

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

Date: Monday, May 21, 2018
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

Matt Tribby
Chris Wood
Arsineh Hecobian
Mark Houdashelt, Chair
Karen Artell
Harry Edwards
Greg Clark

Board Members Absent

Vara Vissa, Vice-Chair
Jim Dennison

Staff Present

Cassie Archuleta, Staff Liaison

Guests

N/A

Call to order: 5:30 pm

Public Comments

N/A

Approval of Minutes

<p>Harry moved and Arsineh seconded a motion to approve the April minutes as presented with edits. Motion passed, 5-0-2.</p>
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AGENDA ITEM 1: Platte River Power Authority – Zero Net Carbon Portfolio Analysis

Brad Decker (Manager of Planning) from Platte River Power Authority (PRPA) presented on PRPA's energy portfolio history, its status, and future outlook under different scenarios.

Presentation

Zero Net Carbon Study Overview

- PRPA's Net Zero Carbon Study concluded last year. The primary objectives included:
 - Determining the least-cost portfolio of generation resources that can achieve carbon neutrality by 2030.
 - Assessing the risks and risk mitigation measures associated with achieving or exceeding carbon neutrality.

- Since demand fluctuates, utilities must rely on neighbors to buy power from and sell power to. Based on this and other sustainability factors, it was important to use a regional lens while performing carbon emission calculation rates for the ZNC study. The study provided a valuable model by helping to develop a carbon accounting method, establishing renewable energy requirements and determining potential least-cost generation technologies to meet 2030 goals.
- The ZNC study only acts as a model, not an action plan.

PRPA Portfolio Timeline/Background

- PRPA was established in the 1970s
 - 1974: Hydropower (90 MW)
 - 1979: Coal Facility - Craig (77 MW)
 - 1980: Coal Facility - Craig (77 MW)
 - 1984: Coal Facility - Rawhide Flats (280 MW)
 - 1987: Solar Array (10KW)
 - 1998: Wind Energy - Medicine Bow (1.2 MW)
 - 1999: Wind Energy - Medicine Bow (3.3 MW)
 - 2000: Wind Energy - Medicine Bow (1.3 MW)
 - 2002: Natural Gas – Simple Cycle Gas Turbines Unit A, B and C (195 MW)
 - 2004: Natural Gas – Simple Cycle Gas Turbines Unit D (65 MW)
 - 2005: Wind Energy - Medicine Bow (2.5 MW)
 - 2008: Natural Gas – Simple Cycle Gas Turbines Unit F (128 MW)
 - 2009: Wind Energy - Silver Sage (12 MW)
 - 2014: Wind Energy – Spring Canyon (60 MW)
 - 2016: Solar Array – Rawhide Flats (30 MW)
- PRPA is highly committed to wind energy and is a leader in renewable energy within Colorado and the surrounding region. More than 1/3 of PRPA’s energy is produced with carbon-free sources.

PRPA Portfolio Outlook

- The electric utility industry is changing rapidly, but we still need to see vast improvements in energy storage to increase the efficiency of renewable energy sources. Lagging battery technology is a significant inhibitor to harnessing wind and solar power as these sources are reliable, but not predictable, and cannot be expected to produce according to a demand curve.
- PRPA is soliciting a proposal to install more solar panels at Rawhide Flats and they’ve committed to close one of the units at the Craig coal plant by 2025. Since PRPA is a part-owner in the plant, this is a lengthy process.

Next Steps

- The next step is to file a new Integrated Resource Plan. The Zero Net Power study was only a modeling tool, but the IRP process obligates action by providing a roadmap to meet objectives. PRPA hopes to bring communities together to solidify common sets of goals so that PRPA can move forward with IRP-supported decisions.

ZNC vs. IRP

- ZNC – In order to achieve zero net carbon, any carbon produced by fossil resources is offset through generation from excess renewable resources that is then sold to the regional power market, thus achieving a “net” zero carbon emission overall.
- There are still a lot of issues with ZNC approach. It’s good first step and helps demonstrate the feasibility of moving to a lower carbon footprint, but:
 - it’s a high-risk approach, will require investment, and will cost more.
 - PRPA would serve about 75% of its load with zero carbon generation.

