Technical Focus, Energy & Environmental Committee Meetings

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M I N U T E S

TUES-WED, MARCH 7-8

TECHNICAL FOCUS GROUP SESSION
Ajay Kasarabada, Black & Veatch Corporation, *Technical Committee Chairman*
Todd Young, HDR, *Technical Committee Co-Chairman*

Robert (Bob) Bessette, CIBO, announced that **Ajay Kasarabada, Black & Veatch Corporation**, will now be the chairman for the Technical Committee and **Todd Young, HDR**, will be the Vice Chairman.

Bob also reported that the Board of Directors has approved the setup of a web based technical community system for the myriad of technical subjects that CIBO is involved with.

Ajay noted that delivery of electricity is undergoing changes such that the generation is becoming more distributed. The topics for this focus group will include Micro grids 101, a case study, and some business case considerations.

Ajay noted that improvements in technology have enabled greater variation in the generation and distribution of electricity. A micro grid is essentially an independent system of localized generation and distribution that can operate in either an isolated mode or a connected mode that deploys smart controls that can decide which mode is appropriate and which services can be offered.

The system includes 3 layers including hardware, communications, and software. The hardware layer is more familiar to us and includes generation resources, distribution resources, switching resources, and communication resources. Conventional generators can be augmented with renewable resources as well as energy storage. The existence of these resources by themselves does not constitute a micro grid. It is the application of the communications layer and the software layer that allows the system to be controlled and varied that makes the system a micro grid.

The Black & Veatch Corporation system at their innovation center can monitor and analyze their system and decide when to become an island and when to offer services to the grid. A Programmable Logic Control system (PLC) supports peak shaving, grid purchase, and islanding mode. Gas fired micro turbines are used to generate some electricity and to provide hot flue gas for heating a hot water system in the winter and an absorption chiller in the summer. An electric boiler is available for back up. Battery storage is also available to store PV solar generation when excess is generated. Circuit breakers are used to isolate the system from the grid when necessary. Roof top solar PV systems with inverters provide AC power when the sun is out. Switch gear and sensor

systems provide data on the electrical demand from the various buildings and loads. The goal is to gain a better understanding of the load requirements so that the system can be optimized during operation. The key drivers for such a system include resiliency, reliability, cost savings, sustainability, and environmental goals. Resiliency is the ability to come back on after a catastrophic event. Enhanced reliability refers to the ability to have properly conditioned power for the required loads. Cost savings comes from reduction in grid purchases. Rate stability can also be achieved in that demand charges can be managed. With more efficient operation and the potential use of renewables, sustainability and environmental goals can be enhanced.

The ability to provide grid support in certain instances can be a benefit to the utility system. Working with the local utility is very important as these systems can be integrated into the overall grid management operation. In some cases, utilities have shown interest in ownership of micro grid systems for such benefits. In one example, Duke Power is working with Duke University to install a micro grid that will be rate based.

Mark Bitto, ABB, Inc., provided a case study in the use of micro grid technology. **Mark** re-emphasized the need for controls and storage in the system. Key applications include end of line applications, efficiency, grid independence, existing distributed generation, and deferral of T&D upgrades on the part of utilities. Benefits include productivity, reduced OPEX, power quality, independence, and sustainability. The key area of the system is the controls that manage the system that includes the battery or storage system and the backup system, such that power is continuously supplied to the system.

For this case study, the goals of the system needed to be established. The characteristics of the site include load sensitivity, space availability, resource availability, and distribution network structures. The needs of the system include the reliability requirements, the plant sensitivity, the sustainability goals, and the desired cost savings. When looking at cost analysis, key metrics should be identified. As with any project, there is an upfront capital cost that has to be recovered by the various benefits that are anticipated to be achieved. In most cases, stacking all of the benefits is required in order to show a positive return. This case study came from South Africa. The plant had manufacturing and office space on site. In this area, electric demand tends to outstrip supply. As a result, electric prices are high and scheduled brown outs are frequent. The site had diesel based back up generation, but this was rather expensive and was still disruptive in terms of the switch over. Roof top PV and battery storage was added to provide a better transition during brown outs as well as to minimize the use of the diesel back up. The plant load was around 1 MW. A 750 Kw PV system was installed along with a 1.3 Mw battery. The control system would have the battery system come on line when the disruption started, then optimize the diesel operation with the PV generation. The system can be completely isolated from the grid if necessary. The combination of self-generation, reduced diesel consumption, and smooth transition provided sufficient savings to justify the capital cost of the installation. In addition, CO2 emissions were reduced.

