CIBO Annual Meeting

Woodstock Inn

Woodstock, Vermont

Oct. 19 – 21, 2016

CIBO's 2016 Annual Business Meeting

I. Opening Statement – **Ann McIver, Citizens Thermal**

The theme for this year's Annual Meeting is "Navigating the Road to a Sustainable Energy Future". **Ann McIver** noted that Vermont is perfect reminder of why we pay attention to the environment. **Ann McIver** was appointed to the CIBO Board of Directors Chairperson upon the retirement of **John C. deRuyter, E.I. DuPont de Nemours & Company** this spring. Ann introduced the remainder of the Board which includes **Mark Calmes, Archer Daniels Midland Company** as Vice Chairman, **Scott Darling, Alcoa Inc., Steve Gossett, Eastman Chemical Company**, **John (Jay) Hofmann, Trinity Consultants, Inc**. Secretary/Treasurer, **Amber LeClair, The Babcock and Wilcox Company**, and **Chris Keuleman, International Paper. Amber LeClair** replaced **Carl Bozzuto** upon his retirement from the Board and **Steve Gossett** was added to the Board replacing **John C. deRuyter**. There are 5 major CIBO committees. These include the Environmental Committee chaired by **Chuck Hallier, Cargill Incorporated**, the Energy Committee chaired by **Fred Fendt, The Dow Chemical Company**, the Membership Committee chaired by **Denis Oravec, AAI-JMP Engineering**, the Technical Committee chaired by **Jason Philpott, Eastman Chemical Company**, and the Communications and Outreach Committee chaired by **John (Jay) Hofmann, Trinity Consultants, Inc**. **Ann McIver** noted that **Robert (Bob) Bessette** has been President for 21 years. **Bob Bessette** and his staff have made all of these activities work smoothly. **Ann McIver** pointed out that the depth of technology and experience in energy and environmental issues has been what makes CIBO so successful.

Robert (Bob) Bessette noted that there have been a substantial number of changes over the years. Back in 1970, steam was the driving force in sustaining our commercial, institutional, and industrial activities. Today, a whole host of pressures and issues are threatening the sustainability of our industrial production activities. Going forward, we will need to integrate the new challenges and technologies with the knowledge and experience of our existing members. A strategic planning session was held in

September to begin the process of addressing that integration. We have already begun to make changes to our May Conference, now the Operations, Maintenance, and Performance Conference. We will hear more about these activities this morning. Our members provide us with "best and brightest" in the energy and environmental space. Our credibility, whether on the Hill, with EPA, with DOE, and others is very high and we appreciate your participation to make that happen.

II. Membership – **Robert (Bob) Corbin, CIBO Consultant** and **Denis Oravec, AAI-JMP Engineering**

Robert (Bob) Corbin pointed out that Membership is a full time job and is everyone's job, as membership is the lifeblood of the organization. There are currently 94 members, with a roughly even break down between owners and suppliers. Membership has dropped off from 125 since 2011, when the revised Industrial Boiler MACT was proposed. The losses were primarily in the Associates that supplied back end equipment. With the compliance date for the MACT rule this year driving the conversion of coal fired units to natural gas, the back end equipment business has dried up for the industrial markets.

The Annual Survey provides us with feedback from our members about the major issues and needs that are important. A complete packet with these results is available and will be posted on the website. In the environmental area, the NAAQS remains the top concern. In energy, CHP moved up to the top spot and energy efficiency moved into second place. In the technical area, CEMS was added along with the steam/electric balance at a plant or facility. All of the technical interests have impacts on policy.

A matrix is being prepared to align the technical interests with the appropriate policies. Major benefits continue to be networking and staying current of the ever changing regulatory issues. Members have requested more technical case histories at the conferences. Alternative fuels have been highlighted by the membership. Issue information availability was also noted as a valuable resource. With the current changes, a broadening of the CIBO scope has been suggested. The drivers have been segmented into economic, environmental, energy, and sustainability issues.

Denis Oravec reported on the 2017 membership plan. The Membership Committee, along with the Outreach Committee, serves as the sales and marketing function of CIBO. Again, the plans are backed up by the volunteer members. The organization needs the help of its members in executing our membership plans and sustaining the organization. The current trends are driving us toward a more diverse membership outreach. Our members have energy needs that involve more than just the boiler. Water issues are in front of us today. Climate issues will be an ongoing driver as many governmental plans have requirements through 2050.