- if others simultaneously pursue this goal, there will be more sellers of renewables, fewer buyers, lower market prices, reduced carbon offset values, and cost will increase.
 - committing too early may result in foregoing opportunities to capitalize on lower renewable costs later in the planning period.
 - future costs are uncertain.
 - selling higher quantities of power in a bilateral market imposes higher risks than in an RTO-based market.
- The new IRP will allow for more customized, lower-risk means of achieving goals by involving stakeholders within state and local governments, the utility industry and members of the public to make sound and timely decisions to ensure an adequate supply of reliable, low-cost, and environmentally-responsible electricity to meet the future needs.
 - The generating capacity under the ZNC portfolio is nearly double the capacity of the current IRP portfolio;

Now	~1,022 MW mostly coal and gas
2030 ZNC	~1,089 MW mostly gas and solar
2030 current IRP	~956 MW mostly coal and gas; coal generation drops by 1/3 by 2030 and then mostly carbon-free and gas after 2030

However, the cost of the ZNC portfolio is 20% above the current IRP in 2030 but about 10% less than the current IRP in 2050, with an 8% higher NPV over the entire planning period (about 10% higher NPV from 2030 – 2050). Furthermore, the adoption of renewable technology amongst consumers is expected to decrease future demands.

Discussion

- Greg asked if PRPA has a model to track [renewable] adoption rates at the consumer level to incorporate into the overall portfolio.
 - Brad replied that load forecasts take such statistics into account; the penetration of rooftop solar in the area is substantial and has seen significant growth in the past two years (~15MW of rooftop solar). PRPA will continue to examine consumer renewable trends in detail to determine the potential for rooftop solar and cogeneration, thermal storage, battery storage, EVs, etc. Batteries are the one missing link in a highly efficient renewable network. Another drawback is the inability to integrate all these technologies into a central system which would allow for synchronization, analysis, and control in an integrated fashion.
- Harry enquired if PRPA has considered EVs in their scenarios. He noted that EV charging times will be unpredictable and non-linear.
 - Brad stated that PRPA considered forecasting for consumer trends related to EVs and the electric demand associated with them. There is a high growth potential, but the projected demand curve is broad, so it is difficult to pinpoint exactly what EV-associated demand will look like in 2030 or 2050. PRPA has been aggressive in EV penetration estimates for inclusion in this plan and understands that erratic charging times may affect demand curves, but there is little historical data on such demands right now (Xcel has a study that PRPA has referenced on this topic).
- Harry and Brad discussed the dangers of rushing into reliance on renewable energy without assuring reasonable costs and risks. Brad noted that it would be very difficult to achieve 100% renewable energy because transmission is very expensive and utility companies must balance the unpredictability of renewables by having diverse renewable resources, which is also very expensive. It is more difficult and costlier to support more and more renewables, so it is important to invest in the right technologies at the right time. Offsets play a key role in reducing carbon emissions.

- Matt asked if there are opportunities for communities to invest in renewables to produce energy for other (densely populated) areas on a macro scale.
 - Brad stated that utilities have been designed by the law of economies of scale and that there will be opportunities for certain areas. For example, Oklahoma has huge potential for wind, solar and biomass renewables, Wyoming has potential for wind energy export, etc.; however, there are still barriers related to transmission costs, policy and permitting, and interconnection standards between states and communities.
- Chris enquired how boards can influence or participate in the IRP process?
 - Brad responded that PRPA will reach out to communities to arrange targeted open forums for industry groups, consumer advocates and other stakeholders to take part in the discussion. The IRP has a two-year planning process; the rest of this year will focus on stakeholder outreach and preliminary tasks so that analytics, presentation and documentation can be done next year. In 2020, PRPA will file with Western Area Power Administration for approval of its IRP.
- Mark asked how many suggested improvements from Energy Strategies critique of the ZNC study will be incorporated into IRP, or if the IRP will build off the study in any way.
 - Brad stated that the primary intent for the ZNC study was to begin a process of engagement with the public; it was never meant to be an action plan. PRPA agreed with most suggestions made by Pace Global, who performed the study, but it is unclear exactly which improvements will be adopted. This will likely depend on timing, available technologies and, ultimately, the decision-making process that will result from the IRP. Prior to the ZNC study, PRPA was developing separate goals/portfolios for every city it serves, but the IRP will help to develop common goals which will be beneficial to everyone. Then an action plan can be implemented, which will be reevaluated on a five-year cycle.
- Mark and Brad briefly discussed the EV Readiness Roadmap being generated by the City. Mark encouraged PRPA's involvement in the process; however, Brad stated that the City's customers will likely drive the expectations for this Roadmap and thinks it would be most beneficial for PRPA to focus on the technologies required to implement an EV infrastructure.

