

CIBO Technical Focus Group, Energy and Environmental Committee Meeting

March 5 – 6, 2019

Hilton Garden Inn, Arlington, VA

1. Technical Focus Meeting – **Mike Zebell**, Environmental Resources Management

Mike introduced **Ruth McCormick** of the Business Council on Sustainable Energy (BCSE). The BCSE was formed in the 90s and is a coalition of companies and trade associations from the energy efficiency, natural gas, and renewables industries. They put together a report each year that aggregates data on sustainable energy in America. They hire Bloomberg NEF to compile the data. The goal is to try to show trends in energy use and applications. It is intended to be purely a set of facts that can help members and government understand policy implications. There is a sister company for small businesses. This group prepares a report called “Faces Behind the Facts” that showcases actual companies working with sustainable energy. Topics include fossil power, renewable energy, distributed power, and transportation.

The power sector continues to de-carbonize due to increased use of natural gas and renewables, along with coal fired retirements. Employment has grown. Energy remained affordable. Electric vehicle sales have increased. Energy productivity improvements has stalled somewhat. Energy consumption went up last year overall. The last was attributed to some very cold and very hot days last year. CO2 emissions rose last year as a result. Last year, natural gas provided 35% of power generation. Nuclear remained at 19%. Coal had declined to 27%. Renewables (including hydro and wood as well as solar and wind) are now at 18%. Solar and wind have been subsidized, particularly for capacity development.

Corporate procurement for clean energy is also driving some purchasing decisions. States have helped decouple growth and energy use. Energy efficiency has been promoted by federal and state agencies. Jobs grew in the energy sector, although solar lost some jobs in recent years due to trade and tariff issues. Jobs in energy efficiency led the totals. The US and Canada have the lowest electric rates in the world. Energy storage equipment that is paired with solar equipment also receives tax credits. Electric vehicles have now reached about 3% of new car sales. The information is available on the BCSE website (www.bcse.org).

Ann McIver of Citizens Thermal gave a presentation on bringing sustainability to energy project development. She reported on the ENVISION sustainability rating system and project development. Today there are programs that look at occupied buildings, including LEED and Green Globes. The ENVISION system can be applied to everything else, including roads, bridges, and other infrastructure type projects. The framework is intended to focus on sustainability and resilience for infrastructure.

The system applies across all project stages. As with any project, work starts in the planning phase. All aspects of the planning and the project are considered. A rating system includes social (quality of life), environmental, resiliency, economic, and resource considerations. A series of questions is utilized that create a score. The questionnaire essentially challenges the project to consider all of the potential impacts. Once the score has been evaluated, there are a number of levels of project achievement. There is also a certification process to get a project certified. The web site is <https://sustainableinfrastructure.org/>.

Bob Bessette pointed out that CIBO would like to provide the members with some kind of guidance for implementing sustainability type projects. This might become a CIBO guidance document. One such idea is metering. If you can't measure it, it doesn't exist. Measuring steam flow, fuel use, electric consumption, etc. provides the needed information to help make good decisions on projects. It also provides a means to show results. Stopping the leaks is another good practice. Monitoring and repairing steam traps makes good sense.

General membership discussion: **Mike Zebell**, Environmental Resources Management, Facilitator - Electric rates and rate classes are important. Making sure that the facility is in the right rate class assures that the proper charges are made. Electric rates have gone up. Borrowing costs have come down.

Economic analysis of projects that did not look good years ago may be economical today. Using solar on restrictive sites is another potential good use of land while bringing in renewable energy. Brainstorming for ideas is another good practice. Our own people know a lot about our plants and processes that can be tapped for good ideas. Lighting is another area that can provide both energy and cost savings. Building recommissioning is another tool to look at existing buildings that have either been re-purposed or modified since the original commissioning. Proper maintenance of equipment is also very important. In addition to the actual improvement projects, it is important to bring the people involved with doing the work into the process.

