



# HEALTH & ENVIRONMENT COMMITTEE

## COMMITTEE MEETING

~ MINUTES ~

Tuesday, March 1, 2022

11:00 AM

Sullivan Chamber  
795 Massachusetts Avenue  
Cambridge, MA 02139

The Health and Environment Committee will meet to receive an update on the Net Zero Action Plan.

Attendee Name	Present	Absent	Late	Arrived
Quinton Zondervan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dennis J. Carlone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Marc C. McGovern	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Patricia Nolan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Burhan Azeem	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Minutes Acceptance: Minutes of Mar 1, 2022 11:00 AM (Committee Reports)



**CAMBRIDGE CITY COUNCIL HEALTH AND  
ENVIRONMENT COMMITTEE**

COUNCILLOR PATRICIA M. NOLAN, CHAIR

COMMITTEE MEETING  
TRANSCRIPT OF PROCEEDINGS

March 1, 2022

11:00 AM, SULLIVAN CHAMBER

Minutes Acceptance: Minutes of Mar 1, 2022 11:00 AM (Committee Reports)

**CITY CLERK ANTHONY WILSON:** Councillor Nolan, the time of the meeting has arrived and you have a quorum.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you, Clerk Wilson. The time of the meeting having arrived, I call this meeting of the Health and Environment Committee to order. The Call of the meeting is to receive an update on the Net Zero Action Plan.

Pursuant to Chapter 20 of the Acts of 2021, adopted by Massachusetts General Assembly and approved by the Governor, the City is authorized to use remote participation at meetings of the Cambridge City Council.

To watch the meetings, please tune in to Channel 22 or visit the Open Meeting Portal on the City's website.

Today's meeting will be conducted in a remote format. If you would like to provide public comment, please go to [www.cambridgema.gov/publiccomment](http://www.cambridgema.gov/publiccomment) to sign up. We will not allow additional public comment sign-up after 11:30 a.m.

And with that, all of today's votes will be by roll call. Clerk Wilson, if you could take a roll call of the Members present.

**City Clerk Anthony Wilson called the roll:**

Councillor Burhan Azeem - Present

Councillor Dennis J. Carlone - Present

Councillor Marc C. McGovern - Absent

Councillor Quinton Y. Zondervan - Present

Councillor Patricia M. Nolan - Present

**Present-4, Absent-1.**

**CITY CLERK ANTHONY WILSON:** There are four members present.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you, Clerk Wilson. I also want to acknowledge that we have Councillor Toner on the Zoom, who is obviously a Member of the City Council, and not on the Health and Environment Committee but is participating. We also have several members of the city staff present.

That this meeting has the call of updating the Net Zero Action Plan. We will be starting with a presentation from City staff on the Net Zero Action Plan.

To remind the Council, this is a five-year update of a plan that was first passed in 2014, codified in 2015. And this represents there was a process of assessing and reviewing the first five years and then updating the Net Zero Action Plan.

After the presentation from City staff, I will go to

public comment and then we will open it up for questions and discussions from the City Council.

So with that, I will turn it over to Director Farooq who can introduce any staff. Director -- sorry Assistant City Manager Farooq, introduce your staff and go ahead with their presentation.

**ASSISTANT CITY MANAGER IRAM FAROOQ:** Thank you so much, Chair. I am Iram Farooq, Assistant City Manager of Community Development and I'm joined today by Suzanne Rasmussen, our Director of Environment and Transportation, and Seth Federspiel who, who leads our-- net zero work in the E&T Division. And Seth is going to do the--our presentation for today because he--he led the five-year review process. We also have the City Solicitor here, Nancy Glowa, and I think that's it from the Law Department.

And I will, just in the interest of time, turn it right over to Suzanne and Seth to take us through the presentation.

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** Thank you. I think we're ready to start the presentation right away.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** All right, can folks see the full screen slides?

**COUNCILLOR PATRICIA M. NOLAN:** Yes, I can. I'm not sure others, it's not full screen but it is--

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** It's not in slideshow yet.

**COUNCILLOR PATRICIA M. NOLAN:** Yeah.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** All right, let me share the other screen.