Staff Follow Up: Cassie will send a copy of Brad's presentation to those who would like it.

AGENDA ITEM 2: Oil and Gas – Land Use Code Updates

The Board continued its discussion to provide a recommendation related to proposed updates to the Land Use Code regarding development near oil and gas operations. This item is scheduled to go before Council on June 5, 2018.

Discussion

The Board continued a discussion regarding a recommendation related to oil and gas reciprocal setbacks and alternative compliance and began the conversation by briefly discussing other Boards' (Natural Resource Advisory Board and Planning and Zoning Board) decisions on this matter. The NRAB recommended adherence to staff recommendations regarding new setbacks, with added suggestions to alternative compliance, while the PZB recommended adherence to staff recommendations regarding setbacks and removal of the alternative compliance section of the Code (they would rather consider it under the modification rule). The current staff recommendation is to offer alternative compliance if sampling conditions are met; setbacks can be no lower than 150'.

- Matt asked what the significance of a 150' buffer is.
 - Cassie stated that this distance was chosen to be consistent with Longmont, which is one of the most progressive communities along the Front Range with regards to oil and gas setbacks.
- Arsineh noted that examination of historical votes by the Planning and Zoning Board suggests that, with regards to alternative compliance, it seems that there's more successful adherence to regulations when

there's a mechanism in place. The staff recommendation would likely be a useful tool for them to base their decision on and give the public a platform to make comments on.

- Cassie stated that no modification will be allowed under 150' if alternative compliance is stipulated within the code.
- Matt and Greg expressed concern with the lack of long-term monitoring requirements within the code, since there are still so many unknowns regarding the health risks associated with plugged and abandoned wells. Karen agreed and stated that she believed the only way that alternative compliance would be acceptable within the Code is if periodic monitoring were specified. She went on to say that if initial sampling indicated a problem, then mitigation must be done prior to proceeding with construction and that all test results should be made available to the public by targeting nearby homeowners (especially those within 1000 feet of the well).
- Greg asked if the City has resources for ongoing monitoring and notifications.
 - Cassie stated that the City does not currently have resources to perform these services.
- Matt asked why long-term monitoring is not on the table.
 - Cassie stated that the resources to pay for such monitoring present an unknown for the City and went on to state that there are only two areas within Fort Collins that are developable that this code will apply to – these areas are already discussing the installation of permanent monitoring.

The Board discussed two options: 1) No alternative compliance, 2) The potential for a developer to request an alternative compliance buffer of no less than 150 feet if the reclamation conditions currently suggested by City staff are met, and if and only if:

- *A – the same fencing requirements apply as for the default setbacks.*
- *B – no fencing requirements apply.*
- *C – a designed party takes responsibility for ongoing monthly/annual monitoring and reporting.*
- *D – notification of test results is sent monthly/annually to all addresses/property owners within 1000 feet of the oil and gas location as defined in the proposed changes to City Code.*

The consensus of the Board was that there are too many details associated with option 2. Arsineh stated concern that while she agrees there are too many details associated with option 2, she worries that future members of the Planning and Zoning Board may allow for modifications (such as Waters Edge) if no alternative compliance is stipulated. Mark noted that alternative compliance applies to buildings only, there is nothing stopping people from walking up to or over wells without fencing; they could be in parks or back yards.

Matt moved, and Greg seconded a motion to adopt no alternative compliance buffer. The Board feels that Staff's proposed Code changes for an alternative compliance buffer is incomplete. For example, there is no requirement for remediation following initial testing and/or ongoing monitoring (and notifications of testing results).

Motion passed, 5-1-1.

Staff Follow Up: Cassie put will put the recommendation into a memo for Mark to review and he'll finalize and send it to Council.

