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Environmental, Energy & Technical Committee Meetings

March 9-10, 2010
Radisson Hotel, Reagan National Airport
Arlington, VA
(703) 920-8600

M I N U T E S

TUES-WED MARCH 9-10 2010

FOCUS GROUP SESSION

Practical Solutions for GHG Regulations in Tomorrow's Powerhouse
Jay Hofmann, Trinity Consultants, Inc.

Bob Corbin introduced the guests and new members for this meeting. The usual "round the table" introductions were carried out. The situation is changing on a daily basis relative to all things carbon with respect to the US EPA, the US Congress, the States, and the international scene.

An Updated Overview of the Status of State Level and EPA Regulatory Actions/Initiatives Concerning GHGs
Kathy Blue, Trinity Consultants, Inc.

The Mass v EPA decision triggered action by the US EPA. Under the Obama Administration, the US EPA has issued an endangerment finding. The EPA has prepared a light duty vehicle rule to be issued at the end of the month. The EPA has also issued a proposed "tailoring rule" which sets a lower limit for CO2 permitting. EPA reporting requirements were instituted in January. Once light duty vehicle rules are issued, PSD would be triggered 60 days later. Under the existing rules, sources of 100 ton/yr of CO2 or 250 ton/yr of major of combined "pollutants" would come under the rule. The Tailoring Rule proposed to raise the level to 25,000 tons/yr. This level still ran into a lot of small units being covered under the rule. At testimony on March 3rd, the administrator indicated that the level could be 75,000 ton/yr. The Rockefeller bill would delay stationary source GHG regulation under the Clean Air Act, but would not prevent issuance of light duty vehicle regulations. The Murkowski Resolution would reject the endangerment finding and ban EPA from issuing GHG regulations under the Clean Air Act. Several states have sued EPA on the endangerment finding alleging "faulty science" in the finding. Under PSD, there would be a BACT process. There would still be a "top down" BACT process. The various issues for doing a BACT analysis were considered to be the same or similar to current BACT. There was no consensus on whether sites should be forced to consider alternative locations or on the extent or degree of availability of CCS "demonstrated" technology. Energy efficiency should be considered in BACT analysis, but specific energy efficiency levels were not agreed upon. The EPA working group continues to work on these types of issues. The Calpine Russell City Energy Center proposed a 612 Mw natural gas fired combined cycle power plant in Hayward, CA. Calpine requested a CO2 BACT determination and a CO2 limitation from the Bay Area AQMD. In the BACT review, the board determined that subterranean or biosequestration were not feasible options. The Energy Commission determines the type of generation. Therefore the Air Board would not consider other fuels or generation sources.

The EPA has made clear the BACT should not include alternative technologies that alter the project's fundamental scope (this is particularly important for looking at IGCC as an alternative). The efficiency standard was selected to allow some flexibility in fuel, cooling water, and weather variations. The heat rate was selected at 7,730 Btu/Kwhr on an HHV basis at full load. Limits for CO2, CH4, and N2O were imposed for 1 hour, 24-hours, and annual standards. These were based upon a heat input limit (i.e. lb/MMBTU). The SE Idaho Energy Advanced Energy Center applied for a permit for a coal gasification facility which was issued in November, 2009. The Sierra Club and the Idaho Conservation League petition the IDEQ to include a CO2 emissions limit for a vent stream. The proposed limit was 756,000 ton/yr on a rolling 12 month basis. The limit was based on capture and sequestration of 58% of the plant's CO2 output. The limit would take effect 5 years after mechanical completion. In Congress, cap and trade has lost momentum due to health care and jobs issues. Hybrid bills have been proposed. State developments include a proliferation of mandatory reporting requirements. The CA AB-32 rules could be put under moratorium after the November elections. The Wyoming Supreme Court ruled that CO2 limits cannot be imposed on power plants (Basin Electric Power Coop, Dry Fork Station).

