

MINUTES
CITIZENS ADVISORY COUNCIL MEETING
March 15, 2016

CITIZENS ADVISORY COUNCIL (CAC) MEMBERS PRESENT:

Cynthia Carrow, Allegheny County
Walter Heine, Cumberland County
John Hines, Lebanon County
John Over, Fayette County
Jim Sandoe, Lancaster County
Joi Spraggins, Philadelphia County
Thaddeus Stevens, Tioga County
Burt Waite, Crawford County
John Walliser, Allegheny County
Don Welsh, Chester County
Jim Welty, Cumberland County
Timothy Weston, Cumberland County

CITIZENS ADVISORY COUNCIL STAFF PRESENT:

Katherine Hetherington Cunfer, Acting Executive Director

CALL TO ORDER:

Acting Chairman Don Welsh called the meeting to order at 10:05 a.m. in Room 105 of the Rachel Carson State Office Building, 400 Market Street, Harrisburg, PA, with a quorum. The meeting was also broadcast via WebEx for the public.

APPROVAL OF FEBRUARY 4, 2016 MEETING MINUTES:

Acting Chairman Don Welsh asked for a motion to approve the February 4, 2016 Council meeting Minutes.

**Tim Weston moved to approve the February 4, 2016 meeting Minutes.
Thad Stevens seconded the motion, which was unanimously approved
by Council.**

DEP REPORT

DEP Policy Director Patrick McDonnell highlighted that the Policy Office's primary responsibility in the Department includes oversight of the regulatory/technical guidance development process, as well as working with the Governor's Office and the Secretary's Office to ensure that the priorities of the administration are reflected in the actions that the Policy Office makes on a regulatory guidance basis.

Patrick McDonnell stated that the Clean Power Plan has been one of the big initiatives in the Policy Office for the past year or so. Early in February 2016, the Supreme Court issued a stay of the rule. The Policy Office is still working on the Clean Power Plan, but, with the stay, the staff is doing much more work now on the Cross-State Air Pollution Rule (CSAPR) methane issues. Work is still being conducted with the stakeholders who want to come in to speak with the

Department, as well as working to finalize the National Governors Association policy project that began last year. That project enabled the Department to get some modeling, as well as access to experts in other states in terms of assessment. With regard to the Clean Power Plan, there is still a fair amount of work going on in most of the states. Even those states that are opposed to the Plan are still working to understand and assess the ultimate impacts of the rule should it go forward.

Regulations currently open include the water quality standards, the Class A stream re-designations, the explosives regulation, the disinfection requirements rule, and the climate change action plan. Information on all of these regulations is available on DEP's website under the E-Comment section.

With regard to Alternative Fuel Incentive Grant (AFIG) permits, DEP has listened to the frustrations of those who have applied regarding the relatively short application period. To put together a good application involving the purchase of vehicles and the purchase of fueling stations can take longer and can be problematic, so the regulatory program has been changed into a year-long, revolving program. A time-out is called three times during the year to assess what has been received and to make awards. Two webinars were conducted, with over 100 participants. Those webinars were recorded and are available through the AFIG site on the Department's website. A lot of the questions can be answered just by reviewing the webinars.

It is once again time for Great American Cleanup Pennsylvania. The event started March 1 and will end May 31. A lot of activity will be centered around that in the next month. DEP is working with PennDOT to supply volunteers with bags and equipment. Anyone interested in signing up can go to www.gacofpa.org.

The building celebrities, the falcons, have been active over the last few weeks. We have four eggs that have been laid in the nesting box on the 15th floor. The banding event is tentatively planned for May 3.

CAC Policy and Regulatory Oversight Committee

Chairman Tim Weston stated that the Committee considered three regulations brought forward by the Bureau of Air Quality for amendments to Chapters 121 and 129.

First is the draft proposed rulemaking for Control of Volatile Organic Compounds (VOC) Emissions from Industrial Cleaning Solvents in Aerospace Manufacturing. In 2006, the EPA issued what are called Control Technique Guidelines (CTG), which are guidelines that are applied to states indicating what the Environmental Protection Agency (EPA) believes represent reasonably available control technology for the entities covered. A CTG is basically a standard that states should incorporate into their state implementation plans. The category in question involves a variety of products used to remove contaminants, such as adhesives, inks, paints, soil, oil, and grease in aerospace manufacturing. The Department determined that the measures consistent with recommendations provided in the 2006 CTG would be appropriate for inclusion in its regulations. The proposed rulemaking was previously issued in February of 2014, and several changes have been made to the proposal. The original threshold of applicability that the Department proposed in 2014 was 15 lbs. of VOC emissions. The trigger is if a facility, without

controls, has the potential to emit 15 lbs. of VOCs in any one day. This is not a limit; this is a trigger. The metric is how much volatile organic compound emissions would occur without any control; uncontrolled emissions. The Department is now proposing the applicability threshold of 2.7 lbs. per rolling 12-month period, which is 15 lbs. per day averaged over a 12-month rolling period. This trigger is only on the aerospace manufacturing sector. We know there are specific solvents that have to be used because of Department of Defense or Federal Aviation Association (FAA) requirements. The EPA looks at other states near us to see what those states have done, including those that are in the northeast ozone transport region. New Hampshire has three tons per 12-month consecutive period, which is more than the Department is proposing. Delaware has five tons per year. Maryland is 15 lbs. per day, which was the original proposal. Ohio is three tons per 12-month rolling period. The Department is recommending the average be used out of individual daily emissions because it provides some greater degree of flexibility for the operators and from the standpoint of controlling ozone. The metric is how much volatile organic compound emissions would occur without any control; uncontrolled emissions.

Clarifications, including two exceptions, were added: one for digital printing and one for the use of certain industrial cleaning solvents under circumstances where the Department of Defense, Federal Aviation Administration, and other federal government agencies, mandate the use of that material.

