



**Climate Action Plan
Citizen Advisory Committee Minutes
January 7, 2015**

215 N. Mason Street, Community Room
5:30 p.m. – 9:00 p.m.

CAC Members: (X = present)

Bill DeMarco	X	Harry Edwards	X	John Shenot	X
Bryan Watkins	X	Holly Wright	X	Sara Frazier	X
Chadrick Martinez	X	John Holcombe	X	Scott Denning	X
Dana Villeneuve	X	Kellie Falbo		Stacey Clark	X
Dianne Ewing	X	Marge Moore	X	Suraj Renganathan	
Eric Levine	X	Mike Freeman		Tom Ghidossi	X
Glen Colton		Olivia Stowell	X	Yvonne Myers	
Greg Rittner		Mark Easter	X		

In attendance:

CAC Alternate: Hunter Buffington, Stacey Baumgarn, Kelly Giddens

Staff: Lucinda Smith, Emily Wilmsen, Travis Paige, Bruce Hendee, Paul Sizemore, John Phelan, Cassi Nichols, Bonnie Pierce, Josh Birks, Melissa Hovey, Kathy Collier, Travis Paige

Consultants: Judy Dorsey – Brendle Group, Zach Taylor – Brendle Group, Coreina Chan – RMI, Brad Decker PRPA

Facilitator: Art Bavoso

Guests: Mark Hoadashelt, Martin Carcassone, Colin Day, Kevin Jones, Molly McGaughlin, Brian Woodruff, Sara Gillis, Paul Hudnut, Janice Lynne, Sarah Gallup

Public Comment and Announcements

Bruce: Steve Catnach, our Light and Power Director, has changed positions and we congratulate him on that. We do still have continuity, I spoke with Kevin Gertig who is our Utilities Executive Director and he is going to continue to ensure that we have representation. John Phelan is here, he is with the Utilities as well.

Lucinda: I wanted to recognize Platte River Power Authority for their recent recognition as clean generating station.

John: RMI has published the final report for the Integrated Utility Services model.

Kathy: We have the Business Innovation Conference coming up on Jan. 29.

Approval of November Minutes

We will defer the vote on the minutes until next time because everyone has not had a chance to review.

Status Update

Lucinda: We can take a show of hands to see which date (Jan. 20 or 21) would work best. All present committee members could make either day except for John Phelan. Even if you cannot make the meeting, we will provide the questions in advance and we would really like to have feedback. I am inclined to suggest Jan. 21 and it would be held at the utilities building. We are looking for a supermajority vote. That would be 15 votes out of the 23 member committee. Is anyone uncomfortable with this plan? If you can't attend in person, can you at least submit your input on the questions?

- Early on as a group, I thought that we decided we could not vote by proxy. I thought I remembered that there was this requirement in the bylaws.
 - Lucinda: I know that that's the way Council appointed advisory board functions; they do not take action offline. I recall that the committee had talked about the importance of getting the input and not having the process delayed. I would advocate having a different approach where people could provide their input, not in person if they cannot attend the meeting. Are there any concerns with this? Art is checking. Is there anyone that is concerned in the meantime? I am not seeing any major concerns.

Tonight we are committed to have a shorter meeting. Becky Fedak is out of town right now, so I will make a general presentation about where things are and it is in part foreshadowing some of the information we will be providing at a City Council work session on Jan. 13. This does reflect some of your input.

If you notice a little bit further down on the agenda, we do want to get a feel as to where the committee is. We did a little bit with the clicker technology last time and this time I think we would like to ask for a formal vote on some smaller items. This has to do with the inclusion of airline miles, or not and the inclusion of or not of the cost of carbon. Do you feel at this point we have provided enough information for you to understand the general pathway to achieve the objectives in 2020, 2030 and 2050? At this time would you support updated goals and an updated climate action plan?

Lucinda gives a summary of the clicker questions from the last meeting.

Lucinda: Airline travel is optional to include in the greenhouse gas inventory. Some cities do, but most cities do not, especially cities like Fort Collins that do not actually have a large airport. The next question involves two different levels of PRPA generation models, 80% reductions and 60% reductions. The third question focused on what the strategy should focus on more if there was an opportunity to adjust the dials in the model. In terms of population growth, the group decided that this information should be provided, but a strategy does not necessarily need to be developed to include a

recommendation for a different level of population growth. Most of you expressed that the model should include the cost of carbon for all fuel sources. Finally, the last question revealed that the next steps should include near term suggestions and financing approaches.