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** That looks good.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Okay, great. Thank you. Zoom and multiple screens is always a challenge. Well, thanks again for having me today. Again, my name is Seth Federspiel. I'm the Climate Program Manager with the Community Development Department, and have had the pleasure of working with the Net Zero Taskforce over the past about two years to update the Net Zero Action Plan.

So in the past, we've provided an annual progress report update to the Council. And so this year, this--this presentation will cover both the progress report but also be focused specifically on the updated Net Zero Action Plan.

So I'll be presenting the executive summary slides for

the plan update, and the full set of slides will be posted with the meeting materials. I'm going to skip some of the slides in the interest of time. But again, the full record will be part of the meeting hearing and also is available on the Net Zero Action Plan website which is [cambridgema.gov/netzero](http://cambridgema.gov/netzero).

All right, so diving in, I'm going to give a brief overview the background, talk about the Net Zero Taskforce process for this review, give a little context on emissions from buildings in Cambridge. And then the bulk of the presentation will be going through the updated actions, the anticipated impacts and implementation.

Okay, so as the Chair mentioned, the original Net Zero Action Plan was adopted in 2015 as part of our efforts to address climate change in Cambridge. And in particular, to address emissions from buildings, which in a dense urban environment like Cambridge, account for about 80% of our greenhouse gas emissions, so are particularly impactful.

And the original Net Zero Task Force defined net zero emissions precisely so that everyone would--would understand what was being discussed.

And so, so the idea is that all buildings together

would achieve net zero greenhouse gas emissions from the, specifically from their operations.

And I want to be clear that the original plan, again in 2015, was targeting achieving net zero emissions by the middle of the current century. So the plan set us on a pathway to around 70% reduction in emissions by 2040 so that we could be on the path to zero emissions and mid-century.

And so in the plan update, based on the current science, we targeted net zero emissions specifically by 2050, and about a 50% reduction by 2030. So I'll show that a little bit later in more detail but just to be clear about the targets that the Net Zero Action Plan has been seeking.

And so the objectives of the five-year review were to really do a comprehensive review of the plan and its impact to date, to be able to understand those impacts as fully as possible. And then to set the stage for adjustments to the plan to be able to respond to where society has advanced in the last, in those preceding five years, both on a scientific basis, a technological basis, a policy basis.

And importantly, also to more thoroughly incorporate



equity considerations into the plan and make sure that the Net Zero Action Plan is working in a way that fully benefits all members of the community, while mitigating harms to any members of the community.

So--so again, as we looked at updating the plan, there are a number of frameworks that were considered. So the original Net Zero Action Plan principles, those--these lenses of where we are and co-benefits of the plan, how the plan could affect other aspects of community activity.

And then really thinking about, you know, what the tools we have to decarbonize buildings. And so those are listed here as the three pillars, decarbonisation, looking at energy efficiency, so reducing energy demand in buildings. Electrification or fuel switching away from fossil fuels towards renewable sources of energy, and then creating the renewable energy supply to power those buildings.

And the original Net Zero Action Plan principles sought to balance the impacts of the plan between greenhouse gas emissions, but also looking at economic activity and integrating new ideas, measuring results over time, and, very importantly, engaging stakeholders

throughout the process.

And again, for the plan update, we added a new principle specifically focused on racial equity and social justice.

So-so I already mentioned that these lenses that we looked at to understand over the five years of Net Zero Action Plan implementation how the science around climate change had had evolved, and what science-based targets we would need to meet. What policy interactions there would be with local state and federal law. The changing technology and what that would mean for being able to advance to this Net Zero Action Plan, and then incorporating equity.

And I want to specifically talk for just a second about how we looked at equity in the Net Zero Action Plan update, given that it was a new lens for the work, and we have a sub-consultant who specifically helped us look at, look at this by developing an equity checklist, considering different dimensions of equity and making sure to identify equity pitfalls upfront to avoid any--to be able to anticipate those and avoid them going forward.

And so, you know, as--as you'll see with the updated actions, each action has an assessment on these equity

dimensions, and includes potential benefits around lower energy bills, increased indoor comfort and health, increased access and the ability to participate in financial equity opportunities, and increased reliability of energy sources.

Pitfalls to avoid includes increased costs, either direct energy costs or indirect housing costs--housing costs, and inequitable ability to participate.

So for example, in Cambridge, given the large renter population, how do we enable renters to participate in the energy transition for their home, just as homeowners might?