After review of the regulation, the Committee unanimously recommended CAC's endorsement.

The second rulemaking deals with changes to Chapter 129, the Control of VOC Emissions from Automobile and Light-Duty Trucks Assembly Coating Operations and Heavier Vehicle Coating Operations. In 2008, the EPA issued the CTGs and this rule will incorporate the CTGs into our regulations. In April 2014, the proposed rulemaking went to the Air Quality Technical Advisory Committee (AQTAC) which voted 15-0 to concur in the recommendation. The Environmental Quality Board (EQB) put it forth in April 2015 as a proposed rulemaking. That rulemaking has now gone through its comment period. No comments were received. The Independent Regulatory Review Committee (IRRC) did submit comments, suggesting that a compliance date be set to allow development of the final form regulation. The compliance date would be January 1, 2017. The next regulation has the same issue. The Department is trying to set one common compliance date of January 1, 2017 for all these regulations.

This regulation was reviewed by the Committee, which unanimously recommended CAC's endorsement.

The next rulemaking before the Policy & Regulatory Oversight Committee was another change to Chapter 129 which is Control of VOC Emissions from Miscellaneous Metal Parts Surface Coating Processes, Miscellaneous Plastic Parts Surface Coating Processes, and Pleasure Craft Surface Processes. In 2008, the EPA issued CTGs for the control of VOCs from this category. In February 2014, the proposed rulemaking went to the AQTAC, which voted unanimously to recommend them. In October 2014, the EQB put forth the proposed rulemaking. It was published in August of 2015 for public comment. The EQB held public hearings. The end of the public comment period was October 2015. The Department is proposing to have the compliance date set as January 1, 2017. IRRC submitted comments regarding the compliance date and

requested that all of the rules be adopted on the same date. IRRC also expressed concern regarding the clarity of one of the sections dealing with potential conflicts with other regulations involving handheld aerosol cans. That clarification was made.

Again, the Committee recommends that this regulation be endorsed by the CAC and then forwarded to the EQB.

The fourth regulation deals with gasoline volatility requirements. Pennsylvania has had in its regulations for some time a volatility limit on the vapor pressure of gasoline. That was designed to help control VOC emissions from automobiles when refueling and operating. As noted by the Department, life has changed since the rule was adopted in 1987. We are now in a new world of Tier 3 gasoline requirements by the EPA, which will result in very substantial reductions of VOC, Nitrous Oxide (NO_x), and other emissions from cars. This will make a substantial dent in the impacts on ozone creation, particularly in the northeast where the I95 corridor, on the transportation side, has been a major problem with regard to VOCs and NO_x. Tier 3 gasoline is a much better solution. So in light of the fact that the Tier 3 motor vehicle emission fuel standards go into effect January 2016 means that Pennsylvania had a separate vapor pressure restriction on gasoline which is now no longer useful, not helpful, and we should follow the uniform national standard for gasoline. The recommendation is to repeal the current Pennsylvania regulation and that means that the national regulation is in place.

The Committee reviewed this and agreed unanimously to move this regulation to the EQB.

Tim Weston moved that the CAC recommend to the EQB adoption of the final rulemaking for Control of VOC Emissions from Automobile and Light-Duty Trucks Assembly Coating Operations and Heavier Vehicle Coating Operations. John Walliser seconded. Adopted and unanimously recommended to the EQB.

Tim Weston moved that the CAC recommend to the EQB adoption of the proposed final rulemaking for Control of VOC Emissions from Miscellaneous from Metal Parts Surface Coating Processes, Miscellaneous Plastic Parts Surface Coating Processes, and Pleasure Craft Surface Processes. John Walliser seconded. Motion adopted.

Tim Weston moved that the CAC recommend to the EQB adoption of the draft proposed rulemaking for Control of VOC Emissions from Industrial Cleaning Solvents in Aerospace Manufacturing. John Walliser seconded. Motion adopted.

Tim Weston moved that the CAC recommend to the EQB the proposed rulemaking for Gasoline Volatility Requirements. John Walliser seconded. Motion adopted.

DEP BUDGET UPDATE

John Stefanko reminded everyone that there is only a partial budget, but stated that the partial budget has allowed DEP to operate in a somewhat normal fashion. The hiring freeze and the travel ban were lifted, so the Department is operating in a somewhat normal mode with the monies that it has. As far as moving forward into the next budget year, basically a cost-to-carry budget has been proposed which would essentially allow the Department to maintain where it is currently. A complement management is ongoing within the Department. A ceiling has been placed on positions that can be filled within the agency. As far as losing positions, the Department has not. It is a matter of being a little bit more prudent, as we always have, within the agency itself and filling the positions to the ceiling that has been provided for us by the Governor's Budget Office.

In response to a question, John Stefanko stated that at the time the new ceiling was imposed, the Department had 228 vacancies in the agency. The ceiling reduced that by 188. A ceiling was imposed on every fund within the agency. A memo was recently submitted to the Governor's Budget Office requesting that the Department's ceiling be raised. A number of positions were listed and mission critical justification was provided for those to allow us a bit more flexibility. We did lose 188, but we are pursuing getting our ceiling raised because of the flexibility issue and the fact that a lot of the positions were either federally funded or special funded. The agency as a whole usually maintains about a 7-8% vacancy rate.

In response to a question about the impact on the federal cost share, John Stefanko stated that there has been an impact on the federal cost share. The mining program itself, since 2009, due to the fact that DEP cannot meet the federal match on the general fund side, has lost over \$6 million in federal monies. The Department has been cited by the EPA for not having enough staff to meet the needs of the EPA, which has allowed them to withhold \$3 million. The Department has been able to get the EPA to re-release the funds on the promise that we would move forward with business as it relates to the Chesapeake Bay. DEP has been cited by the Federal Office of Surface Mining. The agency has been cited by the federal government on a number of occasions due to not having adequate staffing to meet the needs of the delegated programs that we have. That is part of the justification provided to the Budget Office -- that we have been cited by the federal government on a number of occasions, which has caused the Department to lose federal dollars.