Sustainability committees, score cards, brainstorming, and overall programs need to be tied together to get impact. Recycling and reuse opportunities also need to be considered. Often times, new builds fail to consider energy efficiency aspects. Building a new process but using the same equipment (inefficient motors, lack of instrumentation and metering, no optimization, etc.) can overwhelm the savings from small efficiency projects. Implementing an internal cost of carbon can help drive evaluations in favor of sustainable energy efficiency projects. If economic evaluation or sustainability evaluation doesn't get appropriate attention, quality projects can be approached as a means of continuous improvements.

There may be other corporate drivers that can be utilized to gain management support. Safety can be another driver for improvement. Competitor analysis can uncover energy efficiency and sustainable programs and projects that could identify potential threats to the business.

Bob Bessette is looking for a list of things that a person that needs to do something can actually refer to as potential energy saving ideas. Temperature measurements can identify areas where there are leaks or failed equipment. For the document, it would good to have some kind of impact or benefit associated with the particular idea. When these things are implemented we should promote our successes. There may also be opportunities for additional self-generation such as substituting a back pressure turbine for a pressure reducing valve or adding a water turbine in flowing water streams. **Fred Fendt**, The Dow Chemical Company, volunteered to provide a starting point with a list of potential items for such a document.

2. Government Affairs – **Anthony Reed**, Archer Daniels Midland Company

Congress is back to work. Climate issues and oversight have been two key elements. There have been over a dozen climate hearings. Republicans are now looking at how to address it rather than whether or not it is happening. Polling and the 2018 election are leading the way. There is a Select Committee on the Climate Crisis. Nearly every House Committee has had some kind of angle on the climate issue. On the Green New Deal, a recent poll shows 48% have some kind of support and only 28% oppose it. The rest don't know. The Republican position is now that we need to do something, but the Green New Deal is not the way.

Investigations are in full swing. This is all about setting up for the 2020 presidential elections. What has to get done is a budget and the US Mexico Canada Act. Maybe an infrastructure and tax bill could get done. The Democrats are planning on winning in 2020 and restructuring government in their favor.

There are still border issues. The debt limit, the sequestration issues, and the border issues will all need to be addressed. **Andrew Wheeler** was confirmed as head of EPA last week. There will be lots and lots of oversight requests. That takes away from time spent on the ACE rule, RFS, WOTUS, and NSR. Regarding the presidential election, the first Democratic caucus events occur in June. Right now, the presidential election is a tossup. The Electoral College votes are evenly split with about 46 votes undecided. The Senate is close, but could stay Republican. The House is likely to stay Democrat.

3. Energy Committee – **Fred Fendt**, The Dow Chemical Company

Ann McIver gave the antitrust admonition. Ann introduced **Tim Batton** of Whertec who is attending his first CIBO meeting as a prospective member. Fred Fendt called for the minutes of the last meeting to be accepted and introduced **Mike Zebell** to talk about the Green New Deal. This is currently a non-binding resolution somewhat modeled after the FDR New Deal of the 1930s. The focus is on tackling climate change, but is not just concerned with reducing emissions. There are 5 goals.

The first is to achieve net-zero GHG emissions through a fair and just transition for all communities and workers.

The second is to create millions of good, high wage jobs and to ensure prosperity and economic security for all people of the US.

The 3rd goal is to invest in infrastructure and industry in the US to sustainably meet the challenges of the 21st century.

The 4th goal is to secure for all people of the US for generations to come the clean air, clean water, and environmental sustainability goals.

The 5th goal is to promote justice and equity by stopping current, preventing future, and repairing historic oppression of various elements of society.

The resolution is silent on cost and funding mechanisms. Three of the areas for discussion include electricity, transportation, and agriculture. Others include energy efficiency, buildings, and other sectors. For electricity the goal is to meet 100% of the US power demand with clean, renewable, zero-emission energy sources. The document states that no new nuclear plants will be built. They claim that the right way to do capture and storage is to plant trees and restore our natural ecosystems.