Our goal is to be the steady voice of reason in the energy and environmental arena. In particular, CIBO is the one place where all of these issues are considered together. Member retention is important. We have a process for contacting members that we haven't seen at our meetings. We have introduced some webinars to address those members who have travel restrictions. These webinars were very well received and we expect to do more in the future. For new member development, we are targeting for 10 new members. If our hit rate is 30%, that means we need to be in contact with at least 33 potential new member companies in order to meet our target. We do have a path for membership that includes getting prospective members to one of our meetings. When that occurs, our hit rate improves to 80%. Membership is the lifeblood of our organization.

III. Treasurer's Report – **John (Jay) Hofmann, Trinity Consultants, Inc.**

John (Jay) Hofmann noted that we experienced a small loss last year for the first time since the early 2000's. Membership continues to supply most of our funds. Expenses focus on legal, salaries, and office expenses. The fund balance is still good. Membership is still higher than the early 2000s, but have trended downward in recent years. Dues continue to supply 75% of our funds. Meetings and conferences supply the other 25%. Meetings are budgeted to break even. Conferences can supply a surplus if we get enough attendance. Of course, attendance comes from our members, thus amplifying the impact of membership on our finances.

In 2016, we will likely miss budget again due to the loss of the Associate members that are related to the switch from coal to gas. The Treasurer's wish list includes increasing membership and a concerted focus on making the conferences attractive to both members and non- members.

IV. Strategic Planning – **Mark Calmes, Archer Daniels Midland Company**

The Board decided to hold a planning meeting in September to discuss the future direction of CIBO. A SWOT (Strengths, Weaknesses, Threats, and Opportunities) analysis was done on the organization. Both internal and external attributes were evaluated. **Mark Calmes** pointed out that the membership input on these type of issues is important. If any members have input on these issues, please contact a Board member by whatever means you are comfortable with. The vision statement was reviewed and revised with a few tweaks.

There are two Board members whose terms are expiring. **John (Jay) Hofmann, Trinity Consultants, Inc.** and **Scott Darling, Alcoa, Inc.** were re-elected to the Board. **Amber LeClair, The Babcock and Wilcox Company** and **Steve Gossett, Eastman Chemical Company** were also confirmed to replace the retiring Board members for their respective terms.

CIBO's Annual Business Meeting Adjourns

CIBO's Annual Meeting Begins – Navigating the Road to a Sustainable Energy Future

V. Opening Remarks – **Ann McIver, Citizens Thermal**

Ann McIver introduced the new members that were present along with our Honorary Members. We also have a potential new member in Horn Industries. The usual "around the table" introductions were carried out.

VI. Energy Implications of Everything We Do – **John Litynski, US DOE**

John Litynski is substituting for **Angelos Kokkinos** at DOE. His group works on coal energy and especially CCS. He noted that without CCS, the cost of carbon mitigation would double or triple to meet the goals. In particular, the industrial sector will be extremely difficult to decarbonize. The DOE projects include about $315 million. The tax incentives are looking at $2 billion, while the loan guarantee office is considering $6 billion. The current incentive for storage is $10/ton. A proposed level is being considered at $50/ton.

Coal is still being forecast to include 200 Gw for the foreseeable future. There is a significant program in advanced CO2 capture technologies. Currently, it is estimated that CCS would increase the generation cost of electricity by 80 – 100%. The goal is to reduce that cost by 50%.

Carbon storage is being carried out through the Regional Partnerships. 30 smaller scale projects have been carried out. Going forward, 8 large scale projects are being planned. Permitting and characterization have been initiated for large, long term storage sites. The CarbonSAFE program will be fully characterizing several large scale sites to be ready to accept CO2 for storage in the future. The big cost is still expected to be in the capture process. The current figure is $60/ton.

Currently, there are several pilot scale, second generation systems that expect to reduce the cost to $30/ton. Transformational technologies are expected to produce an actual reduction in cost of electricity. The Kemper IGCC plant is now coming on line. This plant will use a TRIG gasification system and couple that with 65% CO2 capture to sell CO2 for EOR. PetroNova will come on line this year with an MHI carbon capture process. The Summit Power project also has DOE support. The Archer Daniel Midlands Company, project will be storing CO2 from ethanol production. Integrated retrofit projects in the 10 – 50 Mw range are the current focus. Commercial scale plants in this size range are anticipated by 2020.