In response to a question about the federal government's ability to withdraw authority for programs, John Stefanko indicated that the delegation of authority could be removed from the state. The Department did receive a letter that there is the potential that could happen. DEP does not want to give up its delegated authority to the federal programs that are in the Commonwealth.

In response to a question about the Budget Office's authority to defund the Citizens Advisory Council staff position, John Stefanko stated that the position is still within DEP's complement and the Department does have the ability to fill the position at the Secretary's discretion. A list of positions was sent over to the Budget Office that were deemed mission critical and that the Department would like to pursue filling should they become available. The staff for the CAC is

important, but as far as a decision to move forward with that position, the decision would be up to the Secretary.

PUBLIC COMMENT

Amanda John, Pennsylvania and Delaware Program Manager for the National Parks Conservation Association

The first public commenter was Amanda John, Pennsylvania and Delaware Program Manager for the National Parks Conservation Association (NPCA). Amanda stated that the NPCA supports Governor Wolf's plan to introduce a Pennsylvania methane reduction strategy that would reduce the impact of the methane emissions from the state's natural gas operations on national parks and historic sites.

For nearly a century, the NPCA has been an independent, non-partisan voice working to strengthen and protect the national park system. Part of its commitment for the public trust is to ensure that America's national treasures and historical and cultural heritage is preserved and protected and that all generations of visitors enjoy a quality experience. Under the existing state and national standards, venting, flaring, and making of natural gas results in millions of tons of pollution released into the air each year, threatening national park air quality and speeding climate change. When it comes to capturing heat, methane is nearly 80 times as potent as carbon dioxide (CO₂) over a 20-year period. The rapid increase of leaked methane since Pennsylvania's natural gas surge in 2008 will spark changes to the landscapes and national parks. When methane is leaked, so too are air pollutants, such as volatile organic compounds which can form into smog. Roughly 115,000 metric tons of methane are lost from venting and flaring in Pennsylvania each year, the equivalent of 575,000 cars. As DEP estimates, a loss of \$8 million in methane.

The impacts to the 18 national parks, 7 national heritage areas, 27 national natural landmarks, and 167 national historical landmarks in Pennsylvania and further reaches of the air shed like the Shenandoah National Park, a Class 1 air quality area under the Clean Air Act, is evident. People will not want to vacation or visit a park with worse air pollution than Pittsburgh. Pennsylvania's national parks support a robust economy, sharing more than \$396 million in economic activity and supporting over 7,000 jobs in Pennsylvania. Local economies built on national parks and historic sites should not be threatened to support wasteful industrial practices.

The commonsense solutions included in the strategy announced on January 19th would improve upon existing insufficient national standards, rightfully establish Pennsylvania as a natural leader on the issue, and protect the parks and other protected aspects of our nation's heritage. To protect the legacy of the national park system in its centennial year, we must ensure that America's parks are handed to the next generation with increased, not impaired, value and that special places that belong to the public are not harmed by development activities to achieve short-term gain.

The NPCA applauds DEP and the Wolf Administration for announcing its intentions to establish high standards for methane pollution reduction that vests all other states, and until last week the

federal government, and for continuing to take actions to protect the national parks in Pennsylvania.

Thomas Au with the Pennsylvania Chapter of the Sierra Club

Public comments were offered by Tom Au with the Pennsylvania Chapter of the Sierra Club. Tom stated that methane is a highly-potent greenhouse gas. Over a 20-year timetable, it is 86 times more powerful than carbon dioxide. The oil and gas industry was the largest source of methane pollution in 2013. That sector emitted over 7.3 metric tons of methane. From a climate standpoint, that is the equivalent of carbon dioxide emissions from over 960 coal-burning power plants. The EPA estimates that the 2013 natural gas producers in Pennsylvania emitted over 120,000 metric tons of methane.

The Commonwealth needs to control the fugitive emissions of oil and gas operations. The proposed control measures that will be discussed are sensible, cost effective, and already in use by leading companies in the oil and gas industry. Of the 450 natural gas producers in Pennsylvania, fewer than 10 have joined the EPA voluntary natural gas star program. This is a program where producers sign up to implement the best control measures to capture fugitive emissions. It indicates that voluntary measures are not enough to reduce fugitive emissions.

Oil and gas operators need to also control smog and hazardous pollutants that are emitted from oil and gas operations. Each additional control will generate significant public health benefits, as well as climate benefits.

The general permit program that is being proposed covers only new and modified infrastructure, while existing sources are by far the major source of the problem. Further, the general permit proposal does not provide the opportunity for the public to comment on specific controls at new facilities. The United States cannot meet its international greenhouse gas reduction commitments unless it cuts methane from all sources by 40-45% by the year 2025. That is the current proposal for the cap on new emissions of methane.

Even with optimal methane controls in place, natural gas will continue to be a dirty fossil fuel, and the Sierra Club supports the swift transition to renewable energy, energy efficiency, and for the clean energy requirements.