Ben Edgar, Black & Veatch Corporation, provided a review of the business case considerations. The intersection of the 3 main drivers will provide the justification for a micro grid. These include reliability, sustainability, and economics. Each of these has a number of facets that can be used to justify the installation. Typically, one of these factors is the main driver, but all three are always present. The types of systems include "do it yourself" (DIY), "do it for me" (DIFM), or "do it together" (DIT). In the DIY case, there will likely be more cost savings. However, there tends to be more risk associated with such systems. Of the 3 factors, the economics are maximized, but the reliability

could be problematical. In the DIFM case, the risk is shifted to the supplier, but the cost will likely increase. The sustainability goal is still self-determined.

In the DIT case, risks are shared amongst the stakeholders. In thinking about the type of system, a good risk analysis is very helpful right at the start of the project. For reliability, the system requirements and the level of responsibility needs to be addressed. For sustainability, corporate goals and targets are important. A "green metric" is helpful for assigning value to such goals. On economics, required returns, competition for capital, and current costs need to be identified. In a DIFM case, the kinds of guarantees that will be required need to be identified. Responsibility needs to be clearly stated. For sustainability, ownership of any green credits or tax credits needs to be spelled out. For the economics, the savings need to be identified and guaranteed. Other benefits need to be addressed and quantified. With the DIT, the boundaries for all of these have to be identified. Since both parties are sharing risk, benefits have to be shared in some way. These all need to be clearly spelled out. The market for these systems is improving as utilities are looking at ways to participate in these types of projects. The business models are becoming more like the roof top PV model, where a supplier owns the equipment and capturing any credits and the home owner buys the power at a lower price. In this type of business model, the utility might own and operate the system and provide the power at reduced cost.

GOVERNMENT AFFAIRS SESSION
Anthony Reed, Archer Daniels Midland Co., *Government Affairs Committee Chairman*

Anthony reported on the "roller coaster" ride that has been the scene in Washington since the election. The cabinet is almost full. **Sonny Purdue** for Agriculture and **Alexander Acosta** for Labor still need to be confirmed. Progress has been slow. Without the rest of the appointments, the various departments are at a standstill relative to policy decisions and implementation.

The National Economic Council will have a significant role in any major economic issue. Executive orders have been issued for a number of Trump campaign promises. The Congressional Review Authority (CRA) is reviewing a number of Obama regulations. However, only 2 rules have been rescinded thus far. Environmental and Energy regulations have been prime targets, but several had not even had floor time as yet. Therefore, many of these issues will likely have to go through the legislative process. Some 30 rules at EPA have been frozen. However, time runs out on March 21st. Thus, some of these rules will likely go into effect.

The House has passed 2 rules that may get stalled in the Senate. These include an expansion of the CRA and a Congressional review requirement for any regulation costing over $100 million. One of the biggest costs to industry is reporting and record keeping, which cost more than all of the other regulations. Trump has requested that 2 regulations be eliminated for every new regulation put forth. There will be some kind of regulatory reform and deregulation. There will be some legislative reform. We will need to identify the top 3 CIBO asks. Congress and the Administration will be bombarded with a long laundry list of things to "fix".

The Supreme Court nomination will likely take up a lot of time and energy and will slow things down even further. The administration wants to talk to anybody who makes things in the US or is involved with energy.

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

Robert (Bob) Corbin, CIBO Member Service Consultant, introduced the guests for today's meeting. The usual "round the table" introductions were carried out. **Bob Corbin** introduced the new member.

