. Blonski inquired if the projected growth of the State was taken into account and Chairperson Hayes indicated that it was not. He added that there has been no formal estimation of the 1990 emissions. This is something that needs to be determined and CARB's job is to determine the 1990 levels.

Chairperson Hayes reviewed the sources of GHG emissions in 2002 and stated that transportation, at over 40%, is the largest emitting sector in the State. Dr. Holtzclaw stated that nation-wide transportation is a little over 20% for trucks and cars. California gets some of its electricity from out-of-state and has a mild climate. Industry tends to be high-tech, which uses electricity, but not as much as other industries. Also, agriculture and forestry, which are major businesses in California, is only at 8%.

Chairperson Hayes stated that the common theme is that anything that burns fuel creates CO₂. About 85%, or more, of greenhouse gases are CO₂ and the bulk of that comes from burning, such as burning fuel in your car. The pie chart shown reflects the mix of California businesses and driving habits. Dr. Holtzclaw commented that the per capita driving is less than the national average and there are a lot of Western states, as opposed to Pacific states, whose population drives a lot. Chairperson Hayes added that electric power often shows up as a higher fraction than 20% so the 19.6% on the chart is low compared to the national figures. It may be the type of fuel used, such as more natural gas being used in California than coal. There is also hydro power and California is also buying power from other states. The important fact is that cars are a major contributor to GHG emissions. The chart also shows where regulators would look if regulations were promulgated to reduce GHG emissions in California. It is clear that transportation needs to be addressed, as well as electrical power and industrial use.

From 1990 to 2005, emissions from the residential and commercial sectors remained about the same during that time frame. The industrial category dropped from 1990 to 2005 by approximately an amount that was greater than what would have been required under the Kyoto Protocol. Mr. Hess stated that this is due to the California Energy Commission standards on efficiency, such as efficiency on home water heaters, double-paned windows, and similar types of things. This is also taking place in the industrial sector, the Air District's rules which limit the amount of NO_x that can be emitted, forces industry to be more efficient in their operations. More is being done with the same amount of "energy" which translates to less pollution, whether it be CO₂ or the criteria pollutants.

Mr. Blonski inquired about outsourcing or sending overseas heavy manufacturing and to what degree would that affect emissions. There is a lot of heavy industry that is leaving the state and being replaced by other types of industry, which have fewer emissions. Mr. Hess noted that energy efficiency trends started about 20 years ago throughout industry and in homes. Fuel efficiency is critical right now in the transportation sector; it could have a significant cut in the CO₂ and criteria pollutant emissions. Most of the power generation in California, compared to 25 to 30 years ago, is combined cycle where the energy is used more than once to generate electricity. This is not seen in other locations.

Chairperson Hayes continued with the presentation and reviewed trends of GHG emissions normalized to 1990 in California versus the rest of the United States. The chart indicates that the trend did not go above the 1990 level until approximately 1998. Chairperson Hayes reviewed the graph showing carbon intensity in California versus other states. Carbon

intensity is defined as emissions per capita (per person emissions). The graph shows that the emissions per person in several states were comparable to or lower than the United States overall. The horizontal line on the graph indicates the emissions per dollar of gross state product (GSP). The graph shows that California has low emissions per dollar of economic activity.

Dr. Holtzclaw stated that many of the states listed have economies that have not risen as rapidly as California's and that they have more energy intensive industries. In response to Mr. Blonski, Chairperson Hayes explained that Texas is high because there is a lot of industry in Texas and there are high emissions relative to the number of people because Texas is lightly populated outside of the major cities. Mr. Hess added that Texas has a law that requires that all of the electricity must be generated within the state. Chairperson Hayes reviewed the CO₂ emissions from fossil fuel combustion and noted that California is second only to Texas in this area.

Mandatory GHG Emissions Reporting: The requirements of AB 32 were discussed. Chairperson Hayes stated that there is a portion of the bill that deals with mandatory GHG emission reporting, regulations that require reporting and verification, and sets out the rules of how it is to be done. CARB is to adopt these regulations by January 1, 2008. The law requires that ARB review existing programs, international, federal, and state GHG reporting programs. ARB is to make reasonable efforts to promote consistency and streamline reporting requirements.