Aaron Jacob Smith, Clean Air Council

Public comment continued with the third commenter, Aaron Jacob Smith, coordinating attorney for the Clean Air Council. The Clean Air Council is a member-supported organization that has been fighting for over 40 years to protect everyone's right to breathe clean air. The Council commends DEP for recognizing that the gas industry has a methane problem. Gas is leaked from every phase of gas development, releasing methane, potent greenhouse gas, ozone precursors, and hazardous air pollutants. As the second largest gas-producing state in the country, Pennsylvania should institute commonsense regulations that protect public health and ensure that the natural environment is protected for generations to come. The Council is very encouraged by much of what DEP has proposed. Replacing Exemption 38 with the general permit provides a

much-needed opportunity for upfront regulatory oversight of well pad operations and allows outside groups such as the Clean Air Council to participate in that review. While the Clean Air Council has concerns about the use of general permits; namely, that they do not allow for public comment on permits issued to individual facilities, they represent tremendous improvement over Exemption 38 which allows operators to submit compliance demonstrations six months after the facility is operating. The Clean Air Council is also pleased that DEP is proposing some of the nation's leading control measures, such as quarterly Leak Detection and Repair (LDAR) inspections of well sites (which is up from yearly), no venting from pigging operations, a source of emissions that the EPA and other states have overlooked, and best management practices for liquids unloading. Conventional well sites are not covered by DEP's proposed methane reduction strategy. A recent study from Carnegie Mellon University shows that conventional well sites emit an enormous amount of methane. Researchers found that leakage rates of conventional well sites range from 0.35 to 91%, with a median rate of 11%. Based on their findings, the study authors estimate that conventional well sites account for 40% of all well site emissions in Pennsylvania. The Clean Air Council urges DEP to take swift action in addressing conventional well site emissions. The regulation of existing sources is of particular importance to the Clean Air Council. With President Obama's recent announcement that the EPA will move to regulate existing sources of methane from the oil and gas sector, DEP has a real opportunity to lead the nation. With little detail on what the EPA proposed, we support DEP's commitment to seize the moment and show the rest of the country what smart, protective methane regulations look like. The Clean Air Council looks forward to reviewing the specifics of the regulatory package and the proposed general permit language.

The Clean Air Council is focused on natural gas because it is the largest industrial source of methane emissions. As a group, the Clean Air Council is looking for ways to control methane, which is a heat-trapping gas that contributes to climate change, and there is a whole suite of control technology that can be used to greatly reduce the industry's methane emissions.

Acting Chairman Don Welsh invited the commenters and the Department, for the edification of the members of the CAC, to point the members toward data that will educate the members about emissions trends in methane either in Pennsylvania or in the nation as a whole. Any information supplied will be made available to all of the members.

PRESENTATION BY KRISHNAN RAMAMURTHY, AIR PERMITS CHIEF, BUREAU OF AIR QUALITY

Krishan Ramamurthy, Air Permits Bureau Chief, gave a presentation on the recently proposed concepts for a General Permit (GP) for Well Pad methane emissions that would replace Exemption 38 and proposed modification for GP-5. This initiative was announced by Governor Wolf and Secretary Quigley to cut methane emissions from oil and gas production on January 21, 2016. The current presentation is geared towards the concepts being explored, not to actual regulatory changes being proposed at this time.

Mr. Ramamurthy highlighted that the existing Exemption 38 has been controlling methane and other pollutants and the misconception was that, because other states were permitting the activity, the Exemption was therefore not as stringent, which is not the case. The Exemption 38

is mostly being transferred to the GP process and looks at incorporating existing sources in an update of the regulations. The GP will include all the public comment elements under the development of the GP and then, once it is developed, the operators will follow the GP protocols. DEP is also working to establish best management practices (BMPs) for leak detection and repair to reduce emissions from production, gathering, transmission, and distribution lines. DEP is considering requiring Tier 4 diesel engines on drilling rigs and quarterly LDAR using an optical gas imaging system and monthly Audio Video Olfactory inspections.

Under the GP-5, the first attempt at a leak repair would be done within five (5) calendar days of leak detection. If purchase of parts is necessary, the leak must be repaired within 15 calendar days after the purchase of parts. Volatile Organic Compounds (VOC) emissions from storage tanks must be controlled by at least 95%. The proposed GP for well pads will also include fugitive dust control measures. DEP intends to propose no-bleed and/or low-bleed requirements for pneumatic controllers and pumps. Emissions from pumps may also be controlled through routing pump discharge streams into a closed loop system or a vapor recovery unit. The proposed GP may also require the operation of pig launchers without venting hydrocarbons into the atmosphere.

Well pad operators would be required to use no-bleed and/or low-bleed requirements for pneumatic controllers and pumps. Emissions from pumps may also be controlled through routing pump discharge streams into a closed loop system or a vapor recovery unit. The proposed GP may also require the operation of pig launchers without venting hydrocarbons into the atmosphere. The proposed GP may require plunger lifts or flaring to reduce methane emissions from wellbore liquid unloading. DEP is examining strategies to reduce emissions from produced water impoundment tanks. DEP is considering add-on controls on enclosed storage tanks or a closed loop system for an efficient reuse of produced water. Annual compliance certifications may be required to be submitted to DEP by a Responsible Official, as is the case under the current GP-5.

With the modification to the existing GP-5, DEP intends to propose the use of electric pumps or routing pumps discharged to closed systems when electricity is not available. Emissions from pneumatic pumps driven by natural gas may also be controlled through routing pump discharge streams into a closed loop system or a vapor recovery unit, or the pumps may be replaced with zero bleed pumps. The use of dry seals or control of wet seal venting of methane from each compressor by 95% would also be included in the proposed GP-5 modifications.

Council asked about the timeline for these proposed regulations, and Mr. Ramamurthy commented that all the major changes are in his department right now and much of this development will depend on EPA new source review standard and existing source standards and then DEP can build from that. Council also asked about the inspection protocol for GPs, and Mr. Ramamurthy stated that there is not an inspection protocol for facilities that use a GP. It will be more dependent on the work load of regional field staff and rely on LDAR and other technology to collect the data. Council asked about what DEP sees as the average methane leakage rate from well pad and production facilities, and Mr. Ramamurthy stated that the self-reported emissions from the LDAR program and the dynamic nature of emissions makes it hard to definitively quantify. The Air program will try to provide additional data to the Council.