- Karen suggested that a 1000-foot buffer for active wells be measured from property lines, rather than building boundaries.

Karen moved, and Chris seconded a motion to add Karen's statement above to the recommendation.

Motion passed, 6-0-1.

Board Updates

- 4/18/18 – Karen attended the Natural Resource Advisory Board meeting at which oil and gas setbacks and

West Nile Virus were discussed. Wind energy from Wyoming and a power line that will run through Meadow Springs ranch were discussed.

- 4/18/18 – Mark attended a Transportation Board meeting at which the EV Roadmap and the E-bike pilot study were discussed.
- 4/19/18 – Vara attended a Planning and Zoning Board meeting at which oil and gas setbacks were discussed.
- 4/23/18 – Mark attended the Bicycle Advisory Committee meeting at which members discussed BFO offers and the Bicycle Master Plan Implementation. Tonight, they're discussing a new law passed by Colorado State legislature that gives municipalities the ability to decide if bicyclists may treat stop signs as yields.
- 5/7/18 – Mark and Karen attended the Boards and Commissions Super-Issue meeting that addressed the BFO process, a new City tool to evaluate the Triple Bottom Line, and outdoor residential burning. Mark sent relevant documentation to AQAB members. Boards have until June 8 to submit input to staff about BFO offers, but people can also state their personal opinions via the budgeting website.
 - *Staff Follow-Up:* Cassie will send a link to the website out.
- 5/10/18 – Arsineh attended an Energy Board Meeting at which an electric system monitoring program report, energy policy update and CAP were discussed.
- 5/14/18 – Karen and Mark attended the Futures Committee meeting; there was a lot of support for what was being proposed by the Economic Advisory Board and the Assistant City Manager will put together a pilot resolution for a multi-board collaboration “experiment.”
- 5/16/18 – Mark attended the Natural Resource Advisory Board meeting at which the regional watershed, BFO offers, an update on the carbon inventory process, and dust mitigation were discussed.
- 5/16/18 – Matt attended a Transportation Board meeting at which the City Plan was discussed. Three main topics and their relevance were discussed; livability and sustainability proved to be most relevant planning topics going forward. TransFort was also discussed, as there's been an increase in the use of mass transit.
- Mark – The AQAB Climate Change Subcommittee met on 5/10 and found they are currently lacking data to accomplish what they'd like (comparing City efforts to those described in the RMI study that supported the adoption of the CAP); they also discussed the CAP framework and carbon accounting.
- There will be a City meeting on Thursday evening to discuss changes in GHG emissions accounting.
- 5/31/18 – There will be a CAP citizens advisory meeting in the CIC room to discuss BFO offers related to the CAP.
- Mark reminded everyone to fill out periodic review forms and submit them to Christine by end of month.
- Council voted 5 to 1 to remove the human case requirement for adult mosquito spraying and chose to leave the vector index the same.
- If you cannot attend a relevant Board meeting, please notify the backup. If, as a backup you cannot attend, please notify the rest of the Board so that someone can fill in.
- Mark provided an update on regional watershed planning: everything will still be going to the current landfill, but it will be divided into sections (recycling area, transfer station, site to deal with construction/demolition waste, composting facility, etc.). It's still unclear what the time frame is for getting the landfill in Wellington permitted and built.
- Mark still wants to send a recommendation to Council for a pilot project for organics. We only have until 6/8/18, so there will not be enough time to discuss it at an AQAB meeting. Mark will send a personal recommendation.
- Karen has put forth a question about whether we want to have more ozone monitoring within the city.

Staff Updates

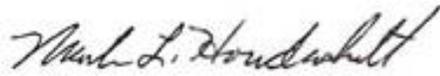
- Martinez case may be coming up soon and the City may ask for Board feedback.

Future Actions and Agenda Items

- Review of City Council 6 Month Agenda Planning Calendar
- Karen suggested discussing EPA non-attainment in ozone and more monitoring related to the Boulder ozone study.
Staff Follow-Up: Cassie stated that this could be appended to the July agenda; she'll follow up with Mark.
- Climate Program Update from Lindsay *or* bump up Monitoring and Attainment Status update
- Radon Update

Meeting Adjourned: 8:45 pm

Next Meeting: June 18, 2018



Signed by Chair