Utilization continues to gather interest. While the long term goals will still require sequestration, there are still potential utilization concepts that could help to reduce the cost of getting these programs off the ground. The industrial sector in the US could contribute 10 – 15% towards the overall goal.

VII. Environmental Regulatory Activity - **Steve Fruh, US EPA**

There are lot issues going on with regulatory activity in the various rules related to air emissions, including active litigation. The Boiler MACT Decision covered 14 or more issues. The court sided with EPA on most of those issues. The one that was vacated was the standard setting approach with some of the categories concerning not using all of the available data. If a category is described by units that co-fire various fuels, then such units that have data should have been used in the standard setting. EPA has requested that the vacatur be converted to a remand. This approach can be implemented fairly quickly.

There has been no response at this time from the court. The MATS rule also has been litigated. In particular, the startup and shut down issue is a part of both MATS and Boiler MACT. Work practices are currently preferred as an approach to working through startup and shut down. Malfunction may come back into play. Affirmative defense has been taken out of EPA's hands by the courts. The agency is now working on the problem in the refinery and chemical industries. We should expect to see some more practical approaches to the malfunction issue.

It was reported that a state was holding a brand new unit to the regulations for operating units. For utility units there is a 180 day period for commissioning. This time frame was thought to be generalized. There may not have been a specific reference to this period in the Boiler MACT. This particular state may have then applied the routine start up provisions, which requires all controls to be operating once he unit is out of the startup period (4 hours after useful thermal steam production).

The MATS rule had some issues remanded for cost consideration. EPA has been using co-benefits for justification of some standards. There is a turbine NESHAP as well as boilers. For many technologies, the original MACT rules are supposed to be reviewed every 8 years. Thus, the turbine MACT rule is due

for review. The eNGOs have sued EPA for missing these dates. EPA has filed a brief for a schedule on these. The turbine review is in process. A facility list has been prepared and needs to be vetted.

The next step will be an ICR questionnaire for the rule. The original rule was issued in 2002. The original approach was invalidated by a court ruling, which will require EPA to make adjustments. There will be opportunities to communicate with EPA on the issues. The goal would be to get to a point that by the time the rule is issued, there are no surprises. That does not mean that there is agreement. However, at least the issues would be identified ahead of the rule making.

EPA is thinking about including boilers within an industry into their own rule making. Thus, boilers in the steel industry would be just another affected source within that industry. The idea would be to make those boilers now covered in that industry not subject to the Boiler MACT. At this time, this is only an idea. The CPP is in the courts. For new sources, briefs are due in January for the 111(b) rules on GHGs. The cost manual is being reviewed and industry input is desired.

VIII. Industry and the States – **Clint Woods, AAPCA**

AAPCA (Association of Air Pollution Control Agencies) was formed in 2012. This consensus driven organization of state and local air quality agencies focuses on technical information sharing while serving as a conduit to EPA. There are 20 member states with 11 technical committees. They are a part of the Council of State Governments.

One of the new topics is personal air sensors. An individual can purchase a personal ozone meter. The reading may be different from the monitor that is used to determine whether or not an ozone alert is warranted. This situation often leads to phone calls and complaints. A fact sheet has been prepared about such devices.

A timeline with a number of state deadlines identified has been prepared. Nearly 3 dozen such deadlines have been identified for the next 5 years. There are more that are known and need to be added. Another 18 or so actions are coming out in the next 3 months. Guidance documents and NAAQS review milestones are also anticipated before the end of the year. In 2017, additional activity on the NAAQS take place. Final designations for the ozone NAAQS will be issued. The GHG work will include PSD and Title V regulations. Another 6 activities on remands and consent decrees are anticipated.

There will be a number of eNGO law suits. In the last 6 months, nearly 20 “intent to sue” statements were issued by the eNGOs. Interstate and international transport issues are also coming up. Environmental Justice is another topic that will raise more issues. Arizona is the leading litigant against EPA on attainability concerns, particularly background ozone levels and contributions.