PRESENTATION BY RANDY BORDNER, CHIEF OF STATIONARY AND AREA SOURCES, AIR RESOURCE MANAGEMENT DIVISION, BUREAU OF AIR QUALITY

The EPA issued the CSPAR in July 2011. They required 28 states in the eastern United States to improve air quality by reducing emissions from power plants that cross state lines and that contribute to the ozone particulate pollution in other states. CSAPR was scheduled to replace the Clean Air Interstate Rule beginning January 2012. CSAPR was challenged in the D.C. Circuit Court, it was stayed, and then vacated before it was implemented. The D.C. Circuit's decision was appealed to the Supreme Court, which reversed the vacatur and remanded CSAPR back to the D.C. Circuit Court. In October of 2014, the D.C. Circuit Court granted the EPA's motion to lift the stay and shifted the compliance dates of CSAPR by three years.

Phase I implementation of the annual CSAPR program began on January 1, 2015 and on May 1, 2015 for the ozone season program. The EPA issued a finding on June 30, 2015 that several states had failed to submit a good neighbor State Implementation Plan (SIP) for the 2008 ozone standard that began a two-year deadline for the EPA to approve an SIP or finalize a Federal Implementation Plan (FIP) that addresses the good neighbor requirement. In July of 2015, the D.C. Circuit remanded the ozone season budgets for 11 states to the EPA for reconsideration.

The EPA proposed an update to CSAPR on November 16th of last year for the 2008 National Air Quality Standards (NAAQS), by issuing the proposed CSAPR Update Rule and publishing that update in the Federal Register on December 3rd of last year. The purpose of the rule was to reduce the interstate transport of air pollution that significantly contributes to nonattainment or that interferes with the maintenance of the 2008 NAAQS in the eastern U.S. The proposed CSAPR update further limited Electric Generating Unit (EGU) emissions in 23 states during the ozone season.

The CSAPR Update Rule also responds to the 2015 remand of the NO_x emissions budgets by the U.S. Court of Appeals for the D.C. Circuit, and the CSAPR update that the EPA had proposed replaced Phase II CSAPR ozone season NO_x emissions budgets for nine states, including Pennsylvania's ozone season budget, and the EPA removed South Carolina and Florida from the ozone season CSAPR trading program.

The EPA estimates that the NO_x emission reductions in 23 states affected by the CSAPR Update Rule will result in \$1.2 billion in health benefits for millions of Americans with modest effect on electricity prices and employment. It anticipates small employment gains and losses in electricity generation in the fuels sectors and that some generation will be shifted from coal EGUs to natural gas-fired EGUs.

The PM_{2.5} (Particulate Matter) NAAQS was updated on January 15, 2012, but the CSAPR Update does not address the 2012 PM_{2.5} NAAQS. The EPA acknowledges that the D.C. Circuit remanded the CSAPR SO₂ emissions budgets for four states and that the CSAPR Update does not address the remand. The Phase II SO₂ remand will be addressed separately. The annual CSAPR budgets which address the 1997 and 2006 PM_{2.5} NAAQS continue to apply at this time. Based on the EPA's contribution analysis, the largest contributions were to downwind receptors. Pennsylvania is at 9.39 parts per billion on the contribution to nonattainment, and the

contribution to maintenance receptors is at 15.93. Pennsylvania's ozone season budget is 14,387 tons of NO_x with a variability limit of 3,021 tons of NO_x and a combined assurance level of 17,480 tons of NO_x. When comparing these new ozone season CSAPR budgets to the created CSAPR ozone season budgets for a select group of states, the reductions are very significant. Pennsylvania has a larger percentage reduction in its budgets than the other states on that list; a 72% reduction.

The EPA extended the comment period from January 19, 2016 to February 1, 2016, and PA DEP did comment on the proposed CSAPR Update by the February 1st 2016 deadline. Pennsylvania submitted comments focused on cost thresholds used to develop the state NO_x budgets, timing and compliance requirements, shifting electricity generation to lower NO_x-emitting EGUs, and the EPA's proposed banked allowance surrender ratio.

The EPA indicated that it used the same four-step analytical process for the proposed CSAPR Update Rule that it did for the original CSAPR Rule. Step 1 in that process included identifying downwind receptors that are expected to have problems attaining the NAAQS. The second step identifies the contributions to NAAQS violations at these downwind receptors. The third step identifies upwind emissions that contribute to downwind nonattainment or interfere with maintenance and quantifies the available upwind responsibility among the linked states. Lastly, states that are found to significantly contribute to nonattainment or interfere with maintenance will reduce the identified upwind emissions via the regional emissions allowance trading program. Pennsylvania commented that it continues to support this analytical approach.

The EPA used a 50% cost analysis for evaluating the cost of using existing SCRs. This means that the cost to operate SCRs falls in the range of \$300-\$750 per ton. The 50% analysis would suggest that \$500 per ton is the cost threshold that should be used to set the NO_x cost reduction threshold, but the EPA did not choose that threshold. That was just one of the cost thresholds that the EPA had evaluated. In determining PA's trading budget, the EPA did not consider establishing the budget based upon Pennsylvania's Reasonably Available Control Technology (RACT) rule and its associated NO_x reductions. To establish state budgets in the proposed CSAPR Update Rule, the EPA used a \$1,300 per ton EGU NO_x cost threshold in its analysis. This cost assumed wide-spread availability of restarting idle SCRs and state-of-the-art combustion controls.

When PA DEP worked on its RACT II rule, the cost to operate Selective Catalytic Reduction Technologies (SCR) was considered to be higher and suggested that the EPA should have considered resetting this cost threshold to use in the SCRs at a cost of \$800-\$1,000 per ton of NO_x reduction. The \$1,300 per ton threshold that the EPA ultimately used in determining available NO_x reductions from upwind states and percentage state budgets fails to address the technical limitations of using and restarting idle SCRs. Idle SCRs are likely to need upgrades and require permit modifications that will go beyond the EPA's compliance timeline beginning in January of 2017. The EPA did not appear to consider that at night and during periods of low demand the required temperature to use SCRs is not reached and some of the NO_x reductions anticipated by the EPA will not occur. This means that the cost of restarting idle SCRs remains the same and the amount of total NO_x reduced is smaller than the EPA assumed and the resulting cost per ton is higher than \$1,300 per ton. PA DEP commented that the EPA's per ton cost

thresholds are too low for each category and that the EPA should evaluate the CSAPR at \$800-\$1000 per ton, which is a more reasonable threshold at which existing SCRs can operate.