Chairperson Hayes reviewed more specifics of the ARB regulations, which require monitoring and annual reporting of GHG emissions, accounting for GHG emissions from all electricity consumed in California, incorporating the standards and protocols developed by the California Climate Action Registry, and ensuring rigorous and consistent GHG emissions accounting, and provide reporting tools and formats to ensure collection of necessary data. In response to a question from Mr. Kurucz, Chairperson Hayes stated that there are certain sectors that will be looked at first. Petroleum refining, power generation and cement kilns are a few of the primary industries. Others include the transportation sector and landfills.

Rules and Regulations: Continuing, Chairperson Hayes reviewed AB 32's rules and regulations. He stated that the ARB must adopt rules and regulations that "achieve the maximum technologically feasible and cost-effective" GHG reductions. Early action measures require that by June 30, 2007, the ARB must publish a list of discrete early action GHG reduction measures and limits. By January 1, 2010, ARB must adopt the regulations to implement the early action measures on that list and must achieve maximum technologically feasible and cost-effective GHG reductions. In addition, by January 1, 2010, the adopted early action measures must be enforceable.

Chairperson Hayes indicated that a lot of work has already been done by the Climate Action Team. California has already put together a Plan for how the state would achieve its emission reductions. Items in this Plan may also be included in the ARB regulations. Mr. Hess gave an example of landfill gas that is used to make electricity instead of being flared into the atmosphere.

There is also a requirement to have a Scoping Plan by January 1, 2009. ARB has to prepare and approve a scoping plan to determine how the state will achieve the 1990 emission level

by 2020. The Plan has to be updated every five years. There are many things the ARB must consider when developing the Plan. Some items to consider include alternative compliance measures, market-based compliance mechanisms, should there be monetary and/or non-monetary incentives, consideration of voluntary measures, consider all relevant information, evaluation of potential costs and benefits of the Plan.

Based on the Scoping Plan, emission reduction measures will be identified and adopted by ARB. By January 1, 2011, ARB must adopt GHG emission limits and reduction measures sufficient to achieve “maximum technologically feasible and cost effective” reductions in GHG emissions. These limits will take effect on January 1, 2012.

When these measures are developed, ARB must consider many factors, including equity, cost, and interactions with efforts to improve air quality. Chairperson Hayes noted that the measures are adopted piecemeal, but there is a broader overall objective – improve air quality. Continuing, Chairperson Hayes stated that the reductions must be real, permanent, quantifiable, verifiable, and enforceable. The reductions must also be additional to GHG emission reductions that otherwise occur, and the emission reductions must occur over the same time period. ARB must also rely on best available science and economic information. The regulations may be revised after January 1, 2011.

Market-Based Compliance Mechanisms: Chairperson Hayes stated that AB 32 discusses market-based compliance mechanisms and that they may be used. Several factors need to be considered before it can be done. The other component is that ARB must adopt methodologies for quantifying voluntary GHG reductions, and to verify and enforce those voluntary reductions.

Key Dates:

- 2007 – June 30th – List of early action measures
- 2008 – January 1st – 1990 GHG emission level reporting and verification regulations
- 2009 – January 1st – Scoping plan for achieving 2020 limit
- 2010 – January 1st – Early action regulations
- 2011 – January 1st – Emission reduction measures
- 2012 – January 1st – Reduction measures operative

Some BAAQMD Issues: Chairperson Hayes indicated he tried to single out some places where the expertise or the interests at the District would cross over with AB 32 requirements:

- Methodologies for quantifying GHG emissions and reductions. The Air District has very well developed and sophisticated program for estimating criteria pollutant emissions and air toxics for stationary sources. This is an important role for the Air District.
- Definition of “maximum technologically feasible and cost effective” GHG reduction measures. The Air District has imposed Best Available Control Technology (BACT) programs in addition to other technology driven requirements.
- Interactions of GHG reduction measure with efforts to improve air quality. GHG emission reductions may do something to ozone, particulates, CO and air toxics. There are cross-effects that will take place. An example is that trucks emit carbon, which is black and absorbs. As is absorbs, it has a net warming affect on the atmosphere. On the other hand, other particles, particularly those that are formed

- photo-chemically, in the air from VOC's and NO_x as part of the photo-chemical process, are reflective. This would tend to cool the atmosphere. There is a need to understand how the trade-offs work.
- Design of market-based compliance mechanism to prevent any increase in the emissions of toxic air contaminants or criteria pollutants. It specifically states in the law that the ARB has to consider the effect of market-based compliance mechanisms on emissions of air toxics and criteria pollutants.