The resolution itself does not mention nuclear and CO2 capture, but does not prohibit either. For transportation, the system will be overhauled to foster electric vehicles, build charging stations, improve public transportation, and stop air travel. The goal is to eliminate combustion engines. In agriculture, supporting family farms, cutting down on beef, using sustainable soil practices, etc. will be promoted.

A goal is to guarantee a job with family sustaining wages, adequate family and medical leave, retirement security, and economic security for all, including those who are unwilling or unable to work.

All of this is supposed to be accomplished in 10 years. While many of these proposals are unrealistic, there is a lot of discussion and activity on the concept.

Bob Besette presented an update on state activities relative to renewable portfolio standards and an associated database of state incentives for renewables and efficiencies (DSIRE). The database has been prepared by the North Carolina Clean Energy Technology Center. The Center is no longer getting DOE support. The database gives information by state including topics such as net metering, efficiency programs, bonds, loan programs, renewable energy standards, and many others. For each program or standard, it is possible to drill down into the details to see what is going on and what is eligible for support.

The website is <https://programs.dsireusa.org/systems/programs>. Such a database is well beyond what CIBO can put together at this point. This database is already up and running and only needs maintenance to update each state. CIBO would have to recreate the whole thing.

Utility based programs are not always reported as they may not be part of the state supported programs.

The university is asking for support, but we do not know what that actually means at this time.

Bob will follow up with them. The EIA web site (www.eia.gov) has data on overall energy use. The energy disruptions link provides a map that shows the pipelines and electric lines for any given area.

4. Environmental Committee – **Chuck Hallier**, Cargill Incorporated

Scott Darling of Alcoa Corp, reported on the results from the Midwest Ozone Group on NO_x emissions and the ambient ozone standards. The CAA has a section on international contributions. The model studies have improved their resolution with reducing the scale from 12 km to 4 km. The State of New York has proposed a new rule on simple cycle gas turbines. New York is one of the states that has filed petitions under Section 126 of the CAA on upwind plants.

Ozone levels are starting to reach background levels. International transport can impact background levels. EPA has now stated that intercontinental transport can impact more than just border states (Section 179 B). EPA will be issuing more guidance on this interpretation.

Standard modeling has been using 12 km domains. MOG has done the modeling with 4 km domains. This does a better job of treating sources, fires, land water interfaces, and other issues. Combining anthropogenic categories into one source group allowed the processing of both domains simultaneously. The Fairfield, CT monitor has been a problem due to the I-95 corridor. The Obama administration had claimed that if one state contributed more than 1 % of another state's standard, then the state contribution is significant. The current administration is looking at a 1 ppb contribution.

The boundary conditions were as high as 14 ppb, which include the international contributions. Most of the state contributions are below the 1 ppb level. The contributions come from Canada and Mexico. But for the international contributions, the Fairfield monitor would be in compliance. New York had similar results. Asia contributes to the west coast.

Generally, the problem comes in the summer time on the hottest days. Small emergency generators are called into service. These currently have no rules for NO_x emissions. New York State has proposed rules for these generators with the goal of reducing emissions from these sources.

Gary Merritt, Inter-Power/AhlCon Partners, L.P., gave an update on the MATS rule. MATS is aimed at utility units. The Supreme Court had sent the rule back to EPA on the method for calculating co-benefits. EPA has issued new rules for considering co-benefits, but did not change the emissions standards. The original rule was justified on the basis of the co-benefits.

Most of the coal plants have already installed mercury controls. For those plants that are in the regulated utility parts of the country, the capital involved was already included in the rate base. For the deregulated parts of the country, most of the coal units have been retired. As a result, EPA concluded that there was no need to change the emissions standards.

EPA's cost benefit methodology is being adjusted. A new methodology is being proposed which will most likely attract comments from everybody. Only the incremental level of improvement that can be attributed to a new rule can be included in the co-benefit analysis. EPA is contemplating creating a sub-category for coal refuse.