The EPA generated a Pennsylvania ozone season NO_x budget that will require all Pennsylvania EGUs to meet a statewide average emission rate of 0.057 lbs. of NO_x per million British thermal units (BTUs). Meeting this average rate is not technically feasible when EGUs operate at lower capacities and cannot reach the minimum temperature needed to operate their SCR controls and control equipment. The lower emission rate far exceeds the rates of .12 and .16 reasonably evaluated that is part of RACT for coal-fired EGUs. Owners and operators of coal-fired EGUs in Pennsylvania will be able to comply with the new CSAPR Rule, but only when they purchase NO_x allowances to achieve compliance.

Pennsylvania commented that the EPA should also give special consideration to Pennsylvania's waste coal-fired facilities as they provide substantial environmental benefits to Pennsylvania residents by cleaning up the coal refuse piles across the state. Pennsylvania has about 184,000 acres of unclaimed mining areas to recover. Waste coal facilities in Pennsylvania consume 12 million tons of coal refuse annually. Pennsylvania suggested that the EPA tailor the CSAPR Update Rule to ensure that this cleanup can continue.

Pennsylvania also commented on the EPA's suggestion that it was possible for high NO_x emitting generators to shift generation to lower emitting generators since that investment had already been made. PA DEP did not agree with the EPA's position on that issue. The Department believes it is just as likely for generation to shift to higher emitting small EGUs, demand response, and high electric demand day units that are not subject to the CSAPR Rule.

The EPA requested comment on the banking and retirement of banked allowances. The EPA indicated it was considering requiring a retirement ratio of 2:1 or 4:1 to reduce the size of the allowance bank. The Department does not recommend the use of retirement ratios because banked NO_x allowances allow facilities to address operational variability. Capping the allowance bank or permitting allowances to expire may be a better option for the EPA with regard to preventing growth of the allowance bank.

The EPA requested comment on NO_x mitigation strategies as it continues to evaluate non-EGU emission reductions that can be made at a later date. The EPA also asked for comment on allowing legacy non-EGUs to participate in the CSAPR program. DEP commented that the EPA provided only a partial remedy to address ozone transport to downwind states and the EPA needs to address non-EGU emissions as part of its strategy. The Clean Air Act applies to non-EGUs as well as EGUs and NO_x emissions in a state that causes downwind violations of the ozone capacity. There also may be some cost-effective reductions available, which the EPA has failed to address.

PA DEP commented that non-EGU legacy units should continue to be able to participate in the CSAPR trading program. DEP also commented on future steps that could be considered to address good neighbor obligations. The EPA should consider capping NO_x emissions across other sectors based upon achievable emission rates and allowing the purchase of CSAPR

allowances to meet compliance obligations. This would also help to control the size of allowance banks moving forward.

PA's comments are available for review on the EPA's docket.

**PRESENTATION BY HAYLEY JEFFORDS, EXECUTIVE POLICY SPECIALIST,
ENVIRONMENTAL WORKGROUP CHAIR**

Pennsylvania's history is punctuated by waves of natural resource extraction, from Drake's first oil well in Titusville, to the timbering over of the state's northern tier to fuel the early days of the Industrial Revolution, to the rise of King Coal. We are little more than a decade into the latest wave of natural resource extraction – the shale gas revolution. The growth of this new industry has been incredibly fast. Today, Pennsylvania is the nation's second largest producer of natural gas.

The biggest challenge facing the natural gas industry in Pennsylvania today is getting their product to market. Industry dynamics – the need to hold leases by drilling wells, the immense productivity of those wells, and the competitive market – have combined to create the current glut of gas and the low price regime facing the industry. Make no mistake about it – the industry created this situation. As a result, almost 30% of those wells drilled are not yet connected to infrastructure. Over the next decade, tens of thousands of miles of gathering lines and thousands of miles of transmission lines – along with compressor stations and ancillary infrastructure – will be built across Pennsylvania to connect these wells to market.

Governor Wolf wants to use as much of Pennsylvania's natural gas and co-products as possible in Pennsylvania to generate lower-carbon electricity, to create manufacturing opportunities, to spur combined heat and power systems, enable microgrids, and to support the deployment of much more renewable energy. Shale gas presents the Commonwealth with an immense opportunity to strengthen our economy and protect our climate – Pennsylvania's CO2 emissions have fallen 20% since 2007, due in significant part to the switch from coal to natural gas as fuel for electricity generation. These opportunities do not come without costs. Every county in the Commonwealth will be impacted by this wave of infrastructure development and the cumulative impacts of this buildout will exceed the environmental impacts of well drilling itself, according to studies by The Nature Conservancy.

Pipeline siting is determined by a combination of private transactions and, in certain cases involves interstate transmission, federal law, and a decision by the Federal Energy Regulatory Commission (FERC). FERC has the authority to grant certificates of public convenience and necessity to interstate pipelines. That certificate enables pipeline companies to use the power of eminent domain to acquire property for pipeline right-of-way. This is the source of a great deal of turmoil, community disruption, and protest seen in Pennsylvania today. To complicate matters further, when it comes to pipeline development, there is no single agency in charge of permitting and approvals at either the state or federal level. County comprehensive plans and local governments are not empowered in the planning and approval processes. As a result, while cumulative impacts are required to be considered by FERC, taken as a whole, when viewing the full scope of the coming infrastructure building in Pennsylvania, it is fair to say that cumulative impacts are not fully factored into the permitting processes. Impacts to sensitive lands, to

watercourses, to communities, to cultural resources, to public lands and more are not always avoided, minimized, or mitigated. Cumulatively, this situation poses significant and avoidable risk to Penn's Woods and its citizens and communities. There is a need for smarter infrastructure planning to minimize these risks.