And so this equity analysis leads into considering a wide range of community co-benefits. And I think one of the rewarding things for me about this work is that, you know, reducing greenhouse gas emissions from buildings not only addresses climate change, but it comes with a range of other community benefits, that some of which are listed here.

So that'll--I'll move on to briefly discussing the taskforce process and the update process that the taskforce worked on.

So the City Manager appointed and 25-member taskforce

of community representatives, stakeholders and subject matter experts to inform the Net Zero Action Plan update. So you can see them listed here broken out between residents, institutions, and subject matter experts.

And again, you know, I think this is always a work in progress for us but there was a specific effort to include a wider variety of representatives than were on the original Net Zero Taskforce. So some original Net Zero Taskforce members came back to serve again but we were able to add folks like a youth representative, and representatives of the health community and other community groups to really try to get a, as broad a range of perspectives on this as possible.

So that taskforce had seven full taskforce meetings over a little more than a year period, so starting at the tail end of 2020, and going through the tail end of 2021. As well as a number of working groups in specific areas, so energy efficiency, new construction and energy supply.

And so over the course of those seven meetings, the taskforce was able to get to know each other and understand the principles of the Net Zero Action Plan. Go through a goal setting and brainstorming process to really flush out

potential adjustments and new actions, and then go through an analysis process to narrow down those actions into a concrete set of recommendations, which lead to the final plan that we have today.

So lastly, in terms of context setting, it's important to understand how greenhouse gas emissions have changed from buildings in Cambridge over time, and the impacts of the Net Zero Action Plan in its first five years.

This is a breakdown of the community-wide greenhouse gas inventory for 2012. We're in the process of updating this now, for all the sectors, for 2019, so we'll have that to share in the next few months. But you can see all of the blue shaded rings here relate to buildings. Residential buildings, commercial buildings, industries in construction, and then energy industries are the cogeneration facilities, so like the Harvard and MIT combined heat and power plants that provide energy to buildings in Cambridge.

And so when you add those all up, those add up, again to a little more than 80% of our inventory. And then the remaining emissions come from the transportation and waste sectors.

And as part of the Net Zero Action Plan, we updated the building sector inventory all the way back to 2012, when the full inventory was completed through 2019. And so the trendline that we see here is a slight growth in emissions over that time period.

And so to put that into context, we know that over the similar time period, and this actually goes all the way back to 1990, we saw a very large increase in development in Cambridge. So residential units since 1990 having increased by 26%, and commercial square footage increasing 44%.

So maintaining a relatively level amount of emission is certainly helping to avoid backsliding in our goals. But at the same time, we know that we need to reduce emissions at a faster pace to--to achieve our science goals in the future.

And just to note, the 2017 dip anomaly, that dip was largely caused by a decrease in natural gas consumption. Looking back at the weather, the 2017 winter was particularly mild, which is what would have led to less natural gas consumption at that year.

So what we can learn from the emission trend are a few

things. So the commercial sector, being particularly impactful on the community-wide building greenhouse gas emissions. So while the warmer winter had a particular impact in 2017, overall, it's actually the cooling degree days that tend to drive emissions more.

And so as climate change continues, the--the efficiency of cooling in buildings--in buildings will have an increased impact on our overall emissions.

And then the last bullet speaks to the increase that we saw in new building area. But the--the fact that the emissions were relatively level over that time indicates that those increases in building area were offset by increases in energy efficiency in all the buildings to offset the increased amount of buildings.

And so as we look to where we need to go, we see on the top our current trend line, and the business as usual forecasts, assuming that the state RPS continues.

And we see in the bottom line, where the latest IPCC Report says we need to go. So to stay on the 1.5 degree trajectory, the report said that we need to achieve a 51% reduction relative to 2015, which in Cambridge would equate to a 547 metric ton emissions budget. So certainly closing,

the goal of the updated Net Zero Action Plan is to close the gap between that business as usual and that science-based trajectory, and we'll show how that plan intends to do that.

Looking at the specific impacts of the original Net Zero Action Plan actions, you know that again, the original Net Zero Action Plan was meant to be a 25-year plan to set the City on the trajectory towards zero emissions by mid-century.

So the, I think part of the really important role of the first five years of the Net Zero Action Plan was to get that groundwork laid and the foundation for emission reductions going forward.