From the states’ point of view, the low hanging fruit has already been picked. Finding additional NOx reductions, for example, will be very difficult for some states that already have fairly stringent regulations. Relative to the Clean Power Plan, the 20 member states are ahead of the rest in terms of meeting the goals of the plan. There are at least 10 more considerations that EPA has to come up with once the legal issues have been decided.

IX. Corporate Financial Drivers and Implications – **Heidi King, GE Capital**

Companies are coming under increasing pressure to go beyond just compliance and engage in “social responsibility” and “sustainability”. This pressure comes from investors, regulators, lenders, lessors,

communities, employees, and others. Diverse entities want increased transparencies across a wide range of corporate activities. A number of rating agencies have a number of different definitions for many of these issues.

GE has adopted its own definition of sustainability in order to "own" its story concerning the subject. Rough definitions are also in place for environmental, social, governance, and sustainability. Some assumptions are that putting something on the company's website means that the Board of Directors knows about it. Investors appear to fall into 3 groups: sustainability (risk), socially responsible (diverse interest), and governance (managing the issues).

Socially responsible investors typically have a single issue that is near and dear to them. Governance is more to see that management is "on top of this issue". There are multiple web based organizations that are advocating sustainability considerations at companies. Some organizations track and rate funds that invest in the markets. VW took a major hit on stock price with their scandal, as did BP. Investors don't have all of the facts and will typically over react. The performance of "sustainable" mutual funds appears to be better than average. Water, climate, and climate change are the major themes cited by these groups.

There is now a Sustainability Accounting Standards Board (SASB). It has posted draft standards on their web site that will eventually be used by the rating agencies and others. These might be how to attempt to quantify risk in certain types of activities. Climate risk has become a major topic in terms of how this problem might impact a company. Regulators like the SEC require a forward looking management discussion and analysis along with the risk factors. This includes a discussion of Climate Change legislation and regulation and their impacts on the company. The SEC is now asking for sustainability disclosures. Yet some 80% of comments receive by the SEC were on sustainability issues.

UN initiatives are supporting sustainability disclosure as well as the OECD. Exxon is being investigated over what they have stated in their sustainability disclosure. Lenders also consider issues beyond compliance. They are concerned about getting their money back. Most banks and insurance companies typically worry about serious accidents, which could seriously impact the ability to get paid. Issues that hurt credit quality, asset impairment, potential direct liability, and reputation. Standards are being adopted throughout the financial sector.

Lenders are keenly aware of eNGO organizations that publish "facts" about our companies that may or may not be true. These organizations also pressure lending institutions to avoid making loans to those companies that are deemed to be environmentally and socially irresponsible. Thus, compliance is no longer enough. It is critical to be proactive on this subject. It is important to "tell your story" to get out in front.

X. Commerce in the New Era of Energy/Environmental Regulations

Vincent (Vince) Albanese, Consultant

The subject matter of sustainability is a fascinating one. It is much broader than most people think about. Hurricane Matthew uprooted a very substantial number of pine trees. This natural disaster has led many to question why there are so many pine trees. Arborists, of course, want more trees not less. Sustainability covers a lot more than just environmental compliance. These things are complex. Some restrictions in one area can impact another. Global organizations tend to consider sustainability as the

intersection of social, economic, and environmental considerations. Attaining a policy or activity that can satisfy requirements in each of those areas provides a sustainable policy or activity.

The NOx SIP Call was basically implemented between 2000 and 2003. Very substantial NOx reductions were achieved as a result of this regulation. The plan was vetted by the stakeholders prior to the issuance of the plan. In this way, it was known ahead of time what could be done and at what cost. With the EPA implementation of a cap and trade system for NOx allowances, the actual cost came in about 35% lower than planned.

The Clean Power Plan started with building blocks that included heat rate improvements, increased capacity factors for NGCC units, increased use of nuclear and renewables, and demand side management. These building blocks taken separately or in any combination together have been defined as the Best System of Emissions Reductions (BSER). The compliance costs estimated by EPA were lowest for heat rate improvements. Energy efficiency was next. Nuclear and renewables had a wider range of cost with the biggest cost impact.