Ann McIver, Citizens Thermal, gave an update on WOTUS (waters of the US). A revised definition has been issued on February 14, 2019. Comments are due by April 15, 2019. This is a joint proposed rulemaking from the Army Corps of Engineers and the EPA. This rulemaking amends (replaces and deletes) provisions impacted by the 2015 Clean Water Rule.

There are 11 sections of the rule that are being modified. Currently, the 2015 rule is still in effect in 22 states. The proposed definition revision is also intended to clearly implement the overall objective of the CWA within the scope of the federal government's authority over navigable waters. The rest is up to the states.

The new definition establishes 6 categories of jurisdictional waters considered as WOTUS. These include navigable waters, tributaries to navigable waters, lakes and ponds that feed navigable waters, wetlands next to navigable waters, impoundments that feed navigable waters, and ditches that discharge in navigable waters.

All of these definitions have further definitions to more clearly define what is included and what is not. The term ephemeral is defined as to what is not included. The term ditch means an artificial channel used to convey water. Ditches that satisfy these conditions that are adjacent to a wetland are jurisdictional. The term wetland is defined. A direct hydrologic surface must meet the criteria of inundation. The significant nexus evaluations are eliminated. The term abut is used instead of neighboring.

Lakes and ponds that contribute to jurisdictional waters are jurisdictional waters. The 100 year flood plain is no longer jurisdictional. There is no current definition to distinguish between a pond and a lake. Groundwaters are not WOTUS, including groundwater drained through subsurface drainage. At a public meeting in Kansas, there was one fly fisherman that was concerned about the cleanliness of a trout stream that might no longer be considered WOTUS and that trout need clean water. A duck hunter was concerned about ponds that only have water during parts of the year. These might be issues that come under the Fish and Wildlife Service.

Ann McIver, Citizens Thermal, gave an update on the Nox Sip Rule. On February 26th, the EPA Administrator signed a new NOx SIP rule that does not require CEMS only for the sake of having a CEMS. This will be posted in the federal register shortly.

Amy Marshall of AECOM gave an update on ambient air issues. For PSD or NAAQS violations, air modeling is generally required to determine the impact of emissions on the concentrations in ambient air. The definition of ambient air is that portion of the atmosphere outside of buildings to which the public has access. There have been numerous guidance memos and letters trying to put a more specific guideline for the definition. Issues such as roads going through property, leased properties, temporary access (i.e. deliveries), and others have confused the situation.

For example, 2 sources within a fence line could be considered ambient to each other. The likelihood of exposure is not really considered.

The average annual standards are averaged over the course of a year. If a person trespasses on property owned by a source, the exposure may be very short. A railroad track that is adjacent to a property is not likely to have people spending significant amounts of time sitting on the tracks. A plant that is adjacent to a river should be able to consider the far side of the river as a boundary. The impact is where receptors have to be located. EPA released draft guidance last November. The new guidance only proposed to replace the words “a fence or other physical barriers” with “measures, which may include physical barriers that are effective in deterring or precluding access to the land by the general public”.

Environmental groups have charged the proposed change as being arbitrary and capricious and an abuse of agency discretion. Industry has proposed alternative language. Some states have been more reasonable and some have not. These inconsistencies cause problems for plant owners. Right now, there could be 50 different policies on this subject.

The consequences are the need for additional control measures to meet calculated impact levels from air models with receptor points too close to the stack. In one case, the first new pulp and paper plant in 35 years had to install a 564 ft stack to satisfy the state. In another state, 200 ft stacks were imposed on gas fired boilers.

Tom Webster of E.I. DuPont de Nemours & Company, pointed out that refrigerants are included in the ozone depleting substance rules. The leak rate levels have been reduced. Maintenance records have to be kept. If a leak is above the appropriate leak rate, the leak must be repaired in 30 days. Disposal records are required.