So I think while we would have all liked have seen more emission reductions in those first five years, having had the action developed over that time period I think does set us up for accelerated emission reductions going forward, because now we have many of the policies and programs in place that we need to actually reduce those emissions.

Some, some highlights are, you know, having the--so one, one example of that is the Building Energy Use



Disclosure Ordinance, which was adopted originally in 2014. And so began the process of having the largest buildings report their energy use and greenhouse gas emissions on an annual basis. And as folks are aware, we're working with City Council on amending that to include performance requirements for greenhouse gas emissions.

And then an area that we need to continue working at is the data tracking not only on the city-wide level, but on a more action-by-action level. And one of the key challenges that we've faced is a lack of data that can then correspond specifically to individual net zero action.

And so one of the things that we did with the update was develop a new set of metrics that we--we hope to develop and track going forward.

Some other barriers, both again internal and external barriers to a successful Net Zero Action Plan implementation have been around financing options and limits to financing that the City can directly provide to building owners in Cambridge.

Interaction and potential pre-emption at the state level, where the state sets the building code. And so that limits the options that the City can take in terms of

regulating building energy use.

And then there's also physical limits to how, you know, reconciling the pace of reductions that we seek to achieve with--with the capacity to make those reductions.

So if we look at the number of buildings in Cambridge, and how many buildings need to be retrofit on an annual basis, there's challenges in--in, you know, finding the workforce and finding the resources to physically make those retrofits over time.

And that's the intent behind Action 1.3 the transaction point action, which is to take advantage of natural turnover points in buildings. So those are all barriers that we want to take into account going forward for a successful Net Zero Action Plan implementation.

That said, there were a number of accomplishments over the first five years in terms of getting quite a few projects enrolled in our retrofit program. And having those projects begin to pursue their--their ideas and possibilities, which we can then build on over time.

Also, significant--significant leadership by example by municipal buildings, both in retrofits and new construction, and an increase in the amount of solar across

the city.

But again, there's no question that we need to accelerate the amount of greenhouse gas reductions being achieved by these actions to meet our targets going forward.

All right, so I'm going to transition now into the updated action recommendations. And I'll spend most of the time on the actions that have either changed or new actions, but I'll mention all of them as we go.

So again, the goal with these updated actions was to respond to the feedback from the Net Zero Task Force and the factors considered in the five-year review process. And to think about how the actions could be organized and streamlined in some ways to be more effective.

So you'll see on this slide that we're recommending fewer actions going forward, but that we're consolidating the actions to try to maximize the impact of the actions and really choose the most impactful actions to put our effort into going forward.

Also, the engagement and capacity building, Action 5 from the Net Zero Action Plan, those activities are ongoing and are meant to be rolled into the Net Zero Action Plan

implementation. So those activities are still there, they just don't show up as separate actions going forward.

So when we look at the updated Net Zero Action Plan, we have four action areas, energy efficiency in existing buildings, net zero new construction, low carbon energy supply, and financing and capacity building.

And we have three actions in each of the action areas with the exception of the fourth. We have two new actions, looking at embodied carbon in new buildings. This was a priority that was raised by the Net Zero Taskforce, as well as looking at off site renewable energy access as a direct part of the Net Zero Action Plan.

And when we look at the Net Zero Action Plan as a whole, and I think this is important to understand, it really is meant to be a framework plan for how we can eliminate greenhouse gas emissions from the whole building sector in Cambridge.

So while certain actions in the action plan may have larger direct impacts than others, for the plan to be successful, it really requires the whole plan to be advanced in concert.

So affecting not only the different building sectors,

but relying on different mechanisms. Some of those mechanisms being requirements, some of those being incentives and support, and some of them being enabling actions.

And so you'll see across the action categories that-- that most of them have both, have all of these different components to them. And even under the new buildings category, those actions do have, those requirement actions have incentives and support to come along with them.

And the idea is to really, you know, build up the scaffolding needed to successfully implement the plan and achieve the goals with all the actions working together.

So diving into the actions for existing buildings, we start with our existing retrofit program. And just to orient folks to what these summaries look like, so on the top left, we have the overview, which explains what the action is trying to do.

