

**MINUTES
CITY OF FORT COLLINS
AIR QUALITY ADVISORY BOARD**

Date: Monday, November 20, 2017
Location: Colorado River Room, 222 Laporte Ave.
Time: 5:30–8:00pm

For Reference

Mark Houdashelt, Chair
Ross Cunniff, Council Liaison 970-420-7398
Cassie Archuleta, Staff Liaison 970-416-2648

Board Members Present

Gregory Miller
Arsineh Hecobian
Harry Edwards
Chris Wood
Mark Houdashelt, Chair
Greg Clark
Tom Griggs
Vara Vissa, Vice-Chair
Jim Dennison

Board Members Absent

Staff Present

Cassie Archuleta, Staff Liaison

Guests

Alan Braslau (Citizen)

Call to order: 5:31 pm

Public Comments

- Alan Braslau noted three upcoming events:
 1. The Energy Board will be holding an upcoming discussion on electric vehicle charging infrastructure and AQAB Members are invited.
 2. The Colorado Public Utilities Commission will be holding an informational session (Investigation of Electrification of Transportation) to discuss charging structures on 12/8/17 from 10:00 - 4:00 at DORA Hearing Room A.
 3. The Platte River Power Authority (PRPA) has planned a number of upcoming public presentations to explain the findings of the zero net carbon modeling project.
 - On 12/7/17, PRPA will present to the PRPA Board in morning and there will be public presentation at 3:00 PM at the Fort Collins Hilton Hotel.
 - On 12/13/17 a Town Hall meeting will be held at 222 Laporte Ave., Fort Collins in the Colorado Room at 6:00 PM.

Approval of Minutes

Harry moved and Tom seconded a motion to approve the October minutes.

Motion passed, 9-0-0.

AGENDA ITEM 1: Oil and Gas Flowline Emissions

Arsineh Hecobian, Board member, presented a brief overview of emissions related to oil and gas flowlines. Cassie Archuleta, Staff Liaison, provided a brief introduction to the presentation.

Presentation

Introduction

- The Front Range lies over the Denver-Julesburg Basin, which is the geological source of oil and gas extraction for Larimer and Weld Counties. There are approximately 55K active wells in Colorado, with almost half of those existing in Weld County, and 277 active wells in Larimer County. There are three producing wells within the City of Fort Collins, which are operated by Prospect Energy. Oil and gas development in Fort Collins is regulated by the Colorado Oil and Gas Conservation Commission (COGCC).
- In April of 2017, a home explosion occurred in Firestone, CO due to an uncapped, abandoned gas line. The event has prompted a much-needed discussion of flowline regulations statewide.
 - The State and COGCC responded by requiring all operators to report beginning and ending points of flowlines and perform integrity tests on lines. Further flowline rulemaking is in progress.

Background

- Pipelines are significant emitters of methane, which is a potent greenhouse gas. The Environmental Defense Fund recently performed a study which examined the impact that methane leaks have on the global climate utilizing Google cars to take measurements nationwide. The study showed significant emissions from cities with older pipelines, while those with newer pipelines had less. Leaks in such gas utility lines are just one portion of the total emissions from gas flowlines. Because reparation of these leaks is the responsibility of local utilities, they often are not repaired promptly due to a lack of funds.
- Most leaks don't pose an immediate threat to safety, but can produce pollution that can aggravate respiratory conditions. The threat level depends on a number of complex variables including the emission rate and emission period.
- Most documented leaks usually occur where pipelines meet and when people happen to report them, which suggests that many leaks occur without anyone's knowledge.
- Three different kinds of pipelines are involved in moving natural gas from wellhead to processing plant to consumer. Gathering pipelines gather raw natural gas from wells, transmissions pipelines transport natural gas over long distances, and distribution pipelines consist of main and service lines.
 - The DOT reports about 2.5 million miles of distribution and service pipelines (mostly buried underground) in the U.S. They must be marked with brightly colored markers; within a 500-foot distance of the actual pipeline location.
- The National Pipeline Mapping System Public Map Viewer allows the public to view gas transmission pipelines (only those run by the DOT), hazardous liquid pipelines, liquefied natural gas plants and breakout tanks (www.npms.phmsa.dot.gov/FindWhosOperating.aspx).