Natural gas combined cycle had a relatively high cost within a narrow range. Averaged delivered fuel prices in 2011 $ would be $2.50/MMBTU with 6.4% escalation in 10 years and $6.00/MMBTU for gas with 8% escalation. There is a policy disparity at DOE with $200 million budgeted for fossil fuels and nearly $2 billion in support for renewables with much less generation. Worldwide growth of coal is still higher than any other fuel. The effort in the US to reduce or eliminate coal would be to the world's detriment if we no longer work on technologies such as CCS that would allow the rest of the world to reduce their GHG emissions.

Data from South Carolina indicated that low income families spend 30% of their household income on energy. Driving up the costs of energy on these families will be burdensome. Even for the middle class, infrastructure spending has been in decline and the S&P 500 leadership has changed from hard asset companies (Exxon, GE, etc.) to software companies (Apple, Amazon, Facebook, etc.). That makes it difficult for those that might lose their jobs at the older companies to get a job at one of the new companies. Further, capital growth from the S&P 500 companies has fallen consistently since the turn of the century. The complexity of these issues is remarkable and should be much more thoroughly analyzed and thought through.

XI. Natural Gas Supply and Availability – **Mike Lynch, Strategic Energy & Economic Research, Inc.**

Mike Lynch pointed out that President Carter justified the gas pipeline from Alaska on the grounds that we would run out of natural gas. The Fuel Use Act of 1978 prohibited the use of natural gas in boilers. Today we are in the position of exporting natural gas as we have discovered not only more gas but also better technology. There was (and still is in some cases) a belief that the price of oil and gas must go up. In fact, prices are volatile. More recently, price forecasts have tended to be flat at roughly the current price level.

The views on break even costs vary markedly. Some companies claim to be profitable. A number of companies have gone bankrupt. Technology has improved in recent years and well size and length have increased. Prices can be impacted by a number of factors in the short term. These might include political issues, weather, LNG exports, and gas use for power. The LNG exports will be limited as the international price has been dropping, meaning that the price differential is declining, making it more

difficult to make money. The long run outlook is that while there might be some increase in gas demand due to increased power generation, there will not be great upward pressure on gas prices over the long term. There will be short term price swings as the resource is inherently volatile.

XII. Electricity Interconnection, Availability, and Reliability – **John Hughes, ELCON**

Last year **John Hughes** talked about some of the "smart" initiatives that were being considered, particularly by some of the states. ELCON celebrated its 40 year anniversary this year. Several states and the federal government are pushing for "grid modernization" (i.e. smart grid).

If one assumes that EPA plans to tighten constraints on GHGs to the "80 by 50" requirement. The California "duck curve" demonstrates that the implementation of renewables, and more particularly solar, causes a decline in conventional generation during the day with the need for a steep ramp rate at around 6 – 9 pm. A ramp rate of 13,000 Mw in 3 hours will be required by 2020. Such a rate is very difficult to manage.

The tools include advanced metering, asset optimization, cyber and physical security, demand response, distributed control systems, and batteries. Two way communications and two way power flows are anticipated. A much bigger role for 3rd parties under contracts is anticipated. There are currently TSOs (transmission system operators). One concept is to create a DSO (distribution system operator). The DSO would not only control energy distribution, but potentially control the end user.

The CHP technology appears in both applications. A micro grid is a group of inter connected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity. This allows a micro grid to "island" from the grid system. Converting a large industrial complex into a micro grid might have some intriguing benefits, especially if the system can escape from regulation as a result.

Energy storage could be used to accept power during the day when renewables are running and can charge the batteries. The battery system can then discharge at night. Demand response is currently a voluntary process. The environmentalists prefer real time pricing. Southern California Edison estimates that combined heat and power will remain steady, while renewables will expand to over 50% of generation. EVs are not expected to make a significant contribution to storage.

FERC and NERC studying and evaluating these grid requirements. One of their approaches includes taking control of the CHP plants. That, in turn, translates to control of the manufacturing plants. Missing from this whole debate is the need by manufacturers to stay in business.

XIII. The World According to California – **Ted Guth, Consultant**

The California Air Resources Board (CARB) has come up with so many regulations that it has been a windfall for consultants. AB32 has been called unique (only CA), a tax (fees for carbon emissions), or a climate rule. The price of generation has gone to 5 – 10 cents/Kwhr for NGCC, 6 – 8 cents/Kwhr for coal, and 8 – 12 cents/Kwhr for biomass. There is one coal plant left. It makes Trona with the captured CO2. Also 5 gas turbine plants have shut down and 6 biomass plants have shut down. Thus, with AB32 there needs to be some options.