On the bottom left, we have an estimate of a relative impact of the actions. And again, you know, we can only be so precise in this modeling. So it's really meant to compare the impact of one action to another rather than have a prescriptive outcome.

The key activities over the short, medium and long term are listed in this middle column. Then in the top right, we have a summary of the equity assessment and the equity is, impact is rated as either positive, neutral, or flagged for further work to avoid any potential negative equity impacts.

And in the bottom right, we identify cross-cutting issues that that connect back to those pillars of decarbonisation and an overlap across multiple interactions.

So for the custom retrofit program, this is--this is an action that is largely continuing work that we've been doing through our Cambridge Energy Alliance and other programs to really make energy retrofits as accessible as possible to a broad range of Cambridge residents.

And I would mention that this is an example of an action that evolves through the taskforce process. You'll see that there's no medium-term actions here. We previously had proposed medium-term actions, but the Taskforce recommended that we accelerate those actions into the next one to two years, and so that--that feedback was taken into account.

So the goal here is to continue strengthening those programs. And--and the equity impact here is positive because we see a lot of opportunity to engage residents and give them the benefits of the program.

The next action is the BEUDO requirements, so amending BEUDO to require buildings to reduce their greenhouse gas emissions over time. And we're not going to spend a lot of time on that in this hearing since there are other forums on this.

But I do want to emphasize that there are two parts to this. So there's the actual performance requirements. And then the second part of it is providing support to the BEUDO building to be able to achieve the retrofits that they're--that they need to make to achieve the requirements.

And so in 2019, we initiated the building energy retrofit program to provide concierge services to BEUDO buildings so that they can really help them to navigate the state resources that--around energy efficiency and renewable energy to help them meet their targets.

And we're pleased to have now a full-time staff person on the team who can, whose job is not only to oversee BEUDO

reporting, but also oversee development of this resource hub, and really bring those resources together and help buildings access the hub going forward.

I mentioned the transaction point action earlier as being important in terms of the pace of retrofits for buildings. So this would apply to--to buildings that are smaller than the BEUDO threshold, so under 25,000 square foot commercial and under 50 unit, square foot residential.

And again, the goal here is to take advantage of natural transition points when buildings are sold or renovated, or equipment is upgraded.

And so this is an important policy to--to again, address those smaller buildings greenhouse gas emissions and in a predictable way over time. And the activities here are emphasizing, you know, how do we how do we design and prepare the program and the resources in the short term, so that when the program kicks in and the medium term, building owners have the tools they need to--to meet the policy goals?

Moving on to new construction, it's important to remember that new construction is a much smaller portion of our emissions than existing buildings, given the number of



existing buildings versus new construction. But obviously, we don't want to, we want to make sure that new construction is, is not adding to the problem. So it is a high priority to make sure that new construction does achieve Net Zero going forward.

And the primary way that we envision achieving this is through the state level Net Zero Energy Stretch Code, which is in development now and under discussion. And so it's a short-term priority to really engage in that discussion process and make sure that this, that state option is in alignment with the Cambridge that's are actually playing goals of requiring net zero emissions from new buildings in the short term.

I mentioned earlier that a new action prioritized by taskforce members is looking at embodied carbon. Embodied carbon is the emissions that are created from constructing new buildings and--and making the materials that go into those buildings.

So this is, this is not an area of emissions that has been measured in the past. So in the inventory that I showed earlier on, we're not currently accounting for these emissions, they're called scope-free emissions, because

we're still working on developing the tools needed to do that accounting.

However, we think it's important to begin working with builders on reducing their embodied emissions now, because embodied emissions, they have the most short-term and immediate impact on greenhouse gas, overall greenhouse gas emissions.

So we've modeled this action under, we modeled this action by the current Article 22 zoning requirements for green building performance, wherein in the short term, buildings are asked to measure and develop and share information about embodied carbon.

And during that short-term period, we can develop resources for buildings, so that then in the--in the medium and long term, we can implement actual performance standards that can be progressively increased over time.

So this is a new area that I'm really personally excited about getting into, and figuring out the best approach for addressing these embodied emissions with--with builders.

And then the last action for new construction is the municipal buildings. And again, continuing to lead by

example. So for example, the Tobin School, which is now under construction, will be a net zero emissions building from the start. Which means that not only will have no fossil fuel use on site, but all of its electricity use will be provided by renewable electricity.