The role of goal setting is to provide community leadership and set a direction or intent and it can attract outside capital. There's a new organization forming and I believe it's called Carbon Neutral Cities alliance and it's going to be starting this year with cities around the world. Fort Collins has an opportunity to partner with these cities on really continuing the exploration of a lot of the core issues. The Climate Action Plan framework, just like the 2008 plan is intended to demonstrate capability. The strategies are listed at a really high level, so it's really a roadmap for the next 15 years. It will be iterative inevitably and it will require periodic updates.

Lucinda outlines major changes to the model.

Lucinda outlines the PRPA modeling.

Brad Decker: I think that is a good representation overall. This is a very involved effort; we collected and gathered a lot of input. There are some aspects of the climate action process that will yield increased needs for electric generation and some that will decrease the needs.

- John: The solar is reducing the demand, so when you see the supply slides, solar is not in there. That was something that we ended up deciding early on.
- That dark blue line represents Platte River's combined coal, hydro, natural gas, and wind?
 - Brad: That's right
- Energy generated within the city associated with solar and bio mass is still there, but PRPA is not providing that
 - Brad: Correct. Platte River's system under this plan dips by about 40%. That has to grow elsewhere and that would be through the addition of solar on the distribution side.
- Are those numbers for all of Platte River or just of Fort Collins' portion of Platte River power?
 - Brad: That is for all of Platte River
 - Lucinda: The graph itself actually goes in the 20 year horizon of Platte River's modeling, but the climate modeling extends it out to 2050. In terms of the graph itself, it's from 2015 to 2035.

Brad: This shows that of the generation, that we have to produce and deliver to our customers, it shows how we might go about that. As you can see, the dark blue area represents our coal resources and that first steep drop is our Craig facility and then the Rawhide facility comes out of the mix around 2030. The compensation for that are gas resources. The red slice is purchases, so we have to rely more on the market to help balance the system. You can't count on those resources (wind and solar) very well to produce when you need them. It's about a 40% decrease in what Platte River would generate, but that's compensated by resources on the distribution side.

- It looks like, in about a 1 or 2 year timeframe you're taking Rawhide off and completely replacing it with wind and natural gas. This is just a really short transition, so I am wondering about the risks associated with this short timeframe.

- Brad: One of the things that we have to consider in the overall analysis is that there's an unprecedented amount of new generation construction required. At this point there has been some simplification to try to address some of this. To get to the question of the risks associated with this quick transition, there are lead times for generation anywhere from 3 years for a gas plant and 7-10 years for a coal plant. That's one of the issues; the objectives of this plan are ambitious and we need to see if we can physically meet those generation requirements.
- John: This is really the first iteration of the model intended to see what the carbon emissions implications are. In order to get to operational or business plan, we have to do an enormous amount of additional work. This just gives us an idea of the playing field.
- Brad: There are a lot of unresolved issues that we need to identify and address.
- John: One of those would be the timing of how quickly we would want to make those transitions.
- I get nervous when I see big bets played out on natural gas in the future. We've seen a 96% reduction in recoverable reserves in Monterey for fracking out in California. What is being done to try to get some better data on natural gas availability and pricing further out? Our short term thinking is that natural gas is plentiful, but that data seems to be inaccurate.
 - Brad: This is something that really needs to be explored from Platte River's prospect. From a consumer perspective, and an overall market perspective, we'd still be a relatively small player, but it is definitely something we have to look at. At this point, and as we look out to 2030 our gas needs are pretty minimal.
 - Lucinda: This is just one more aspect that points to the iterative nature of this. It defines a pathway, but a lot can happen between now and 2030 or even now and 2020. The scenario reflects the inputs that CAC members suggested last time. This is what that particular scenario looks like. We still are in the process of looking at and reviewing the information in terms of the way that inputs from Platte River fit into the model. What we are showing you here is not 100% final.
 - Brad: Platte River has made a pretty strong commitment over the last several years to add more renewables. Right now we're upwards of 30% of our total electricity generation is from non-carbon emitting sources. Just committed to a 25 Mw solar facility at our Rawhide station and we entered into some wind contracts this past year. A lot of growth is going on, we're making progress toward that and helping out with the overall goals that the City is considering.
- Lucinda: Here are some of the outcomes that are projected from this scenario. The scenario at this time gets to 75% of the 2030 goal and 92% by 2050. It has a net cumulative cost in the year 2020, but by 2030, that has shifted to a net cumulative savings. We also put it into a smaller number, the total cost divided by each resident, but this is not necessarily what each resident would have to pay. This analysis does include the cost of carbon and a 2.5% discount rate. If you change the discount rate to 5%, it's a relatively small difference
 - The slide that shows this change from coal to wind and gas, because that happens between 2029 and 2030, there's no cost of this enormous infrastructure until the year 2030. This could make the cumulative savings a little misleading in the year that that happens. The way you've modeled it, isn't necessarily the way you would probably begin construction.