Robert (Bob) Bessette, CIBO, pointed out that very little has been coming out of the administration on the second and third level appointees (i.e. Assistant Administrators and Deputy Administrators). With the appointment of **Rick Perry** to the DOE, we are starting to get initial contact with that agency. There will likely be budget cuts in many of the agencies. **Bob** noted that a lot of things have changed in the industrial energy sector.

It is still important to recognize that you can't make or do anything without using energy. Anytime you make or use energy, you impact the environment. It takes energy to clean up the environment. Energy is not free. It takes energy and money to make a cleaner anything. On a societal basis, increasing energy costs disproportionately impacts the at risk populations. Natural gas has replaced 80 – 90% of the ICI coal fired units. Electrification and hot water are replacing steam systems for HVAC in buildings.

The once central powerhouse is being replaced/displaced with remote controlled distributed generation. Zero emission energy and renewable energy is here to stay and will be driven by millennials as they replace the aging workforce. Environmental and social concerns will always have to be considered. Permitting will remain a struggle. Boiler MACT is the last major industrial driver for industry units. Since most of the units have converted to gas, there should not be a need for additional regulations on industrial units. There will still be problems with the eNGOs attacking every permit for units that use fossil fuels. Monitoring and reporting has been a major cost to industry. This data will be used by citizens and environmental groups for enforcement. If a permit request triggers a public hearing, there will be a protest and a contested permit process.

Activist shareholders and eNGOs are complicating companies' and institutions' economic evaluation criteria. GHGs will have to be addressed. There is no longer only one engineering optimized solution. Subjective business concerns and public perception must be considered. Energy and environmental operation costs are no longer immediate pass-throughs in a globally competitive market place. Social responsibility and sustainability must be considered along with cost and return on investment.

As the "boomers" are retiring, millennials are taking their place, surpassing the gen X'ers. This turnover of personnel represents a very sharp change in perception. Technology and the internet is ubiquitous and is expected. All knowledge is available on the smart phone. Social media is assumed to be 100% accurate all of the time. Perception is indeed the reality. Equality is owed, not earned. The public and private media know their power and how to use it.

Going forward, policies and plans must be in place to address energy, environmental, economic, and social concerns. A company must know every emission or operating parameter needed for compliance with any regulation or statute to legally justify their operations against any challenge at any time. Companies have to be socially proactive. All information must be accurate, unquestionable, and transparent to be legally defensible. There are no unintentional malfunctions. The new buzz word is sustainability.

Tom Wenning, **Oak Ridge National Lab (ORNL),** reported on the energy efficiency tools now available from DOE. DOE has a program for Better Buildings and for Better Plants. The Better Plants program allows plants to set efficiency goals and get some government assistance in achieving the result. DOE has set up a number of Industrial Assessment Centers across the country. DOE can help with preliminary assessments and evaluations so that companies can justify the next step (hiring an A/E to do a detailed assessment).

The ISO 50001 Energy Management Systems standard was developed across the world. DOE has a plan to help companies get ready for ISO certification. A software tool will be developed to allow a self-assessment that can bring most of the benefits of an assessment at less cost. Tool modernization is needed as many of the tools were developed with older versions of operating systems that don't work on new machines. An open access system is being developed. This will allow for automated updates. Open source coding will be used. Community engagement is desired. Tool revamp is planned for pumps, process heat, fans, compressed air, steam, motors, and log tools. A plant energy profiler will be released shortly. Tool use tutorials will be developed for each tool. Potential 3rd party development and implementation of professional certifications will be explored. One useful tool is a desktop digitizer. This program can take pump or fan curves and digitize them for algorithm use. Another tool can provide an overview level for energy use along with appropriate graphics.

Alexandra Romero, Arent Fox LLP, reported on the OSHA Electricity Rule. OSHA sets and enforces safety and health standards for the workplace. EPA sets and enforces standards for public health and the overall environment. Some EPA proposed rules over reached into OSHA responsibilities. The two may conduct joint inspections.