A Statistical Method of Driving Energy Efficiency and Savings at the Process/Plant Level

Nick Spates, Modular Process Control, LLC

Modular Process Control works on Energy Management Systems that address operational, technical, and behavioral factors to reduce energy consumption and costs. The goal is to engage the organization and drive accountability down to the operator level. The idea is to close the gap between required and actual. The work is focused on the plant as it exists today. On average, consumption can be reduced 10 - 15%. Performance standards are utilized to perpetuate savings over time. An evaluation includes processes and systems, awareness, and behaviors. Implementation steps include communications, teams, systems, controls, measurement, results, responsibility, and accountability. System elements for energy need to be identified within the management control system for the plant. Consumption patterns for the major utility components (fuel, electricity, steam, oxygen, etc.). Daily use patterns may vary widely. Ancillary equipment may not be turned off during equipment shutdowns. Many support components run in idling mode, waiting for full production. Weather has a significant impact on consumption (not just summer vs. winter). A good measurement system is critical to a good energy management system. Calibration, functionality, and linkage are all key to a good system. A good energy balance is needed to assure that energy losses or waste can be identified. The energy ratio highlights the variance between actual and expected performance. The energy opportunity log defines specific action items that generate savings. Key volume indicator models track historical performance vs. actual current use for major utilities. An energy requirements plan determines the theoretical amount of energy to produce products. The energy budgeting tool provides a budget going forward based on prior year improvements. There is also a carbon conversion tool to convert unit energy consumption reductions into carbon equivalents. Once reductions have been achieved, energy budgets going forward must incorporate these savings so as not to lose the gains that have been made by falling back into historical behavior. Energy audits are set up to provide some rigor and discipline to the process. During operation, energy use is monitored, analyzed, documented, and compared to the various performance requirements (historical, theoretical, budget, etc.).

Achieving Superior Energy Performance

Kathey Ferland, Texas Industries of the Future

Superior Energy Performance has been developed over the past several years and has been piloted in Texas. The goal is to drive continual improvement in energy intensity. A transparent system to validate energy intensity improvements and management practices could lead to ANSI accredited plant certification and be used as a standard for compliance in a carbon trading scheme. The ISO 50001 standard is used as a foundational tool. A tiered program with a verified record that creates value provides for a corporate culture of continuous improvement. The US Council for Energy Efficiency Manufacturing has been established to champion US industry in pursuing national energy efficiency goals. The ISO standard could influence up to 60% of the world's energy use across many economic sectors. A draft international standard will be published in April with plans for full publication in mid 2011. This is relatively fast for an ANSI standard. The ISO standard would be similar to the ISO 140001 standard for environmental standards. The standard is intended for all organizations that use energy. The benefits to certification include recognition, external financial incentives, and continuous improvement. Industry drives the strategy through the US Council for Energy Efficient Manufacturing and assists in the program design through the initial pilot plants. The DOE funds various program development activities. A tiered program is being developed in order to accommodate the flexibility desired by the various entities. These include partner, registered partner, and certified partner. The difference is the degree of verification or audit. The partner level would conform to ISO 50001 and measure and audit energy performance improvement. The partner would self verify. The registered partner would have additional performance levels and third party verification via remote review. In recognition of the differences between plants that have had ongoing energy efficiency programs and new adherents (with lots of low hanging fruit), there are two pathways (energy intensity and mature energy) for performance levels. The certified partner has all of the above, but has ANSI accredited certification with on site verification. Registered and Certified Partners can qualify for silver, gold, and platinum level awards for validated energy intensity improvements. Performance level criteria for the tow pathways have been developed. For the mature energy pathway plants, a best practices scorecard has been developed with the idea that such plants should have instituted best practices in order to maintain high levels of energy efficiency. The program resources that are available to help plants prepare for certification include standards and protocols from ISO and ASME and certified practitioners (including energy management system practitioners, system assessment practitioners, and SEP validation specialists). Four ASME standards have been developed to provide guidance on conducting energy efficiency assessments (pumps, air compressors, steam, and process heat). Measurement and verification protocols involve a methodology to verify results and impact. This protocol is still being tested. Increasing rigor implies increasing costs. At some point, the costs aren't warranted. On the other hand, to obtain carbon credits, some form of rigor will be required for validation. The Texas Pilot Project started in 2008. Audits will be conducted through July 2010. The plants involved will be the first plants certified by Superior Energy Performance. The process will also establish the first ANSI accredited Certification Body for Superior Energy Performance. DOE is rolling out the program throughout the country. Manufacturing plants in several areas can still apply to DOE for inclusion (and funding) in the program. The Save Energy Now Leader program involves a voluntary pledge to reduce energy intensity by 25% or more over 10 years. The major milestones going forward include selection of a SEP program administrator, professional training programs, finalization of the ISO standard, establishment of the certification system, and the attainment of a self sustaining SEP program based upon program fees.