These might include using less fuel, switching to gas, sequester CO2, or utilize the CO2. Renewable energy includes biomass, geothermal, solar, wind, and hydro. Nuclear can be counted, but nobody in

California wants to build nuclear. Wind and solar are being promoted. For each MW of wind and solar, a MW of natural gas has to be on hot standby.

Sources of CO2 include combustion, transportation, carbonated beverages, and breathing. Automobiles generated 200 million ton/yr. The population breathing produced 20 million ton/yr. The coal plants that were shut down generated 4 million ton/yr. More gasoline taxes are anticipated. The base fee in CA for electricity is 14 cents/Kwhr. The rate increases with use up to 40 cents/Kwhr. Getting financing in California is a problem, as some plants have been shut down early. People are leaving the state.

XIV. Changing Work Force Panel – Moderator, **John C. deRuyter, Consultant**

Panel members include **David Kinasevych, Pan Global Training Systems** and **Neil Moynahan, Higher Logic. John C. deRuyter** noted that structural changes include mergers & acquisitions, product and plant shutdowns, new grass root facilities, and operator behavior. Demographics include an aging work force, limited experienced people, and non-glamorous work. Differing backgrounds of personnel are a fact. Retention is an issue as employees don't necessarily consider these jobs and their life's work.

David Kinasnevych started off the panel with a presentation on the Changing Workforce. The workforce has to change in the face of technology improvements and increased regulation. Operator training is an ongoing need. Demographics influence the type of training that is needed. The cost of not training includes forced outages, insurance, equipment loss, injury, and inefficiency. There are safety costs, maintenance costs, and staff turnover risks. Environmental litigation covers the gamut of activities. New technologies are often needed to provide compliance. Safety procedures need to provide some protection from litigation.

Operator core education includes boiler fundamentals, controls, licensing/certification, and energy efficiency. Forced outages cost 3 – 4.5 the cost of planned outages and runs up to 100 times if it occurs at peak demand. The National Board Incident Report showed that operator error caused around 42% of boiler/steam incidents in 2000, compared to 79% in 1993. The 3 prong approach to safety include safe design, safe manufacturing, and operator training.

Staff turnover is becoming more of a problem. The "boomer" generation is retiring. Replacing these individuals will be difficult. Typically there is limited agreement on the content and curriculum between jurisdiction (state, local, and industry). Portability of licenses can be an issue in the US. Training is considered to be an investment. Operator certification will likely continue to be regulated in states and cities that consider it to be a key aspect of public safety.

Corporate training and certification is and will continue to be paramount. The retiring generation needs to become mentors to the younger generators of operators.

Neil Moynahan

Technology is changing worldwide. Nearly any device can be connected anywhere at any time in real time. This means events and publications become online interactions. At this meeting, we are all here for collective learning. This translates into the need to leverage expertise across the entire organization. Peoples' expectations have increased. Real time expectations need real time responses. Learning Is moving online. As technology keeps changing, we can change with it. Embracing the changes can

prepare us for the future. New technology platforms are available to integrate the diverse learning and networking needs across a changing work force technology and understanding knowledge level.

XV. Environmental Policy – Moderator, **Chuck Hallier, Cargill Incorporated**

Lisa Jaeger, Bracewell LLP, reported on regulatory and litigation matters. The litigation that is in the courts includes the Boiler MACT cases, the MATS cases, the affirmative defense cases, and the water cases. There are some remanded cases from the MACT rules that may be moving next year.

On the Boiler MACT cases, there were 30 issues that were challenged. There were 4 issues remanded and 4 petitions for rehearing. There were 20 standards that were vacated. EPA has petitioned to convert that to a remand. The rest of the challenges were denied. The remanded UPL as applied to subcategories needs to be "beefed up".

The MATs rule was remanded to consider costs. The MATS reconsideration rule and the MATS startup case will be consolidated. The same panel will hear all of the oral arguments for all of the MATS issues on the same day.

CIBO had a number of successes in the Boiler MACT suite of rules, particularly with respect to the Non Hazardous Secondary Materials (which the eNGOs vehemently opposed). On the major source rule, we achieved a much more reasonable set of standards as well as work practice standards and the use of the UPL to handle variability. For area sources exemptions were upheld. Even in the CISWI case, there were some positives for CIBO.