Moving on to energy supply, this is again really key to enabling the emission savings for both new and existing buildings.

And Action 3., this action is particularly cross cutting. It overlaps with a number of other actions as we seek to electrify or again, you know, eliminate fossil fuel use in buildings. Looking at both on an individual building level, but also on district level.

And so we've been watching carefully, for example, the GEO Micro District Pilot Initiative that our local non-profit HEAT has been working on with the state and the utilities, to think about could district approaches to energy systems provide cost-effective ways to decarbonize buildings?

The other important emphasis of this action is thinking about energy resilience, and how clean energy systems can not only decarbonize buildings, but hopefully

provide them with more resilience against things like power outages when we develop community level micro grids, and are there equity opportunities from that in terms of not only the resilience aspects, but also the actual ownership of new energy assets, new shared energy assets.

Looking at renewable electricity, this is divided into on-site and off-site renewables. And the onsite renewables are divided into individual building-level solar requirements. So looking at what policies make sense for requiring solar on new and existing building, in context of existing zoning requirements around energy policies, but also looking at community-level solar.

And this, this action is really again focused on some of the equity opportunities of building, building in cost-saving opportunities for Cambridge residents. And also building in, again, that energy resilience and the--the resilience benefits of having energy production at the local level.

It should be noted that there are no greenhouse gas emission reductions being attributed to this action, because to take advantage of the community solar economic models in Massachusetts, the--the renewable energy

attributes of that solar gets sold back to the utilities and get mixed in the whole state mix. So that's why this is really more about the local equity benefits than--than the greenhouse gas savings.

But to address the greenhouse gas emissions from electricity, the emphasis is on bringing in off-site solar, because even if every building in Cambridge had solar on its roof, only a small amount of the electricity needs of the city could be provided.

So the city has successfully used our aggregation program to lower energy costs for Cambridge residents and increase the amount of renewables in--in the load being provided to them. And we're continuing to look at ways to evolve the aggregation program to bring in much higher levels of renewable electricity, while maintaining those--those cost savings.

And over time, this action is one example of really needing to monitor the interplay with the state policy. And the pace, specifically here, the pace of the greening of the state electrical grid, and how that affects the onus on Cambridge stakeholders to bring in that green electricity, versus sharing it with others at the state level.

And finally, the last action category is around financing and capacity building. And we have one action here, which is the continued development of a local carbon fund, which we can see happening through enhancements to the community aggregation program.

And this action is really, it's meant to be cross cutting across all the other actions in the plan, as a key mechanism to enabling the retrofits needed to achieve the greenhouse gas reductions across all of the buildings.

And so a lot of work needs to be done to really understand what the pathways are to achieve the goals of this action. And, you know, what is feasible within the structures that are available to us. But we see this as a real opportunity to increase equity by giving many more Cambridge residents, whether they rent or own their homes, the opportunity to participate in both the greenhouse gas and the financial benefits of transitioning our energy system.

And so I think there's a lot of potential here to, you know, think creatively about how, you know, what--what monetary flows are coming in and out of the city around greenhouse gas emissions, and how that can be used to

benefit all Cambridge residents.

So I'm happy to go through in the Q&A and answer any follow up questions about the actions. I realize I went through those quickly.

Just to wrap up, I want to just speak briefly to the estimated impacts of the new action plan, and how we plan to move forward with the plan.

So looking across all the actions, we see a large impact of those, again, grid greenhouse gas emission reductions. So understanding the interplay, again, between what's happening at the grid level, and what's happening through other offset rules will show where that responsibility lies.

Then the rest of the emission reductions come from increasing energy efficiency and reducing the energy demand of buildings, and switching those buildings off of their fossil fuel.

So this, this graph shows the--the projected reduction in emissions over time, meeting those 50% by 2030, and 100% reduction by 2050 goals. This graph shows it in terms of sector. So we see the grid emission reductions, we see the energy efficiency, we see the off-site renewable energy

procurement, and we see the fuel switching all baked in to--to this graph over time. And you can see this in more detail in the full Net Zero Report.

When we look at how the--how these reductions map to the action in the Net Zero Action Plan, we see again that, that the grid emission reduction, the grid level emission reductions are key to achieving the goals, providing the renewable electricity we need.