Carbon Capture And Sequestration

Howard Herzog, MIT

Howard noted that the public is only gradually becoming aware of the existence of carbon capture and sequestration. In public surveys, the percentage of people that have even heard of CCS has increased from a few percent to 17% in the past 10 years. The MIT Coal Study issued in 2007 concluded that CCS is a critical enabling technology that would reduce CO2 emissions significantly while allowing coal to meet the world's pressing energy needs. Any hydrocarbon fuel is susceptible to CCS. All of the components of a carbon capture and sequestration system are commercially available today. However, there are no systems operating at the scale needed to service a major power plant (i.e. 500 MW). Most operations are at the 20 - 30 Mw scale. There are two power plants in operation that capture CO2 for commercial use. There are CO2 injections for acid gas disposal and enhanced oil recovery. There are million tons/yr injections of CO2 at 4 locations in the world. These include Sleipner, Weyburn, In Salah, and Snovit. Two systems use deep brine formations and two are used for enhanced oil recovery. There are 3,400 miles of CO2 pipelines in the US. Never the less, we need to go from the megatonne level to the gigatonne level to make any significant impact on CO2 in the atmosphere. Challenges for large scale deployment include costs, infrastructure, subsurface uncertainty, regulatory/legal issues, and public acceptance. Without field tests, the subsurface uncertainty leaves questions about capacity, movement, and leakage. On the regulatory/legal side, there are issues concerning ownership of the pore space, injection permits, long term liability, and potential health and safety issues. Public acceptance is a big issue both in the US and around the world. Injection projects have been stopped in a number of locations. Current cost estimates in 2007 dollars for an Nth plant with current technology, assuming the regulatory and liability issues can be resolved, are in the range of $60 - 65/tonne of CO2 avoided. This plant is based on a PC plant with post combustion capture. There are also oxy-combustion technologies and pre-combustion technologies. Oxygen firing is comparable to post combustion, but the cost of oxygen is high with current technology. Improvements in oxygen technology would benefit this technology. On the pre-combustion side, IGCC offers the opportunity to capture CO2 from a more concentrated stream at pressure. However, the base cost of the IGCC plant has been too expensive to gain much traction in the power industry. The AEP Mountianeer Plant has a slip stream for the ALSTOM Chilled Ammonia process at about the 30 Mw level. The Vattenfall Schwarze Pumpe plant is a 30 Mw demonstration of oxy combustion technology. To move the technology along further, on the order of 10 - 20 large demonstration plants at the megatonne level are needed. A number of countries are providing funding for projects. Never the less, many of these projects will find it difficult to go ahead. As an example, at the end of February, Southern Company turned back the award that they received from DOE in December. The reason that was given was that DOE wanted a firm commitment by Feb. 19th and Southern did not have enough time. In order for CCS to be ultimately successful, a market for CCS must be created. Early on, the carbon price level will not support the cost of CCS. A large cap and trade system might provide enough of a market, but additional support will be required. While the US is on record as having a goal of 50 - 80% reduction in GHGs by 2050, it will be very difficult to meet such a goal. CCS is not a silver bullet, but will be an important contributor. In order to meet the major goal, gigaton levels of CO2 will have to be stored every year by 2050.