Pending issues include the following:

- The standards in some cases did not reflect the best performers. EPA made the definition of the sub categories broad, but narrowed the choice of units to calculate the standards.
- The legitimacy of CO as a surrogate for organic HAP.
- The 130 ppm CO standard.

The court upheld work practice standards. In the area source rule, the eNGOs have petitioned for rehearing, particularly with respect to startup and shutdown. The work practice standards are in 5 other rules and the State SIPs. The affirmative defense issue was struck down on the grounds that this feature was a prerogative of the courts (i.e. EPA could not decide what the courts should decide). The UPL issue has been petitioned for rehearing. The claim is that the court erred in accepting EPA's interpretation of the application and methodology.

In the area source rule, the EPA used GACT rather than MACT. This has also been petitioned for rehearing. The ozone challenges cover both the 2008 rule and the 2015 rule. Decisions are expected next year. The Clean Power Plan was stayed by the US Supreme Court. The new unit rule is being held in abeyance pending CPP litigation. In the meantime, the EPA is preparing for implementation. The Clean Energy Incentive Program has been issued under that approach. The water intake rule has been briefed. The Effluent Guidelines Limitation will be briefed 70court, 10th court, 11th court, and Supreme Court).

A number of issues will be decided on jurisdiction in November. A number of these cases will be decided in 2017.

Scott Darling, Alcoa Inc., reported on the status of ozone NAAQS and the MOG activities. For the 2015 ozone rule (70 ppb), the effective date is scheduled to be Dec., 2017. The litigation argues that the standard should have been left at 75 ppb (industry) or should have been set at 60 ppb (eNGOs).

In looking at the Fairfield, CT ozone source contribution, motor vehicles and are sources account for 46% of the ozone. Industry accounted for 4%. Never the less, EPA still wants to regulate the industrial units. In 2013, 9 northeast states petitioned for 9 mid-West to be included in the ozone transport region. More recently, 6 northeast states have filed in the district court of NY to force EPA to make a decision.

If a region is in an attainment area it can use RACT for VOC and NOx. In the OTC, non-attainment NSR is required, whether the region is in attainment or not. CIBO is coordinating with the Midwest Ozone Group (MOG) on modeling and analysis.

Gary Merritt, Inter-Power/AhlCon Partners, L.P., reported on ash and water issues. On the water side, the WOTUS rule is being litigated. Electronic reporting of water discharge monitoring will begin in 2017. In phase 2, additional reporting on water issues and discharges will be required. Administrative changes are being made to the NPDES regulations. One of the changes is intended to issue permits in a timely manner. If a state is unable to complete its review of a permit renewal within 24 months, EPA can take over the review of the permit renewal.

The cooling water intake rule (316(b)) is effectively in place, even though the rule is being litigated. Over 500 manufacturing facilities are impacted. A number of reports have to be submitted under this rule (at least a dozen). These requirements are basically In effect now.

The ash rule was intended to apply only to EGUs. However, a permit writer can use "best technical judgement" to apply this rule to industrials for permit renewal. Storm water management is attracting more scrutiny. Climate change is impacting state activities. States are looking at climate impacts on water sources. Compliance control could be with EPA, states, or river basin commissions. The river basin commissions can act on their own.

On the coal combustion residuals, inactive CCR surface impoundments will be subject to all of the rules. Some legislation has been introduced to Congress, but little will happen until the election is over. If a CCR unit does not meet "applicable criteria", it is considered an "open dump". If the open dump designation is applied, EPA can now regulate the unit.

John (Jay)Hofmann, Trinity Consultants, Inc., reported on GHG issues and permitting. Relative to GHGs, the PSD program and the GHG requirements are inconsistent relative to source definition. EPA lost a case in the 6th circuit court on source definition. EPA attempted to limit the decision to the 6th court states. They were sued again on consistency. They lost again. They subsequently changed the regulation to allow them to be inconsistent with the exception of the DC circuit court and the Supreme Court.

The Tailoring Rule introduced new thresholds for determining when GHG emissions trigger NSR. A significant emission rate for GHGs is being proposed. PSD is triggered based on criteria pollutants. Once triggered, GHGs can be considered. The Tailoring Rule was set at 75,000 ton/yr. A level of 30,000 ton/yr

is being proposed. In California, transportation has been added to the AB32 trading system. With this step, 85% of the California economy is covered.