Governor Wolf created the Pipeline Infrastructure Task Force (Task Force) to identify a path forward to responsible infrastructure development. Over 200 individuals applied to participate on the Task Force through a public solicitation process. From the applicant pool, 48 individuals were appointed by the Governor, and Hayley had the honor of being appointed as Chairman. The Governor asked the Task Force to identify best practices and other recommendations in six key areas: 1) amply and engage in meaningful public participation; 2) develop long-term operations and maintenance plans to ensure pipeline safety and integrity; 3) employ construction methods that reduce environmental and community impact; 4) maximize opportunities for predictable and efficient permitting; 5) plan, site, and route pipeline to avoid or reduce environmental and community impacts; and 6) enhance workforce/economic development aspects.

The composition of the Task Force is broadly representative of stakeholder interests. In addition, more than 100 individuals drawn from the same pool of self-nominated applicants participated in 12 work groups. The work groups were tasked with identifying best practices and recommendations within their specific focus area and to present them to the Task Force for consideration. The Task Force has met eight times since last July. Each meeting's materials were posted on DEP's website and the meetings themselves were streamed live on the web. Each meeting included a public comment period. The Task Force's work was done with exemplary transparency. We heard some persistent and sometimes vocal comments from the public. Some questioned the need for the infrastructure itself and even the Task Force. Some folks were not very supportive of shale development and called for cracking down. Many were concerned about climate change and the continued use of fossil fuels. There were also voices pointing out the family-sustaining jobs that this infrastructure is able to support. We held a 45-day public comment period where we received over 1,500 comments. Those comments were all included in the final report that went to Governor Wolf.

The workgroups and Task Force produced a very large document, about 658 pages. In those pages are the 184 recommendations that came from the twelve workgroups. The final recommendations were grouped among the six charges from Governor Wolf, and the Task Force members prioritized them by using a weighted vote to express their preferences. While all 184 recommendations from the workgroups were ranked and included in the final report, the top two recommendations were identified from each charge on which to focus early actions. Under public participation, early and frequent engagement with the communities by pipeline companies was noted as the top priority recommendation. This is very critical. Not all companies engage with host communities as they should. Landowners also need to become better educated about their rights and about the development process overall. In terms of pipeline safety and integrity, emergency responder training for individual responders and for local agencies was the top recommendation. Public safety is always paramount.

Pipeline development has large, immediate impacts during clearing and construction and also longer-term impacts. Protecting water courses and especially Exceptional Value and High-Quality streams were identified by the Task Force as the top two environmental regulations. DEP is obliged to ensure that every stream in Pennsylvania is not degraded by development and to provide special protection to High Quality and Exceptional Value streams. The Task Force understands this. The workgroup really wanted to emphasize that there were some best practices being used by companies that are not universal, and the workgroup would like to see those embraced more broadly and more uniformly to help ensure that no stream degradation occurs. That is obviously important because the Commonwealth has more stream miles than any other state, with the exception of Alaska.

When it comes to permitting, these two recommendations are near and dear to Secretary Quigley's heart. After years of relentless budget cuts, DEP has seen about 670 fewer staff than it did eight years ago. Over 440 of those positions performed inspections and processed permits. Because the Environmental Protection group was also tasked with assessing the efficiencies in the permitting process, adequate staffing for pipeline project review was a very common theme. Governor Wolf is doing everything he can to resolve a \$2 million structural deficit, but this was one area within DEP specifically that was noted as lacking. In addition, and very related, was implementing electronic permit submission for Chapters 102 and 105 permits. Those permits can take up an entire bookshelf, just one permitting submission. That is a lot of paper that people would like to see go away and hopefully, with some IT budgeting help, DEP will be able to implement and improve efficiency and get those permitting processes and the applications online. For planning and siting pipelines to avoid reduced environmental impacts, it was noted PA1Call needs to be expanded in order to prevent damage to underground facilities. The habitat fragmentation that comes from pipeline development is a severe environmental impact that can potentially be reduced if rights-of-way can be shared in practical, workable ways. The rights-of-way can be up to 100' wide at points. This could involve locating pipelines along existing disturbed areas like utility corridors, local roadways, and even state-owned rights-of-way like the Pennsylvania Turnpike. This is something that will require much more analysis, evaluation, and possibly even legislation.

Finally, in capturing the full economic benefits of pipeline development, the Task Force identified attracting military veterans to the energy workforce and enhancing STEM education as their top two recommendations.

In the final report, a recommended lead agency was identified for each one of the 184 recommendations. DEP, for example, is the lead agency for over half of the recommendations. We have convened within DEP an internal agency workgroup that will consider and evaluate each of the recommendations that pertain to the agency and consider ways to implement them and on what time table, as well as which recommendations require further analysis and those that may be beyond our current statutory authority or available resources. Other lead entities should do the same, and that includes pipeline companies themselves.

It is true that some of the recommendations in our report are already required by law or regulation. The fact that they bubbled up from the workgroups shows that the additional education and engagement we talked about in the report is necessary. Also, it is accurate to say

that just because something is already required by law or regulation does not mean that it is always done, as even a casual perusal of DEP enforcement actions on pipeline development would make plain. So including in the report recommendations that cover things that industry is already required to do is also fair.

Many of the recommendations in the report are actually being embraced and practiced by leading companies, leading counties (like Chester County), and even in some state and federal agencies, including DEP. High levels of practice are not universal and raising the bar for all of us – industry, government agencies, communities, and stakeholders – is the vision that Governor Wolf had in convening the Task Force. That is what we strive for and the work must continue after this Task Force completes its work.