ENERGY COMMITTEE SESSION

Frederick P. Fendt, The Dow Chemical Company, *Energy Committee Chairman*
Robin Mills Ridgway, Purdue University*, Energy Committee Vice-Chairman*

Introductions - **Fred Fendt**, The Dow Chemical Company

Chemical Engineering, Systems Thinking, and Climate Predictions
Don Koestler, Drexel University

Don pointed out that the world in not linear and that systems thinking is important to understanding how the world works. In order to get a result, process, skills, and attitude applied to the problem gives the result. There are no facts about the future, only predictions. In order to predict climate change into the future, the process, skills, and attitude needed to provide realistic predictions about the future have to be applied to the problem. There are a complex number of variables involved in the earth's processes that make it very difficult to account for all of the energy inputs and outputs required to perform a good material and energy balance on the earth. Subsea volcanoes can introduce heat into the ocean. Estimates run from 10,000 to 20,000 subsea volcanoes. Systems exist everywhere. Complex systems can have both detail complexity and dynamic complexity. Detail complexity can be handled by computers with enough computing power. Dynamic complexities are more difficult because past performance does not necessarily represent future performance. System models, of necessity, are validated by retrospective experimental performance. There are two kinds of systems, escalating and balancing. Escalating systems eventually become balancing systems. In looking at a system, it is important to draw the boundaries correctly. For climate predictions, the entire system has to be modeled (including the ocean and land systems). Even so, the model cannot be proven without valid, controlled experiments. Since we cannot run controlled experiments on the earth, proving a model is difficult. The key parameters are temperature and pressure. Understanding the pressure changes are important in climate activity. The major parts of the climate system include the sun (source of heat), the atmosphere (composition, temperature, and pressure), the oceans (temperature, composition, currents, and volcanoes), and the earth (structure, internal heat source, crust, volcanoes, and glaciers). One of the key questions is how good is the data. Computer models do not produce facts. They can only provide predictions. The earth over long periods is not operating at steady state. Evaporation rates, convection, precipitation, and radiation create an energy balance in the climate system.

Energy Star for Industrial Manufacturing Applications
Elizabeth Dutrow, EPA

The EPA Energy Star program promotes a corporate energy management program in an effort to provide products that use less energy as well as internal use. Energy efficiency offers some of the lowest cost opportunities to reduce energy costs and to reduce carbon footprint. Barriers to energy efficiency improvements prevent progress in this area. Barriers include lack of information on potential improvements, lack of objective measurements, short term metrics, decentralization, and lack of attention from management (for various reasons). Energy Star helps businesses plan for the future, establish formal energy programs, motivate continuous improvements, and involve the entire company. The program is a voluntary government partnership. The symbol is a registered trade mark that is brand owned and managed solely by the government. Products, homes, and

organizations can obtain the Energy Star label. Plants and buildings can establish an organizational energy management guidance program that results in measurable energy savings. The goal is to drive continuous improvement across a company. The program manages and quantifies all energy use that maximizes savings across all parts of the company. A number of companies have qualified for partnership awards. These companies typically have management systems in place where energy management is a priority and responsibilities are assigned. Strong communications programs are a necessary component of any successful energy management approach. A recent publication on energy strategy is available on the EPA website as well as guidelines for energy management programs (www.energystar.gov). A number of industries have been active for a number of years (cement, corn refining, food processing, glass, autos, petrochemicals, petroleum, pharmaceuticals, pulp and paper, steel, and metal casting). There are now over 1,600 Energy Star partners (including commercial as well as industrial partners). In order to partner with Energy Star, the application letter can be downloaded from EPA and the CEO of the company must sign the letter and mail it in.

ENVIRONMENTAL COMMITTEE SESSION

Maxine D. Dewbury, The Procter & Gamble Company, *Environmental Committee Chairman*
Rob Kaufmann, Koch Companies Public Sector, LLC, *Environmental Committee Vice-Chairman*

The minutes from the September meeting were approved as written. The usual round the table introductions were carried out. Lisa Jaeger provided the anti-trust admonition.