Mike Zebell, Environmental Resources Management, reported EPA Enforcement Initiatives. Next generation compliance includes advanced monitoring, innovative enforcement, transparency, and electronic reporting. Advanced monitoring includes real time monitoring and citizen enforcement. Personal monitors could provide ambient data that is fed to the "cloud". Questions that come up include the inference of an increase in ambient levels and the applicability of such a measurement. Communities can set up monitors in local areas. These units are not as accurate as EPA equipment, but generally follow the trends of such units. All of this data can be made public. The proliferation of additional monitoring data can complicate the risks of permit violations. There is great potential for "mischief" on the part of the public.

Leslie Witherspoon, Solar Turbines Incorporated, reported on the Combustion Turbine MACT. The gas turbine MACT went final in 2004. The formaldehyde standard was set at 91 ppb. The standard was at full load only. Exemptions included existing turbines, landfill and digester gas, the North Slope, area sources, and R&D activity. There was a stay on the MACT, as the industry demonstrated that the cancer risk is less than 1 in a million. The eNGOs sued EPA over the 8 year review period. A consent decree is coming soon.

The EPA database for gas turbines is extremely limited because of all of the exemptions. Thus, a lot of preparation work will be needed to establish the baseline. This review will basically be a "do over". Existing units will no longer be exempt. Landfill/digester gas will no longer be exempt. Startup and shut down will be included. The surrogate issue comes up for both CO and formaldehyde. The UPL methodology could be a complication. Data concerns include existing data, representative data, and accurate data. Organizations that are involved include GTA, UARG, INGAA, the OEMS, and others.

XVI. Government Affairs – **Anthony Reed, Archer Daniels Midland Company, Chris Keuleman, International Paper**, and **Lisa Jaeger, Bracewell LLP**

Anthony Reed noted that the electorate is still angry. The election is not likely to change that. After the election, there will be a lame duck session. Preparation for the new Congress will take place during that time. There is an energy bill that is in conference between the House and Senate. The Trans Pacific Partnership could be approved during the lame duck session.

The budget agreement expires on December 9th. There may be some "budget plays" on the part of the House, looking to delete funding for some EPA activities that the House does not like. However, the chances of these budgets cuts is small given the need to get a budget bill that can pass.

The Supreme Court nominee could come up. With the current polling, it looks like Clinton has enough electoral votes to win the presidency. Whether this holds remains to be seen on Election Day. Regardless of who wins, there does not appear to be any likelihood of a "honeymoon period".

In a Clinton win, energy will fall under the environment and climate change. Republicans are very likely to retain the House. For the Senate, the Democrats only need to gain 4 seats to regain the Senate if they retain the White House. For this election, the Republicans have more seats up for election, and thus more seats to loose. This situation reverses in 2018. There is a strong likelihood that the Senate could move back and forth over the next several elections. In either case, the party in leadership will

only have a few votes of surplus. The big item for the Senate is the need to get more than 60 votes to break a filibuster.

Legislation for 2017 will include the energy bill, reform of the renewable fuels standard, more House oversight hearings, and continued gridlock in the Senate. On the regulatory side, methane regulations on the oil and gas sector, energy efficiency standards, ozone NAAQS, and state clean power plans will be coming. The implications for CIBO include creating more white papers or advocacy positions, getting to know the new members, and being more proactive.

XVII. Strategic Thinking for the Future – **Scott Darling, Alcoa, Inc.**

Scott Darling pointed out that industry is changing and our organization needs to change with it. This session provides an opportunity for our members to provide their input and guidance to the organization as we plan to the future. **Robert (Bob) Bessette** noted that we often get questions about advocacy activities vs. technology activities. The members were asked to comment on the importance of each. One of the key results was that the CIBO brand was important and valuable. We don't have to be limited to industrial boilers. We can expand the brand. The list of actionable initiatives seems to have covered all of the items or issues that were brought up during the discussion. The general topics include membership classes, bylaws review, conference structure/agenda, conference locations, succession planning, improve information transfer, social media strategy, and tool development. The Board will be working on these issues over the course of the next year. The overall goal is to continue to serve our members well, now and in the future.