Chairperson Hayes stated that this shows that there are some places where the Air District has an important role to play in the process. Mr. Hess stated that it is important to note that in the upcoming legislative session there will be additional legislation for clarification of the implementation of AB 32.

Tom Addison, Senior Advanced Project Advisor, stated that there is a lot of interest in this bill by the soon-to-be regulated community on exactly what the bill means. The bill has been signed and it is a big program. In response to a question from Mr. Kurucz, Mr. Addison stated that all of the language in the bill was subject to much discussion. The "maximum technologically feasible and cost effective" language was the subject of much discussion. This language in this bill is seen as being a "win" for the environmental community. Chairperson Hayes provided copies of the bill to the Committee members.

In response to Mr. Blonski, Mr. Addison stated that within the environmental community there was divergent perspectives and views on several issues, such as market-based trading. Some groups were opposing the entire bill based on the fact that it had mandatory trading in it. In response to Ms. Drennen's question on the schedule, Mr. Addison indicated that the schedule is very ambitious.

Dr. Holtzclaw discussed smart growth/transit oriented development that reduces the amount of driving and, if encouraged by the state and the ARB, could become more wide-spread. Reducing the amount of driving, reducing heating and cooling energy because walls, ceilings, and floors are shared. There are then less exposed surfaces to the elements, which in turn, reduces building materials, etc. Mr. Addison responded that nothing in this bill removes any local land use authorities or decision-making abilities.

Mr. Hess stated that it is important to compare this piece of legislation to the Kyoto Protocol. There are major differences between the two. Kyoto is focused on countries and also has major exemptions. AB 32 focuses on industry. AB 32 could be the frame-work for an international accord for reducing GHG emissions world-wide. What needs to be looked at is ways to accomplish emission reductions in a cost-effective manner and fair manner world-wide. This piece of legislation should be watched throughout the world. Other states are moving forward on GHG emission programs.

In response to questions from Ms. Drennen on the Air District's role with respect to AB 32, Mr. Addison stated that the Air District had a "support and seek amendments" position on AB 32. There is a piece of the bill that states "nothing in this bill takes away any existing powers that anyone has." This statement in the bill is very important to the Air District. The Air District currently regulates stationary sources and there is an inventory of emissions from these sources. Their GHG emissions are tied to their permit conditions, which specify the

amount of fuel they are consuming, the amount of use, and hours of operation. Air District inspectors are in the field now looking at the sources. In order to have AB 32 work, the baseline needs to be accurate. In addition, there is a need to make sure the regulations are being complied with by the regulated industry. The Air District's role has yet to be determined. The issue is being discussed and it is anticipated that the air districts will play a significant role in this process.

Mr. Hess stated that one of the things that would be beneficial would be a Clean Air Act Science Advisory Committee (CAASAC)-type of procedure. Mr. Hayes noted that there are several advisory groups that are called out in the bill.

Mr. Kurucz inquired about comparisons between this bill and the Kyoto Protocol. With Kyoto, each country would set up market-based mechanisms that would allow trading throughout their whole country to make their targets as a nation. If there was a trading program with AB 32, would it be state-wide, or would it be more like the district-type programs because they already exist. Would it include trades that would be outside of the borders because there are companies that are outside or power that is imported. Someone could make a huge energy savings, but the actual reduction would occur at a power plant in another state. Mr. Addison stated that this will be determined later.

In conclusion, Chairperson Hayes stated that this is one of the most important pieces of environmental legislation that has come forward in California. It is an issue that has world-wide implications.