John deRuyter, E.I. DuPont de Nemours & Company

Amy Marshall, URS Corporation

The rules for the Industrial Boiler MACT, CISWI, fuel definition, and Area Sources will all be proposed on April 15, 2010. Packages have been, or are being, sent to OMB. The EPA Office of Solid Waste is handling the definition of solid waste. CIBO has contracted with URS to review the test data that has been collected under the Section 114 requests. URS is looking at the data and attempting to apply EPA type requirements onto the data to try to anticipate the types of rules that might be forthcoming. Recall that MACT levels are supposed to be set at the average of the best 12% of units in a given classification. Nearly 1000 facilities are involved in this effort. Setting the classifications will be a key part of the new rule. There were a total of 509 coal fired boilers in the database. About 17% of these units have some kind of acid gas controls. Although the acid gas cleanup may have been directed toward SO2 control, some chlorides are undoubtedly collected. Thus, these units will likely have lower chloride emissions. These units will set the control level for chlorides, meaning that the other 83% will likely need some kind of acid gas control for chlorides. Of the 1008 natural gas fired units, 977 have no controls. Some of these units are likely to be process heaters. Another version of the test database will be issued on April 14. There were some problems with the transfer of data from the electronic reporting tool to the Access database. Hopefully, these will be taken care of in the new database. The procedure required the reporting of results below detection limit as being at the detection limit, so as not to imply the result was zero emissions. Not everyone followed directions. This has the potential to average in a zero result for a number of units that would be counted in the best 12%. Variability has to be taken into account. In the medical waste rule, EPA used a 99% upper confidence limit to assure that the mean value and the data around the mean has a 99% confidence level of being below the upper confidence limit. Data can be skewed (ie not

normally distributed). The skewness can be accounted for by using a log normal distribution rather than normal. The actual calculations may be different for different compounds that are in the database. With respect to HBCA, we learned at the Annual Meeting that the best we could hope for is mention in the preamble. Looking at some of the data for gas units, the total hydrocarbon data from existing units shows a wide scatter of the data. One of the complaints from the environmental community in the law suit was that "no controls" was not acceptable for a MACT floor. This would imply that some gas fired units might need to have "controls". Boilers are coming under increasing panoply of proposed rules. These include, in addition to the Boiler MACT, PSD/NSR, Ozone NAAQS, CAIR with Regional Haze, PM fine NAAQS, revised NSPS, State rules, Mandatory GHG reporting , CISWI MACT, Air Toxics, and residual risk/SSM. Over and above these rules, the whole GHG regulatory issue adds to the problem. It is likely that additional litigation will follow.

RCRA Ash

Gary Merritt, Inter-Power/AhlCon Partners, L.P.

EPA submitted a draft rule to OMB on the subject back in October. OMB asked for comments from the other agencies. OMB also went to a number of industry sources for comments. A number of groups have either met with OMB or sent comments. EPA was directed to meet with a number of agencies. A particular concern was the beneficial use of ash. Most users have stated that they would not use ash if it were classified as a hazardous waste. EPA came up with a "hybrid" proposal, that ash was a hazardous waste unless it was used beneficially. Again, users said that they would not use the ash under these conditions. The governors have weighed in indicating that the ash should fall under subtitle D, not subtitle C (National Association of Governors, the Southern Governors, and the Western Governors). The Office of Surface Mining was preparing some rules but waited for EPA's proposed rule. The hang-up is that the environmental groups want a "federally enforceable permit". Under subtitle D, the states have the initiative. An alternative proposal is that the ash in question undergoes a RCRA TCLP determination. This is a leachate test. If the test shows that hazardous substances can be leached, the ash would be hazardous. If not, the ash is not hazardous and should be under subtitle D. If the ash is truly hazardous (as determined by RCRA TCLP), it would come under subtitle C in any case. Most likely, the coal and the data would be checked. Either another source of coal would be used or the ash would have to be managed as a hazardous waste. With regard to "identified" damage cases, these were mostly tied to water conveyance of ash to a site (dam or structural fill). The TVA failure was a dam failure. Pennsylvania and USWAG have reported that they have not seen an ash that did not pass the RCRA TCLP test. The water issues could be handled under a different rule such as NPDES or the Safe Drinking Water program. Impoundments could be covered under the Clean Water Act. There is also the potential for legislation that would allow EPA to provide a federally enforceable permit under subtitle D.