As noted in the preamble of the report, the report will be a success if it promotes sustained collaboration of stakeholders and facilitates the responsible development of pipeline infrastructure within the Commonwealth. It is not meant to be the final word, but the start of a longer conversation and the start of follow-up work across state and local governments, company board rooms, and in communities to assess and implement the recommendations that the Task Force developed together. The work of the Pipeline Infrastructure Task Force embodies DEP's vital mission. In a very real sense, our work on the responsible pipeline infrastructure development has just begun.

DEP ADVISORY COMMITTEE MEETINGS REPORTS

Mining Reclamation Advisory Board

Katie Hetherington Cunfer indicated that there is further discussion on MRAB about mining fees. Considerable pushback has been received from folks in the industry about the fact that not only are the fees being substantially increased, but they are also being substantially broadened. Things that historically either had a nominal fee or no fees are having fees added, but a lot of that has to do with the fact that the program is not being funded by the General Fund as it had been in the past. The program has a certain dollar amount to it and funding needs to be found to match the federal funds that the state receives to be able to put on the program. Right now those discussions are actually pretty brisk. There have been several different special meetings to discuss the fees. There has been a counterproposal from the folks on the industry side on what they would be willing to accept in terms of fees. There are additional meetings in April to further discuss, but the mining program, as well as non-coal and aggregate, are moving forward rather quickly with their package of fees, hopefully to go to the EQB this summer. Right now, the Department is analyzing what came back from the industry side and is going to respond in terms of the numbers that they handed over.

DON WELSH, ACTING CHAIRMAN

There is also an MRAB appointment issue that we have to deal with. Cynthia Carrow and Terry Dayton's appointments are scheduled to expire. In Terry's absence, the Committee has decided that Terry Dayton would prefer to continue serving. Cynthia has alleged that she also would continue to serve.

John Over made a motion to reappoint Cynthia Carrow and

Terry Dayton to the MRAB. Jim Sandoe seconded the motion, which was unanimously approved by Council.

Aggregate Advisory Board

The Aggregate Advisory Board is also knee-deep in fees. There is just not funding from the General Fund to be able to support the program. Similar discussions are being held on what industry can afford versus what the Department needs to survive and continue to maintain the program. This will also hopefully go to the EQB this summer. There is a lot of interest on the legislative side about the mining and the aggregate sets of fees, so this may get more attention once an official fee schedule is published by the Department, especially in the middle of budget discussions.

DON WELSH, ACTING CHAIRMAN

We have the Radiation Protection Advisory Committee. Katie would need to be appointed to serve on that committee.

John Wallister moved to appoint Katie Hetherington Cunfer to serve on the Radiation Protection Advisory Committee.

Cynthia Carrow seconded the motion, which was unanimously approved by Council.

JOI SPRAGGINS

Joi co-chairs the K-12 Science, Technology, Engineering, and Math (STEM) program. Recently, 1,700 students and over 8,000 executives from Fortune500 companies to military Generals participated in the STEM conference held in Philadelphia from February 18th-20th. The focus was on 7th-12th graders. Joi has been talking about workforce development and economic development opportunities since she joined the Committee. What came out of the STEM conference was the importance of having an education and workforce development program around oil and gas. Joi would like to revisit the issue of having a workforce and education program committee, perhaps placing the matter on the CAC agenda at a later date.

DON WELSH

Acting Chairman Welsh suggested that perhaps the following be placed on future committee meeting agenda:

- Triennial review of the Water Quality Standards
- Drinking Water Disinfectant Rule
- Methane
- Summer field trip ideas
- Additional items should be forwarded to Katie Hetherington Cunfer

Katie

The only other piece is a foreshadowing for April 19th. There may be a very heavy EQB agenda, so CAC may start a little bit later. The details are still being worked out.

Cynthia Carrow made a motion that the Committee move into

Executive Session to discuss employment matters. John Walliser seconded the motion, which was unanimously approved.

CAC EXECUTIVE SESSION

CAC RECONVENES FROM EXECUTIVE SESSION

Legislative Committee Meeting Report

On a recent conference call with regard to Act 7 of 2016, Council discussed that it did not trigger, encourage, or support this legislation. The discussion has been whether or not Council should submit a letter to the Secretary that would express the desire of Council to go forward on a status quo basis and to also ask the Secretary to please express his intent for continued support of Council.

Cynthia Carrow moved that the Committee draft such a letter, circulate it to the full Council, and send it to the Secretary. Jim Sandoe seconded, which motion was unanimously approved.

Senate Bill 1114 was also discussed. This Bill essentially says that DEP shall accept conventional or alternate on-lot systems during the planning process. In the CAC transition document that went to Governor Wolf, CAC did talk about short-term and long-term recommendations. One recommendation was to immediately consider alternative systems within the current regulatory framework and the second recommendation was to call up DEP to conduct a comprehensive review of Act 537, to include a stakeholder process, and to consider in that process the use of alternate on-lot systems. At this point, there are three options: 1) CAC can take a position on Senate Bill 1114 that we support it or we do not; 2) CAC can take no action and, therefore, we would not be asserting any position; or 3) CAC can send a letter to the Legislative Committee indicating that Council essentially recommends a comprehensive overview of Act 537, with the inclusion of a stakeholder process and the examination of alternate technologies.

Burt Waite made a motion that the CAC not take any position on Senate Bill 1114. Mark Caskey seconded, and the motion was unanimously approved.

ADJOURN:

With no further business, Acting Chairman Welsh requested a motion for Council to adjourn the meeting. Thad Stevens moved to adjourn the meeting, which was seconded by Burt Waite and all were in favor. The March 15, 2016 meeting of the CAC was adjourned at 2:40 p.m.