And then that locally, the BEUDO policy is very important to meeting the goals. And so this, this wedge is modeled on the BEUDO amendment proposal that has been made by the City. And we show that that proposal, in combination with the other actions, sets us on the trajectory again towards our emission reduction commitments.

So, so some of the other wedges to note here are City efforts to procure additional renewables, such as through the aggregation beyond what we see happening at the state level in the short term.

The transaction point policies, both for residential buildings and commercial buildings.

And then along with that, the new construction and avoiding emissions from new buildings that are being built



over time.

And so this last slide shows that same data but just on a bar graph, so you can really see here the--the magnitude of impact of the different actions. And again, the outsized magnitude of BEUDO and the state electrical grid reductions.

So as we think about moving forward with the Net Zero Action Plan and making sure that, that the update is implemented successfully, we went through an extensive conversation with the taskforce members to think about the impact of the actions across multiple different dimensions, and to make sure that we could prioritize the actions going forward.

So the intent, obviously, is to move forward with all the actions in tandem. But as we think about resources and order of the actions, keeping in mind this priority that the taskforce helped to identify.

Like the Net Zero Action Plan, we developed a detailed Gantt chart of each action and each activity within the actions. This is just a snapshot of a piece of that. If you want to see the full thing again, again, it's in the Net Zero Action Plan Report. But this will be a very helpful

accountability mechanism in--in the annual reports that we plan to make back to City Council, as well as the Climate Protection Action Committee going forward will provide annual updates on progress towards each of these annual Gantt chart.

Key to successful implementation of the Net Zero Action is the partnerships that we have with the various internal and external stakeholders. The Net Zero Action Plan needs to be taken into -- needs to be implemented in concert with the other City activities. So continuing to work with CPAC, alignment with the Resilient Cambridge Adaptation Plan and looking for resilience, mitigation, nexus opportunities there. Thinking about our citywide plan, and other groups that are working on greenhouse gas emission reduction efforts.

So for example, the--the Climate Crisis Working Group I know is wrapping up its work now, and making sure that that work is being aligned.

The other key partnership and interaction that I mentioned a couple of times is, is with the state level and understanding what actions are under City control, and what actions we rely on the state, due to legal issues or due to

jurisdictional authority. And so continuing to engage in these state processes to make sure that, that the state is moving in a direction that is complementary to the Net Zero Action Plan. But also that, you know, thinking about how we're prioritizing our efforts in areas that we can control.

Again, we will continue with the annual reports and then, and then the intent will be to conduct another five-year review of the Net Zero Action Plan, with the next one starting in 2025, obviously now is only three years out. So continuing to refresh the plan so that it can adapt to changing conditions over time is very important.

And as I mentioned earlier, we are building out a more robust data tracking system so that we can try to understand the impacts of the plan on a more granular basis. And again, pleased to have some additional staff support recently that can help us really drill down into this data and metrics.

So with that I'll wrap up. Thanks for your patience and happy to answer any questions that you have.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you, Seth. Suzanne or Iram, is the CDD and Sustainability Department done with

the presentation?

**ASSISTANT CITY MANAGER IRAM FAROOQ:** We are, Chair.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. You can stop screensharing.

Okay, so I see that a couple of Councillors have their hands up. I do want to get to public comment, so if we do-- should we do-- Clerk Wilson, how many people are signed up for public comment?

**CITY CLERK ANTHONY WILSON:** We only have one person signed up for public comment.

**COUNCILLOR PATRICIA M. NOLAN:** All right, then I--why don't we hear that person signed up and then we'll go to Councillor Zondervan and Councillor Carlone?

#### **PUBLIC COMMENT**

Marjorie Davies, address not supplied, representative of the Net Zero Action Plan Five-Year Review Taskforce, Cambridge Chapter of Mothers Out Front and member of the Climate Crisis Working Group, spoke about the UN International Panel on Climate Change Report entitled Climate Change 2022, Impacts, Adaptation and Vulnerability and the accelerating effects of climate change.

Ms. Davies highlighted the need to move very quickly

to address climate change and its impacts, and requested Cambridge move more quickly.

Ms. Davies requested the Net Zero Action Plan be as aggressive as possible in line with City Council commitments to the goal of using 100% clean and renewable energy by 2035, not 2050, indicating Cambridge was behind schedule in achieving goals outlined in the Net Zero Action Plan, and requested less time be spent on planning and more time on action.