Update on Clean Water Act

Ann McIver, Citizens Thermal

Section 316(b) of the Clean Water Act covers the location, design, construction, and capacity of cooling water intake structures. The requirement is to use the best available technology to protect aquatic organisms from being killed or injured by impingement or entrainment. Changes to the rules came in two phases: Phase I covered utilities and manufacturers that withdraw 2 million gal/day that use 25% or more for cooling water. Compliance strategies include limited intake capacity and default

screen velocity. Phase II covered electric utilities that withdrew 50 million gal/day. Compliance could include additional fish protection technologies and restoration measures. A Phase III rule was proposed the flow conditions were such that the application appeared to be new offshore oil and gas. Litigation resulted in a remand of certain provisions of the Phase II rule. The EPA issued a memo in March 2007 suspending the final Phase II rule. Phase III litigation went to the Court of Appeals. The case was argued in December. EPA wants a remand. The Court has not decided. A coalition has formed to follow EPA's rulemaking (CWIS Coalition). EPA is developing a new rule that will combine Phase II and Phase III requirements into a single program. A proposed rule is anticipated in mid 2010. The final rule would then go to mid 2012. EPA has initiated data collection efforts, mostly be site visits. They may consider "new information" since the 1999 information collection request. EPA is recommending that sources review the phase II technical support documents. The coalition is proposing to maintain the definition of cooling water to encourage water reuse. Determinations should be made on an intake by intake basis. Systems with low velocity screens (less than 0.5 ft/sec) should be exempt. The 50/100 million gal/day value should be the threshold. The actual yearly average flow should be used rather than the design flow. Options for case by case selection of potential technologies, water conservation and reuse, and technology installation should be preserved. Requirements for Phase III facilities must consider all of the variables (energy impacts, GHG emissions, chemical use, etc.)

RICE Rule

Ann McIver, Citizens Thermal

The RICE Rule was issued last month. The rule only covers compression engines (diesel). The spark ignition engines will be covered in August. The rule covers units with horsepower ratings over 500 horsepower. Some engines in the 300 - 500 hp range have less stringent limits. The key requirement is 23 ppm for CO. Black start and emergency engines are included in the rule (mostly good combustion practices). Area sources and major sources are included. An inventory of such engines is recommended for each plant as many of these engines will now be covered under the rule. Reporting requirements are different and increased. There are date issues to be concerned about as the manufacturing date may be the trigger date rather than the installation date.

GHG Regulation under the CAA

Maxine Dewbury, The Procter & Gamble Company

Rob Kaufmann, Koch Companies Public Sector, LLC

EPA is planning to issue a mobile source standard by the end of the month. Combined with the endangerment finding, this would start triggering PSD/NSR and Title V permit requirements. The current threshold covers all pollutants "subject to regulation" under the CAA. The threshold is current 100/250 tons/yr. EPA proposed the "Tailoring Rule", which would raise the threshold to 25,000 ton/yr (about 47 MMBTU/hr when firing gas). The legal standing for this is questionable. The 250 ton/yr limit would be under 0.5 MMBTU/hr. Such a limit would mean that virtually all of industry would become a major source for Title V and PSD. EPA's policy and interpretation is that a major source for one pollutant means a major source for all. That means that nearly any change at a facility would require a PSD permit and that state permitting alone would no longer suffice. This means ambient air modeling and permit requirements for all pollutants. The increments for PSD are 10 tons/yr for fine particulates and 40 tons/yr for other criteria pollutants. A typical PSD permit takes 18 months.