There is a proposed rule for refrigerant substitutes. A refrigerant inventory should be kept. The disposal of old machines are regulated. Anything over 5 lbs. is covered. Water coolers have a 5 lb. cartridge. Next year, there are reporting requirements for any leak rates over 125% of the approved level.

This is a whole new area for easy citations. Training is required for plant personnel. Many of the required forms are typically not filled out correctly. Machines that still have R11 and R12 have to be labeled as such. A monthly record of disposal activity must be kept. The rules are in Part 82 and impact nearly all facilities large and small.

Lisa Jaeger of Bracewell LLP, gave the litigation and regulatory update. Oral arguments were held on the CSAPR rule. The Clean Power Plan/NSPS cases are in abeyance. BMACT reconsideration and remand issues are pending. Once in Always in will have oral argument in April. The revised definition of waste is going to oral argument. There are still vacancies at EPA, although **Andy Wheeler** has been confirmed as head of EPA. Several other positions have been filled, including the DOE Office of Energy Efficiency. OMB has issued guidance under NEPA Assignment Authority for surface transportation infrastructure. This requires a 2 year permitting time frame with one lead agency and one EIS.

The “2 for 1” executive order has been challenged. The Court has given standing. Discovery has been launched by the government. The implementation of EPA litigation transparency principles (challenging “sue and settle”) is going forward. The EPA is informing interested parties about law suits that are underway. The number of enforcements are down. Democrats are harping on this. However, 2019 is expected to increase, especially due to the Chrysler/Fiat action.

The 4 MATS cases are still underway, including the startup and shutdown revisions. On MACT, the pulp mill RTR is active. The Risk Management Plan replacement rule is being worked on. For “once in/always in”, part of the issue is that EPA did not take notice and comment, since this was only agency interpretation. The initial issue was also only a memo. NSR reforms are coming out as guidance. It is likely that these will also end up in Court.

The project aggregation issue has been around since 2009. In 2010, a proposed reconsideration rule was initiated that rescinded the 2009 reforms. The rule never went final. In 2018, the new administration issued a new memo going back to the 2009 reforms. This case is now in Court.

The EGU Effluent Guidelines are still in play. The new WOTUS rule was issued in December. That rule will be challenged in Court. Comment taking is in process. The groundwater and point source issue is before the Supreme Court. CERCLA 108(b) covers requirements for financial assurance. The hard rock mining industry is the first to be covered. Oral argument will be March 13, 2019. There are more cases that could have significant impact.

In one case, Grain Processing has a class action suit at its Muscatine, IA corn milling facility. There was a settlement for environmental equipment. A Texas lawyer tried to drive a class action suit on behalf of the citizens. There was difficulty with proving anything. The case went to court as a nuisance law suit. Common law claims that anyone can sue over being deprived of the use of their property due to things like emissions, odor, or some other trespass. Grain Processing eventually settled out of court. In another case, the air toxics assessment identified a hot spot.

Ethylene oxide was identified as the compound. The Sterigenics Willowbrook Facility had permits for ethylene oxide emissions and were always well in compliance. However, local residents got concerned about the potential cancer risks from exposure to ethylene oxide due to a federal report that stated that there might be such a risk. The state issued a seal order on

ethylene oxide containers, which effectively closed down the plant. The company went to court to get a temporary restraining order, but failed. The Illinois state constitution guarantees their citizens access to healthful air. The state claims that the potential to emit up to the permit level (as opposed to the actual level) constitutes a threat to the community.

The federal version of this case is called the “kids climate case”. The kids claim that they are entitled to a safe and stable environment and that the air is part of the public access. They are suing the president and 8 cabinet officers for not only failing in this responsibility, but actually is degrading the environment by promoting the production and use of fossil fuels. The case is before the 9th Circuit Court. The proposed relief is that the US government should phase out the use of all fossil fuels. The lawyer for the case wants the Court to basically “certify the science of global warming”. The claim is that this case will be like the Scopes Monkey trial (which allowed the teaching of evolution in public schools).