- You would have reserve replacement, so beginning today, there has been an accumulation of funds, which would be reflected in consumer costs that could be put aside for these costs.
 - Brad: The cost streams that we estimate for the electric portion of financial planning are put in reserves for construction. What is being translated into the Brendle model, includes those costs, so it is not a lumpy cost, it is absorbed in a reasonable fashion. I cannot however speak to the other components such as transportation.
 - Lucinda: We don't just look at any one strategy or any one fuel sector. This is important as we start to consider that the more cost effective strategy can help offset the more costly strategy.
- So the costs in 2020 PRPA's piece of that is only a slice of how big of a piece of the pie is that?
 - Lucinda: I'm sure we could answer that at this point. I'm sure can look at the model and pull that out.
- Lucinda outlines the direct costs/savings, potential immediate actions, the implementation process and next steps.

Review and Discuss Triple Bottom Line Impact Assessment

Bonnie presents triple bottom line initial findings.

Bonnie: These results are not being presented as a comprehensive list; I am just summarizing this at a high level.

- Looking at the 0.3 overall rating makes me wonder how that stacks up against ratings for other projects that have been evaluated this way.
 - Bonnie: We actually will be one of the first to use this tool. We're not convinced that an overall rating is that significant. We are presenting these results to City Council, so we'll let them determine the value of that. One of the things that our city leadership is interested in is not seeing standardization of scores of all positive 1's or all 2's. One of the things we did not have time to do yet was present alternatives or mitigation strategies for the two negative scores. We would then rate them, with mitigation, and without mitigation.
- How was the overall rating calculated?
 - Bonnie: It is a straight out average
- Shouldn't it be just the sum of the three? Shouldn't it be .8?
 - Bonnie: It came out .3. Well will double check to make sure there is not a mistake in our forms. *(Has been confirmed as the accurate calculation of the average.)*
- In the social category you had indicated a positive for decreased healthcare costs associated with increased air quality, but there wasn't anything about increased active transportation. Why was this left out?
 - Bonnie: That's actually not left out, it's in the SAT. We talk about people having more active lifestyles and the positive impact of this.
- Lucinda: In case people did not have a chance to see it, we provided the full tool in your materials. Bonnie is just talking about a few of the main points. One thing that is included, that I

think the committee is especially interested in, is the lifecycle impacts of different energy generation sources.

- Bonnie reads the results of this section.
- One thing I didn't see in the slides was the difference in water use for various generating technologies.
 - Bonnie: We don't specifically account for emissions from water. We do have the estimate of green buildings and I applied this reference for each building that actually becomes green, or is retrofit.
- I was actually asking about the water associated with energy generation.
 - Bonnie: That is not included in any of the modeling that I am aware of.
 - Judy: It's not in our model, no.
 - Lucinda: I would say that in general, if there are things that are like that, we could still consider these as additional triple bottom line points. Bonnie has identified this process where we can use these ideas to further inform the next update of this TBL assessment when we talk about mitigation strategies.
- When I think about sustainability, water is very near the top of the list.

Financing Approaches

Josh gives an overview of financing approaches and options. He cautions that this presentation was also built off of the Jan. 5 model.

- Where does the circular economy concept come into play with the community financing? Is there a specific focus for that here?
 - Josh: What does the circular economy concept mean to you?
 - I guess what comes to mind to me is the ability or opportunity for citizens to invest. People have an opportunity to invest in the bonds, for example.
 - Josh: I know of an example where Denver recently did this where they actually sold shares of the bond to individual community members. It is a possibility. I also think about the offering of certain goods and services by local employers.
- In the numbers that show the cost and the savings is there a financing factor included, such as interest, build into those cost savings?
 - Judy: We have the discount rate, but this is a cost deflator.
 - Coreina: I don't think there is. There's a discount rate and that reflects an opportunity cost. There is a range of financing options we can explore.
 - Josh: What the model reflects is, through the discount rate, an estimate for the opportunity cost.
 - 2.5% is a very safe rate.
 - Josh: The model also doesn't include any assumptions about inflation moving forward, so that discount rate does not include any inflation.
 - It truly depends on what you have in reserve and how the reserves are built up. We will eventually have to look at these things to figure out how to implement.
 - Judy: These things could be built into the model; it would just take more time.
 - Josh: I think a lot of the real detailed financing questions are difficult to answer until implementation.