Flowline Regulation

- Regulation of pipelines is extremely complicated and occurs on multiple levels.
 - Pipeline Safety - The Pipeline and Hazardous Materials Safety Administration (PHMSA)

- oversees interstate pipelines, while individual states oversee intrastate pipelines.
- Environment Protection - The EPA is responsible for reporting releases and regulating emissions monitoring.
- Management Practices - The Colorado Oil and Gas Conservation Commission (COGCC) develops best management practices.
- State agencies such as the Colorado Public Utilities Commission (COPUC) and Colorado Department of Public Health and the Environment (CDPHE) also have influence over regulations, as do local land-use codes and construction practices. CDPHE also helps to monitor emissions.
- The responsibility of leak cleanup (esp. relating to water cleanup) varies by state.
- Currently, the Colorado Pipeline Safety Program enforces Colorado’s pipeline safety regulations for transmission, distribution, regulated gathering, master metered, and LNG and LPG systems; however, this jurisdiction does not include emissions regulations.
- The new COGCC flowline rules being developed should help to better address emissions regulations. In strengthening flowline rules, COGCC hopes to create more uniform participation among operators and initiate the creation of a non-profit fund to:
 - Cap abandoned wells that have no oversight and have the potential to be significant emitters,
 - Finance in-home methane tests,
 - Prohibit future domestic gas taps,
 - Create a technical group to improve safety training, and
 - Explore an ambient methane leak detection program.
- The hearing regarding the implementation of these new rules will take place 1/8/17 – 1/9/17. If approved, the amendments will become effective 20 days after publication in the Colorado Register.
- There is no definitive action that the AQAB can take at this point, but City Council will play a role in implementing some of these rules and may seek guidance from the Board.
- Arsineh offered that someone from the Colorado School of Mines could discuss flowlines with the AQAB if members are interested.

Discussion

- Vara inquired if oil and gas are piped together.
 - Arsineh explained that it depends on the composition of the basin being tapped. For example, the Piceance Basin is dry gas. Regardless, vendors are required to “clean up” natural gas before selling it to distributors.
- Harry inquired whether or not methane is a smog-forming component and if it’s considered to be a powerful greenhouse gas.
 - Arsineh explained that whether or not methane is smog-forming depends on the oxidant type; however, there are so many VOCs in the atmosphere in Colorado, it is difficult to determine if methane is a significant contributor to smog. She also noted that methane is more potent than CO₂ in acting as a greenhouse gas in the short term..
- Mark inquired about the presence of other VOCs that accompany methane emissions due to pipeline leaks.
 - Arsineh noted that methane emissions are most prominent during the drilling process, at gas-gathering pipelines and during certain parts of the separation process. VOC emissions can be prominent during the drilling process, due to flow-back, and during processing and production.
- Vara asked where flowline leaks typically occur and how operators are able to monitor such lengths of pipeline.
 - Arsineh stated that wellheads don’t leak very often, but there’s an opportunity for leakage during the separation process that occurs above ground on the pad. Leakage from the wellbore itself

(through soil and into the atmosphere) is low. The greatest opportunity for leaks occurs in underground pipelines that transport the product to processing facilities and beyond. Corrosion and damage contribute to leakage, so older pipelines have significantly more leaks. In addition, when new pipelines meet with areas that are abandoned, there's an opportunity for leakage.

- Greg Clark noted that the current method used to detect leaks consists of a systematic approach to measure emissions at designated locations in set intervals (for example, monthly with FLIR cams). He noted the problematic nature of this method, as the potential for leaks occurs along an entire flowline, not just in set locations, at specific times, where operators may happen to be monitoring.
 - Arsineh stated that the new rules do not require monitoring along the entire pipeline, but they do require the application of more pressure gauges and regular checks of them.
- Greg Clark inquired whether or not the methodology of checking for leaks would be examined more closely.
 - Arsineh stated that an instrumentation group at the EPA is interested in looking into more cost-effective technology to do just this. Research at Denver University is also headed in this direction; however, federal policy-making entities still need to be convinced of the importance of improved methodologies. There have been significant improvements in potential monitoring technology recently and assessments of their costs and effectiveness are underway (for example, LiDAR).
 - Mark noted that at the 21st Century Energy Transition Symposium at CSU a new methane detection method utilizing lasers was discussed; it was able to detect 100% of methane leaks within a half mile.
- Mark inquired whether or not funding was discussed with regards to implementing new rules.
 - Arsineh replied that funding has not been discussed in detail.
- Vara discussed how regulations aren't always effective. She inquired whether these new rules would have a significant effect on O₃ production.
 - Arsineh replied that emission inventories don't take into account pipelines; they only account for emissions from aboveground sites. Realistically, we won't see a real change in air quality until gas prices rise by 100 - 500 %. The new rules will help to reduce future emissions, but they won't necessarily reduce current emissions from pipelines.