There is also the presumption that the states will change their SIPs to take into account the GHG requirements. The EPA has indicated a willingness to raise the threshold to 75,000 ton/yr. Even so, the level has to be temporary as the CAA requires a 250 ton/yr threshold. The usual NSR arguments such as potential to emit vs. actual emissions, maintenance & repair vs modification, state permits vs. federal permits, all come into play with this requirement. The implications beyond the permits for existing units include the impacts on efficiency improvement projects (to reduce carbon footprint).

Rob pointed out that the endangerment finding has been challenged by 17 parties, including several states. The basis of the challenge includes ignored confounding studies, inadequate justification for health effects, and economic impacts. Congress has expressed concerns with EPA regulation of GHGs. EPA has begun to respond to the criticisms. The EPA stated that it must follow the Supreme Court decision (although the Court allowed EPA to not issue an endangerment finding). The administrator told a House Appropriations Subcommittee that EPA will need more funding beyond the $56 million in the FY 2011 budget to address GHG emissions. The administrator told a Senate Appropriations Committee that the tailoring rule would be raised to at least 75,000 ton/yr and then decline over time to the 250 ton level. Legislation has been introduced into Congress to delay GHG requirements for at least 2 years. The EPA CAAAC GHG BACT work group made several recommendations to EPA but was unable to reach consensus on a number of tough issues. One recommendation was to apply BACT only to a new or modified plant. The states were concerned about what BACT for GHGs really is. The clearinghouse needs to be expanded. CCS as BACT depends on both the capture and the sequestration processes being in place. Energy efficiency was deemed important, but a standard is difficult to decide. There is no agreement on fuel switching as a requirement. The definitions of "fundamental business purpose" and "basic design" will have an impact on BACT. The role of commercial guarantees in considering a BACT level was not agreed upon. Whether there should be a cost effectiveness threshold for GHG emissions could not be agreed upon. The carbon neutrality of biomass combustion was debated and not agreed upon. Another issue is the impact of adding controls for GHGs that impact the other pollutants. This would result from the energy penalty associated with current CCS technologies. The loss of power from an existing unit would have to be made up on another unit which may increase overall emissions.

NAAQS and CAIR Update

Rob Kaufmann, Koch Companies Public Sector, LLC

The new 1 hour standard of NO2 NAAQS is at 100 ppb. The 53 ppb annual standard is maintained. SIPS are due in January 2013 and attainment is required by 2017. Emissions are 58% mobile and 42% stationary. The SO2 standard is being reviewed the range is currently at 50 - 100 ppb, although they are taking comments on 150 ppb. Now that the utilities have put scrubbers on most of their large units, industrial units become the largest source of SO2. Comments have focused on the fact that other standards (WHO and CARB) are higher so that health effects are over stated by the proposed 50 - 100 ppb level. The new rule is anticipated by June. The monitoring network is to be updated. Some monitors are to be re-sited. Over 100 additional monitors are to be located within states based on a state's contribution to national emissions. Modeling becomes an issue at these low levels as atmospheric changes can produce anomalies in the model results. The ozone standard is on an accelerated schedule. The current standard is 75 ppb. The anticipated standard is in the range of 60 - 70 ppb. The number of non-attainment areas jumps dramatically as a result. There will also be a cumulative standard that integrates exposure with hours. The new ozone standard would subsequently require more NOx reductions in order to meet the standard. Non attainment areas

require LAER for new, or modified, units with offsets for any emissions. Existing sources are subject to RACT. States can look as far as 200 km outside of the non attainment areas to obtain reductions. The PM2.5 standard is currently 15 microgram/m3. The EPA is looking at a 12 - 14 microgram/m3 standard. The revised CAIR rule is still planned for April. Key issues will be the inclusion of large industrials and the standards being sufficient to meet the proposed new NAAQS standards. Any trading will likely be severely limited due to the court decisions.