There are general industry standards and construction standards. The final rule updates standards based on consensus standards and harmonizes both the general and construction standards. Construction work includes to both new installation and repair work. The standard applies to "qualified" employees. There are another set of standards that applies to "non-qualified' employees. Information transfer requirements cover the host employer and the contract employer. The host employer has to share appropriate characteristics of the work and any related safety requirements.

Information on voltage levels, current levels, isolation requirements, etc. must be provided by the host employer to the contract employer. Contract employers must ensure that their workers are informed of hazards that are revealed as a result of the communication. Host and contractor employers must coordinate their work rules. Contract employers are required to notify the host employer of any observed safety hazards that might be encountered when performing the work. Fall protection is required essentially 100% of the time. Fall arrest systems, fall restraint systems, and work positioning rules apply. These requirements are specifically called out in the electric rules. Minimum approach distances are specified when work is required on exposed live parts.

This standard was finalized in January of this year. Workers that are not properly protected cannot be allowed within these minimum approach distances. Electric Arc Protection requires employers to assess the incident heat energy released by an arc or exposed flame. Appendix E provides assessment guidelines with examples. Consensus standards are referenced. There are training requirements. Coordination requirements are specified for de-energizing lines and equipment.

ENVIRONMENTAL COMMITTEE SESSION
Chuck Hallier, Cargill Inc., *Environmental Committee Chairman*
Robert (Rob) Kaufmann, **Koch Companies Public Sector, LLC**, *Environmental Committee, Vice-Chairman*

Alexandra Romero, Arent Fox LLP, reported on EPA's revisions to the Risk Management Plan rule. This revision was prompted by President Obama after a chemical plant fire in 2013. The major changes include 3rd party compliance audits, incident investigations, technology and alternatives analysis, coordination with emergency response providers, emergency response drills, and information sharing. The rule was set to go into effect on March 21, 2017. There are some provisions that are phased in over a 3 – 4 year period.

The major change is that incidents must now be investigated by an independent 3rd party. This applies to an accidental release or a determination by EPA of a strong potential for an accidental release. Accidental release is one that results in death, injury, or environmental damage. There entire investigation team does not have to be independent, only the team leader. The requirement calls for independence and competency. There are requirements for both. There is a 2 year abstention period for an auditor on either side of an incident.

The audit report must contain a summary of the audit team's names and qualifications. All changes or modifications to the report draft must be reported. The auditor must certify that the RMP requirements were adhered to and that the information is true, accurate, and complete. The schedule for the audit is 12 months after the accidental release or the EPA determination that an audit is required. Then the plant owner has 90 days to provide an appropriate response for each finding. A schedule for addressing each deficiency must be developed. The audit and response report must be reported to the owner's audit committee or Board of Directors.

Incident investigation is required for those incidents that caused catastrophic release or could have caused a catastrophic release (i.e. a near miss). Contributing factors need to be identified. A process hazard analysis is required. The analysis must include all findings from prior incidents and "any other potential failure scenarios". This includes incidents that have occurred in other facilities, incidents anticipated in safety standards, or any other identified hazards.

Passive measures include design, fail safe systems, and prevention. Active measures include training, controls, and fail safe systems. Safer technology and alternative analysis should document the systems that were evaluated but not implemented.

Emergency response is divided up into a responding source or a non-responding source. A non-responding source is one that utilizes other entities to provide emergency response (i.e. fire department, state DEP, etc.). Coordination with external agencies must take place at least once per year. All of the coordination requirements must be documented. Response exercises must be conducted including a field test at least every 10 years and table top exercises every 3 years. The

owner must provide upon request by any member of the public appropriate information on regulated substances, accident history, and other safety related data. Public meetings shall be held within 90 days of an accidental release. This rule was issued at the end of 2016.

Some companies have started preparation for legal action, particularly with respect to confidential data and homeland security.