AGENDA ITEM 2: City Strategic Planning Feedback

Mark Houdashelt, chair, presented draft recommendations for consideration of the City's Strategic Plan, which outlines citizen, staff and council priorities for the 2019-2020 budgeting process.

- Prior to this meeting, AQAB members provided Mark with feedback via email, which Mark incorporated into the Board's draft recommendation. Members discussed the difficulty in ranking Strategic Objectives (SOs) due to a few key issues, including vague or repetitive terminology, category overlap, and a dichotomy between their preferences as individual citizens versus their votes as AQAB Members. The board voted on the top two SOs in each Strategic Outcome Area to include in the Board's recommendation.
- Board Members further discussed their uncertainty regarding the use of SOs to guide the budgeting process. Vara noted that it may be more beneficial to use specific City metrics (such as The Community Dashboard) as guidance; as such metrics are traceable and represent more lucid indicators of change.
- Members believe that it would have been helpful to understand the changes that were made (omissions, additions) to the SOs since the last Strategic Plan.
- AQAB Members would like more guidance on the best way for Boards and Commissions to submit their recommendations on BFO offers, specifically relating to the timing and content desired by Council.

Tom moved and Harry seconded a motion to pass the Board's SO recommendations as amended.

Motion passed, 8-0-1.

Staff Follow Up: Cassie will make the final edits to the Board's recommendation and send to David Young, who is the staff contact assembling Board feedback for Council.

Board Updates

- Two members will be leaving the AQAB after this year. Mark inquired whether or not other Board members have specific areas of expertise that they'd like Council to look for in applicants.
 - Members discussed the addition of someone with a biology/toxicology/public health background or a waste diversion expert, as well as the addition of another engineer.
 - They also discussed the balance of gender, education levels and other demographics amongst Board members and whether or not current demographics accurately represent the community.
- Mark is nearing completion of an updated draft of the AQAB's bylaws; he is still working with Christine to finalize details.
- Mark briefly discussed the idea of either creating a separate Greenhouse Gas Board or incorporating more frequent and pointed discussions of greenhouse gases and climate change into the AQAB's agenda.
- On 10/26/17 at the Annual Bike Project Fair, there was an informational booth for the forthcoming City Plan update to notify citizens of opportunities to get involved in the planning process by becoming Plan Ambassadors.
- Mark attended the 21st Century Energy Transition Symposium at CSU on 10/30/17 - 10/31/17. A number of interesting topics were discussed, including carbon capture and sequestration and the security of energy and electric power systems (<http://energytransition.colostate.edu/symposium-2017/>). Chris and Greg Clark attended as well and were both struck by how dire our situation is regarding carbon emissions, noting that negative carbon emissions will be necessary to prevent potentially reaching a tipping point.
 - Greg also noted a presentation (at the symposium) by a contractor that works with natural gas distribution companies across the country who is currently developing a set of standardized performance metrics for emissions.
- On 11/4/17, Greg Clark attended an event sponsored by the League of Women Voters to discuss managing the risks of gas and oil, wells, and pipelines at which a civil engineer from the City of Longmont presented a potential plan to test and monitor orphan wells.
- On 11/7/17, City Council voted 4 to 3 to adopt a TOU plus tiered rate structure for everyone without electric homes.
- Google recently announced that it will reach 100% renewable energy in 2017; this is up from 50% last year.
- Mark brought attention to a white paper pertaining to the discrepancies between state and local laws regarding electric assist bicycles. A few members expressed interest in the report; Mark will send to those interested via email.

City Planning Calendar

- 1/9/18 - Work Session for Regional Watershed Planning Process Update
- 2/13/18 - Work Session for 100% Renewable Energy Study Results and Solar Business Model Review and Outdoor Residential Burning
- 2/27/18 - Work Session for Results Review and Drafting of 2018 Strategic Plan
- 4/10/18 - Work Session for Community Organics Recycling Project

Staff Updates

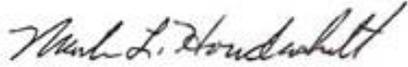
- Selina Lujan is the New Healthy Homes Program Coordinator.

Future Actions and Agenda Items

- Review of 2017 Annual Report Draft
 - Oil and Gas Setbacks
 - Update on Residential Burning - Overview and Seek Direction
 - Review of Bylaws
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Meeting Adjourned: 8:07 pm

Next Meeting: December 18, 2017



Signed by Chair