Litigation Update

Lisa Jaeger, Bracewell & Giuliani, L.L.P.

The NSPS case in 2006 was briefed, but pulled back when the new EPA decided to revise the NSPS standards. The CO2 issue was originally severed, but now may be included in the new NSPS. Ozone NAAQS had pending litigation on the old level (75 ppb). EPA pulled back this rule as well. In the past, we had supported these rules. Once the new rules are issued, EPA will request that the old cases be dismissed. New litigation will then start up again. With the tighter standards, it is unlikely that we will be supporting the agency. The certified protocol gas rule (Part 75) was challenged for not going through public comment. The rule is expected to now go through public notice and comment. The SSM provisions case were not reviewed by the Supreme Court. EPA is now free to do what it wants on SSM. The Johnson memo stated that a pollutant is not regulated until there is actually a rule that forces control. A new memo from the EPA essentially upholds the concept of the Johnson memo. The new litigation starts with the Hospital/Medical/Infectious Waste/Incinerators MACT rule. The 3 issues for this rule are SSM, pollutant by pollutant floors, and MACT on MACT. The parties are negotiating a settlement on the SSM issue. CIBO is part of a coalition in an amicus brief. The MACT on MACT issue is important. The original rules were promulgated in 1997. In 1999, the Court remanded a portion of the rules to EPA. The standard was still in place. Units had to install controls to meet the proposed standard. Now, the EPA is relying on data that was taken with the controls in place, so that MACT is being applied to units that already installed MACT to set the limits standards. For the pollutant by pollutant floor, the methodology isolates the data for each pollutant. This gives rise to standards where no one boiler can meet all of the standards. The case will be briefed in the next month. EPA has notified the Court that they have found some transcription errors in the data and will be proposing some new limits based on these corrections. They indicated that the changes would not impact the issues before the Court. On climate change, there are 5 rules under contention including the mandatory reporting rule, the endangerment finding, the tailoring rule, the light duty vehicle rule, and the interpretive rule (restatement of Johnson memo). The endangerment finding is the lynch pin. Petitioners and interveners include many trade associations, members of Congress, and many states. Intervenors supporting EPA include 16 states and the City of New York. The agency has also been petitioned for an administrative reconsideration. The Congress has also challenged the finding and is proposing a delay to give Congress time to provide legislative changes to the CAA for proper regulation. The LDV rule has not come out, but will likely be challenged. The interpretive rule and the tailoring rule are anticipated to be released in April.

GOVERNMENT AFFAIRS SESSION

Anthony Reed, Archer Daniels Midland Company**,** *Government Affairs Committee Chairman*

Government Affairs

Karen Neale, Hummingbird Strategies, LLC

Our speaker is from the Senate Energy and Natural Resources Committee. Energy legislation has been one of the vehicles for providing some climate related regulations. The planned visits today are related to the Industrial Boiler MACT. The Senate staffers will be asked to consider a draft letter to send to EPA to consider Industrial issues prior to release of the proposed Boiler MACT rule. While we don't know what the final rule will be, our concern is that the rules will be set up such that no one boiler can meet all of the rules. Further health based compliance is being removed from the rule. Compliance with the proposed rules will be costly.

Senate Energy Bill

Jonathon Black, Senate Energy and Natural Resources Committee

Jonathon reports to Senator Bingaman, chair of the committee. Things have been changing daily. The recent newsworthy item is the Kerry, Lieberman, and Graham proposal for a comprehensive energy and climate bill. There are no details on this proposal, but there have been a lot of meetings. Pricing carbon and cap and trade are the key issues. Another potential track is to have an energy only bill. Such a bill was passed out of the committee last year. There will likely be an energy/climate debate before the recess in August, but it is not clear that the debate will result in a bill. With regard to energy efficiency, there are hearings going on this week. Tax incentive issues come under Chairman Baucus.

Next, Technical Focus Group/Environmental & Energy Committee Meetings
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