Robert (Rob) Kaufmann, Koch Companies Public Sector, reported on the CPP/NAAQS updates. Right now at EPA there is a lot of concern amongst EPA staff concerning the new administration. Therefore, most everything is being kept quiet. Administrator Pruitt is beginning to staff up personnel that do not need Congressional approval. Several Senator Inhofe staff personnel are finding positions in the new administration, particularly at EPA. The Council on Environmental Quality is still in existence, but its role is not certain. The National Economic Council appears to have more influence. The new administrator, in a speech to employees, pointed out that process matters, rule of law is crucial, and federalism matters. That means no more "sue and settle, no more rule by guidance, and no more rule by enforcement".

All regulations will be done by proper public comment. The proposed budget calls for a reduction from $8.1 billion to $6.1 billion. Some 3,000 staff is to be reduced. Programs to be reduced include Energy Star, Water Sense, EJ programs, most climate initiatives, and various clean up funds. Grants to state programs may be reduced. EPA Regional Offices could be reduced. There is a hiring freeze in place. The concern is that some programs that actually provide help permitting end up getting cut, which will translate into longer times for permits, etc.

A number of presidential memorandums and executive orders have been issued which are intended to help industry. These include a regulatory freeze, a streamlining of permitting, a reduction in regulations and regulatory burden, enforcement of regulatory reform, and the restoration of the rule of law by review of the WOTUS rule.

As record keeping, reporting, and monitoring requirements have caused the largest portion of cost increases, this area may be one which might be more fruitful. An executive order is expected this week on the Clean Power Plan. How that will play out remains to be seen. Some of the data requests have been pulled back. On the NAAQS, no one has any idea of when a new ozone standard might come up. On NOx and SO2 standards, there does not seem to be much need for a revision. The next round for PM2.5 was scheduled for 2022. The data on PM2.5 shows some health impacts at lower levels. Some consideration of inter-pollutant trading, removing the 2008 standard, and international emissions impacts could come up.

Ali Farnoud, Ramboll ENVIRON, reported on the Ozone Depleting Substances (ODS) rule. The refrigeration management program covers leak repair and other potential emissions of refrigerants which could impact the ozone layer. The Montreal Protocol called for the phase out of traditional refrigerants (like R11). In 2015, the global warming potential of escaped refrigerants were brought into play. The original rule covered class I and class II substances. Now, substitutes are included. There are exempt substitutes, depending upon the final use.

There is a new definition that was added for comfort cooling (i.e. not commercial or industrial refrigeration). The new definition only considers occupied facilities. Data centers and server farms are now either industrial or other types of refrigeration. There are changes to the certification

requirements. Certification is required for substitute refrigerants as well as Class I and Class II refrigerants. Refrigerant recovery certification is no longer required.

Leak repair requirements were impacted by new leak rate thresholds for each category. The thresholds will be reduced by 5 percentage points for each category by 2019. Again, after 2019, the leak rate calculation has to be reported to EPA every time refrigerant is replaced. A verification test within 30 days of leak discovery is currently required. This will be reduced to 10 days. Leak inspection is now required for large units every quarter. Smaller units must be inspected once per year. Chronic leaks have to be reported to EPA and must include efforts to repair. This was changed from having such a leak in one circuit and requiring that the entire unit be replaced.

For appliance disposal, there are record keeping requirements. Most of the new requirements start in 2019. It is recommended to get a list of appliances and refrigerants ahead of 2019.

Mike Zebell, Environmental Resources Management, reported on the CEDRI requirements as well as some Q&A information on Boiler MACT. Once a facility is determined to be a major source under the rule, the facility will remain a major source. For fuel blends, it is important to make sure that any tests have a wide enough blended composition to assure compliance. Certain small fired heaters cannot be "tuned up". In such cases, "good practice" can be used. A common stack can use the average of the limits on the individual units. For submitting the test report, the 60 days after the completion of the test is the determining date. For a CFB with both limestone injection in the bed and DSI for chloride reduction, the DSI system rates are the ones to be monitored for compliance with the chloride limits.

CEDRI is the EPA reporting system for submittals to EPA via the CDX system. There is a "You Tube" video that is useful for first time users. During preparation, it is a good idea to print out the work periodically when creating a large submissions. In this way, if the system freezes up, the same data can be entered. Changes to CEDRI are sometimes done without advanced notice. The data from stack testing should be in the form of the Electronic Reporting Tool. This should be included as a deliverable in the contract with the stack testing company. There might also be some duplicate reporting of tune up reports (stack test and company tune up).