5. Implementation of Advisory Council Motion on Climate Change. *The Committee discussed initiation of planning efforts to implement the Advisory Council's climate change motion adopted at its September meeting. The motion established as a Council goal the reduction of its carbon footprint beyond carbon neutral to achieve AB 32's greenhouse gas reduction targets.*

Chairperson Hayes presented an update of the Carbon Footprint Analysis for the year 2006 for the full Advisory Council. Chairperson Hayes noted that some of the entries on the Analysis are placeholders for the present time. Accurate data will be inserted once the individual Council members submit the appropriate information. Chairperson Hayes noted that air travel to the Air & Waste Management Association conference in New Orleans is the largest amount of the Council's Carbon Footprint. Chairperson Hayes stated that attendance at the conference is important and that even though it is the largest segment of the Carbon Footprint, Council members should still attend the conference. If the resolution is to be implemented, the Council will need to find a way to offset the air travel more than one for one. The Council would need to go to something that is reflective of the percentage of reduction that is necessary to get to the 2020 targets of AB 32. The offset would then be a 1.2 or 1.25 to one basis. The cost of offsetting the 9 tons would cost about \$49.09 to fully offset at the going rate of \$5.50 per ton. That number will go up, but the cost to the Council would still be de minimis.

The Committee discussed identifying organizations which could bundle contributions of money from organizations for the purpose of funding projects to reduce carbon emissions. There was discussion on sending the money to non-profit organizations or sending the money to an organization that already exists that can do something that can have an affect in this

year. This would result in an immediate impact, rather than giving the money to an organization that may do something in the future.

Dr. Holtzclaw stated that aggregating lots of different organizations' money together could be more effective. Mr. Blonski inquired about looking at the equity market and buying shares and these shares would be traded. Chairperson Hayes responded that there are carbon markets, like the Climate Exchange in Chicago that could be contacted and added that there are organizations that will put the money in a "pool" and that could be researched by the Committee. Mr. Hess stated that the Executive Committee of AWMA discussed the issue of having a booth or a place where people can come in, calculate their carbon footprint for the meeting, fill in a card with their name, and put their card and money in a visible spot.

Henry Hilken, Director of Planning, Rules & Research, stated that there are many organizations that do this. There is more interest these days with more individuals and companies attempting to become carbon neutral. In Al Gore's movie he is traveling thousands of miles each year, but he contributes money to one of these organizations to make his carbon footprint neutral. The Air District's Climate Summit being held next month will be a carbon neutral event. A firm has not been selected as yet, but the District will calculate the carbon emissions and pay one of these organizations to off-set the emissions. The key is to see how the money is being used by the organization and will it be long-term emission reductions investments, such as energy efficiency or renewables, as opposed to something that may have a shorter-term benefit.

Chairperson Hayes discussed what it is the Committee needs to do to implement the resolution. The carbon footprint is a start. The Committee may want to get a presentation or further input from staff as to what their experience was been with the Summit. The question is how can the Council go carbon neutral and to look into long-term versus short-term benefits. In addition to the initial step of the carbon footprint and trying to be carbon neutral, the Committee should develop a plan. The plan would include information on where the Council is now, what the options are, and steps to take to get there.

There was discussion on different modes of transportation to the annual AWMA conferences, the equity issue, lifestyle changes, smart growth, collection of the money, and organizations to contact to offset the emissions.

Chairperson Hayes stated that the Carbon Footprint would be sent to the Council members so the information can be updated by the next Regular Council meeting. If the Council wants to go beyond carbon neutral, what are the options to do this. Staff could present information from the Summit and what was done to make that event carbon neutral. A baseline would be established this year from the Carbon Footprint and, in future years, the Council could see how the Plan is working. A report could be given at the Retreat.

Mr. Kurucz stated that each of the Committee members could conduct some research on organizations that the money could be sent to. The Committee could narrow it down to a couple of local organizations and invite them to speak before the Committee on how the emission reductions are provided. Dr. Holtzclaw recommended that the Council put in double the amount. Mr. Kurucz stated that one group that could be contacted is the C3, which is part of the Bay Area Council. They have developed some principles and the Committee could get a speaker from them who could discuss the principles and what their

thinking is on offsets. Mr. Hilken noted that the Silicon Valley Leadership Group has also been very active and they could also be invited.

Mr. Kurucz indicated he would look into getting a speaker from one of these organizations for a presentation at the November meeting if possible.

6. **Committee Member Comments/Other Business.** There were none.
7. **Time and Place of Next Meeting.** 9:30 a.m., Wednesday, December 13, 2006, 939 Ellis Street, San Francisco, CA 94109.
8. **Adjournment.** 11:51 a.m.

/s/ Mary Romaidis
Mary Romaidis
Clerk of the Boards