- This is where the big costs are on this slide (individuals/businesses). Those are the big numbers it seems like the cost the electricity part has a more mature financing plan. The financing is built into our rates where PRPA has the ability to use larger markets. The integrated utility service model seems problematic in that we may not be able to find enough people to do the work.
 - John: Your utility bills would come in two bills. One is likely to go up, the other is likely to go down.
 - In the financing are you talking about the city or some public/private partnership?
 - Josh: One of the near steps we're suggesting is to look at financing and moving forward as a public/private partnership.
 - Coreina: We have various financing options, especially when you do things at a larger scale.
- When you use local help, that money goes back into the local economy. Does the model look at this at all?
 - Josh: This is currently not reflected in the model. We are going to answer this before February however.
- It almost feels like that should be part of the triple bottom line analysis. Someone is going to get paid for all of that work and that is a huge benefit to our local economy.
 - Josh: right now it's in the triple bottom analysis, but it's more qualitative and we will fill that in with actual numbers.
- There may be a sort of boom and bust issue here. We also need to address the issue we may have if financing monthly charges ends up being more than the cost of the monthly utility bill. We need to explain more concretely how this can save people money.
 - Josh: I think that as we move into implementation, I think we can get a lot more specific about it. One of the charts that we would like to get to build is looking at all of the costs that are impacted by the strategies, and what that looks like in household costs today and in the future. That is also the future that includes carbon costs. This may help illustrate that you may be paying more on utility costs, but you may end up saving elsewhere in your budget. The savings start showing up when you look at this as a system.
- We may need to talk about the costs and savings today rather than what may be future projections. That is what is important to the average person.
- Is there some way to have community financing/crowd sourcing?
- Looking at standard vs. high efficiency home appliances, homeowners need to be reminded that these units will have to be replaced eventually regardless.
 - Josh: I think the model, in most cases reflects an incremental cost or is it total cost?
 - Judy: Part of the dynamic tension is that an accelerated goal requires the inclusion of when these things will need to be replaced soon. If it's not going to be replaced by 2030 then there's that dilemma.
 - John: On the efficiency side, there's a portfolio of things. So, there are both.

Voting and Straw Polling

17 CAC member voters at the table

Voting

1. Airline travel in inventory

The group votes 16 in favor of removing airline travel from the inventory. 0 opposed and 1 not sure

2. Inclusion of cost of carbon”

The group votes on the cost of carbon for all fuels

- Lucinda: It’s the cost of carbon based on an average of several estimates and it increases over time. The other estimate for other fuels, natural gas and transportation fuels is just estimated at \$25 per ton and it does not increase over time. The point of the cost of carbon is it anticipates that in the future there will be regulations that will increase the price of these fuels.
- It seems that if we do not include the cost of carbon, we run the risk of underestimating the costs.
- If there is no cost of carbon a lot of strategies don’t pay off. I look at this as not a political thing, but it is a way to allocate some costs to the fact that we’re doing this and there is an impact to it.
- What are you going to base that cost on?
 - Lucinda: For electricity, it is a function of how much carbon is emitted and it increases over time and then the cost for the other fuels is just \$25 per metric ton. The cost for electricity, I believe starts at \$11 in 2020 and I think it goes up to \$26 in 2050. That’s what Platte River they used it in their model.

17 in favor of including the cost of carbon

Straw Polling

3. Does the modeling analysis provide enough information to have a general understanding of the picture to achieve the 2020 reduction objectives?

- Is this enough information for who?
 - Lucinda: For you personally
- I think there is enough information but the presentation of it needs work. Things need to be simplified for the overall presentation

17 In favor

4. At this time, would you support an updated community greenhouse gas goal.

- By updated you mean beyond that approved by council
 - Lucinda: I mean the reduction objectives that council asked you to look at in their resolution which is the 20% by 2020, 80% by 2030 and carbon neutral by 2050.
- What’s the difference between 2 and 3 then? Two is the goals and three is how to get there?
 - Lucinda: In the past, council has considered both the goal and the plan, but also in the past council has considered the goal and they did not adopt the strategic plan.
 - John: Adopting a greenhouse gas goal can affect other city policies, so just a goal can impact other areas of the city.

17 in favor

5. At this time, would you support an updated climate action framework plan? The one that is in development to support the updated goals.

- Could we put this one off until we actually see the framework?
 - Lucinda: absolutely
- I do think that the direction that this whole plan has taken, I support fully. It is a question now of the details

Group did not poll on this as they did not have enough information at this time.

Public Engagement and Role of the CAC

Lucinda: We really want to get a broad span of stakeholders at our CAP open houses, so I would really ask you to forward this to your contacts.

6. For the city council working session, do you want participation?
- Lucinda: These are always open to the public, but they are not an opportunity for public input. The purpose is for them to have dialogue and ask questions.

Next Steps; Close

Art was thanked for his facilitation as he will not be able to attend the last CAC meeting.

Next meeting

January 21

5:30 – 9:00 p.m.

Fort Collins Streets Facility

625 9th Street