States without delegation are not familiar with CEDRI. In those cases, a hard copy should be submitted to the state. Always make sure the correct name and facility identification are in the system. There have been a number of cases where a company name in one state might be the same or reasonably close to a name in another state, resulting in confusion and sometimes requests going to the wrong company. Also, check to make sure what is in the system is actually what represents your plant.

Gary Merritt, Inter-Power/AhlCon Partners, L.P., reported on the RCRA update. A bill on water has passed Congress. EPA has done a partial remand of the CCR rule. It will be important to monitor what the states are doing. The Hazardous Waste Generation Improvements rule was finalized. The effective date was May 31, 2017. This rule reorganized the regulations on generators. There were also a number of "technical" corrections.

A new category called Very Small Quantity Generators has been added. Emergency response and contingency planning has some modifications. The numbering system now has changed due to the reorganized regulations. For non-hazardous materials, certain railroad ties are now classified as

fuels, as well as some materials. The implementation of the CISWI rules has been slow. Right now, any proposed rules are tied up with the 60 day review initiated by the new administration.

Scott Darling, Alcoa Corp, reported on the MOG Update. The Midwest Ozone Group (MOG) is working on the ozone NAAQS. The northeastern states have submitted 176 petitions to EPA claiming that Midwestern states cause them to fail to meet the ozone standards. The petitions were held until the Courts intervened. In January, the EPA proposed to deny the petitions. However, a public hearing will be held on March 14, 2017 and public comments are due April 13, 2017.

The CSAPR v.2 is supposed to deal with the 75 ppb standard for ozone. Significant transport has been arbitrarily selected as 1%. It could be something higher, such as 2 – 4%. Since the MOG work indicates that over 1/3 of the ozone in the northeast region is due to vehicles, the 1% figure doesn't really change the problem. As EPA indicated denial of the 176 petitions, this should apply to the 126 petitions as well. The contribution from international sources should be taken into account when determining compliance. It turns out that there is a significant contribution from Asia. There are also contributions from Canada and Mexico. According to MOG analysis, if these contributions are taken into account, all monitors in the US would meet the current and proposed NAAQS standards.

Amy Marshall, AECOM, stood in for **Lauren Laabs, Mostardi Platt,** in presenting the update on PEMS. Subpart Db allows predictive emissions monitoring systems for certain steam generating units. These systems were developed as an alternative to CEMs. A plan must be submitted to the administrator which identifies which parameters are to be monitored to predict the emissions in question. California requires the ability to predict a malfunction condition as well. Texas developed PEMS guidelines. These were adopted by EPA in Performance Specification 16. A 3 load RATA program must be used to validate the predictions. Sensor validation is required to assure that the sensor are accurate.

The first boiler PEMS system was on an aux boiler from 1987 through retirement in 2012. A protocol acquisition system is needed to capture the data. The data can then be analyzed to predict the emissions. Rules for data filtering are needed. A data verification period is required. A Relative Accuracy Audit must be done quarterly. A RATA must be done annually.

The cost of a PEMS system is typically about half the cost of a full CEMs system (around $80K). The annual cost of the required testing is $10K/yr. Many of the parameters to be measured are needed for boiler operation in any case. The initial operations monitoring plan needs to clearly identify the PEMS implementation procedure. Make sure to understand exactly how the PEMS is predicting emissions. This is not a "set it and forget it" system. If there are changes to the fuels or equipment, a new training period is required. Personnel training is needed to make sure the system is working properly. A user manual should be prepared.

When purchasing a PEMS system, be sure to specify the requirements of the system (i.e. not off the shelf). Maintenance requirements should be clearly spelled out and maintenance files should be maintained. Coordinate with the IT department so that the system can be accessed remotely via a VPN system. PEMS can be as accurate as CEMS. PEMS are only as good as the quality of the input. Bad sensor data could lead to poor results. The system works best with units that run fairly steadily with consistent fuel supply.

Chuck Hallier, Cargill Incorporated, presented some changes to TRI reporting. There are 3 brominated flame retardant compounds that now must be reported. There have also been some changes to the Form R reporting requirements. Be sure to check the form summary on the EPA web site to make sure that you have picked up all the changes that might apply to your plants.

Lisa Jaeger, Bracewell LLP, provided the update on litigation and regulatory issues. The Boiler MACT cases are almost completely finished. There were some remanded issues that might generate some new suits, but these are not ready yet.

The reconsideration case has had briefing and now awaits a decision. The MATS cases are mostly in abeyance pending the MATS reconsideration rule and the Boiler MACT reconsideration rule.

The SSM SIP Call case has the startup and shut down issues, as well as the malfunction issues.

On the Boiler MACT, the court remanded the UPL for small data set sub categories. There are 4 other issues to be remanded. There is a Supreme Court petition as well.

On the Boiler MACT remand, the 130 ppm CO standard was challenged. The argument is that if CO is a surrogate for organic HAP, the surrogate must also comply with the best performance criteria. The other challenge is to work practice standards. The argument is that EPA has not shown that numeric standards are impracticable. The case is in the hands of the court with written briefs submitted. Oral argument is next.

The EPA use of GACT instead of MACT for Area Sources was remanded. Synthetic minor exemption from Title V for Area Sources was also remanded. A number of standards limits were remanded for calculation procedure problems. Once EPA responds to these remands, there could be additional work.

Affirmative defense is all over the map in different rules and court cases. The problem is that the court stated that affirmative defense denied the court the ability to set a penalty. EPA can fix this problem in a number of ways. However, they chose to remove affirmative defense from their rules. This issue could come up again. Work practice standards for startup and shut down will depend on the court reaction. Work practice for malfunction could also be reopened depending upon the SSM case. There is a draft petition for certification on the malfunction issue, citing impossible perfect performance.

The Stationary Combustion Turbine NESHAP Risk and Technology Review is underway. Comments were due in December. EPA is behind schedule on a number of RTRs. The eNGOs have filed with the courts to set dates for these reviews. In many cases, EPA has found no additional risk and still issued additional requirements. This could be an issue to report to the Commerce Dept. In the MATS cases, the "jobs" case, which argued that EPA did not consider the impact of job losses by the rule. EPA filed a 2 year plan to seek advice. The court rejected this plan and issued schedule requirements to EPA. EPA has appealed to the 4th Circuit Court.

The CPP plan and utility GHG rules had been suspended. An executive order is anticipated on the CPP. The CPP went to court. The court could abate the case, meaning that the case can only come back in a different way. The new unit rule is scheduled for oral argument in April. It remains to be seen what the outcome of all this will be. EPA withdrew the ICR for methane emissions. The RMP

rule adds additional reporting requirements. Industry opposed the rule. There is a CRA petition on this rule. The PSD GHG Significant Emission Rate is being considered. No decision has been made as yet. On the social cost of carbon, we have made a number of comments. Two new gases were added to the GHG definition. The Sierra Club made FOIA on the transition team activities.

New Source Review is also being looked at. A small group has been assembled to look at NSR reform. This topic has been a long standing problem for industry. Potentially our top 3 environmental issues could be NSR, malfunction, and RTR to be sent to Commerce.

Support of the NAAQS reform bill in Congress is also important.

On the WOTUS rule, the 6th Circuit Court combined all of the cases and claimed that the Circuit Court had jurisdiction. The rule was held back. The Supreme Court said that they will review the jurisdiction case. The EPA has pulled back the rule for review. The rule will be reviewed to rescind or revise the rule to keep navigable waterways clean and promote economic growth, reduce uncertainty, and respect the positions of Congress and the States. The definition of WOTUS should respect the Scalia position in that case (ie navigable waterways are significant and permanent bodies of water). The Supreme Court nominee is Judge Neil Gorsuch. Confirmation hearings begin on March 20th.