Ms. Davies expressed concerns with the difficulties and barriers that may present, and asked that the BEUDO amendments be as strong as possible, and requested more urgency in addressing these concerns.

**CITY CLERK ANTHONY WILSON:** There are no further individual public comments.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. I saw someone pop up on the screen, but I guess that was for a different meeting?

**CITY CLERK ANTHONY WILSON:** That is correct.

**COUNCILLOR PATRICIA M. NOLAN:** Okay, thank you. I will read a short note from, that came to the Council from someone who could not be here wanting to be in public

comment. David Rabkin, full disclosure, I am married to him, but I am reading this because he is Chair of the CPAC and he wrote to us just an hour ago saying, "I have testified about the Net Zero Action Plan and within it, BEUDO several times mentioned that the Climate Protection Action Committee has reviewed both updates and issued letters in response.

If you don't remember those letters, I encourage you to re-familiarize yourself with them. CPAC members poured over the reports and proposals and worked closely with CDD on the resulting recommendations. They represent well-researched and carefully considered input to the City's processes.

The Net Zero Action Plan letter's high-level messages include, the climate crisis is worsening due to our inaction.

Emissions globally and within our city are not decreasing as mandated by the goals we have set for a livable climate and the physics of our planet.

Our city has a dual role to curb our own emissions and to support other municipalities by serving as leader and practical guide.

Despite our failure to achieve our goals, Cambridge is uniquely well positioned to fulfill those roles.

Even as CPAC wholeheartedly supports the proposed Net Zero Action Plan, it recognizes the need to strengthen it further by accelerating timelines, eliminating exceptions and changing it in ways that will drive the near or total elimination of fossil fuel burning systems within our cities limits, and among other recommendations."

And it says that the--so the CPAC letter is a seven-page, very detailed letter with very specific recommendations for changes and updates and amendments to the Net Zero Action Plan put forth by CPAC.

The whole council received the letter. I know that it's, it was sent on in November, I believe, so this has been on the table for more than two months.

So with that, I believe that's the end of public comment. So we will now open it up to Councillor questions, reactions, thoughts, and I'll start in order I believe that the hands were raised. Councillor Zondervan, Councillor Carlone, and then Councillor Azeem.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Thank you, Madam Chair, can you hear me okay? Great. So I'll start with some

questions. And then I'll wait for a second round to give more comments.

So my, my first question and--and first of all, thank you through you, Madam Chair, thank you to Seth and the CDD staff for this excellent presentation.

So I've seen this category of energy industries in--in the building sectors listed, but I've never fully understood what that represents, and it's a pretty significant chunk. So should we think of the power plant in Kendall Square? Is there more to it than that? What exactly does that encompass?

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** That's right. Through you, Madam Chair. So yes, it's the combined heat and power plant that provide energy to Cambridge buildings. The VLA, a plant in Kendall Square, has only a small proportion of those emissions, because most of the energy from that plant goes to Boston, so that's not counted in Cambridge.

But the larger proportion come from Harvard and MIT's cogeneration facilities, and other smaller cogeneration facilities that are located.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Thank you. And then



you were showing a trendline. And I didn't quite understand the derivation of the slope of that trendline. I don't know if you can show the slide again. But is that based on just the last two years, or is it, does it go much further than that?

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Can you clarify which trendline you're referring to?

**COUNCILLOR QUINTON Y. ZONDERVAN:** This is the emissions. I think you had it in several slides, but also most recently in the projections.

**COUNCILLOR PATRICIA M. NOLAN:** Is it the one with the projections for declining, just for clarification?

**COUNCILLOR QUINTON Y. ZONDERVAN:** Yeah.

**COUNCILLOR PATRICIA M. NOLAN:** Because there wasn't a trendline presented for actual emissions, that was just a bar chart going across, but, which shows emissions going up over time. But if you're talking about the--the future possible reductions trendline?

**COUNCILLOR QUINTON Y. ZONDERVAN:** Right.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** This one?

**COUNCILLOR QUINTON Y. ZONDERVAN:** Yeah.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Okay. So this

is, this is just--so the, the business as usual. So we have, the actual data is--is the bumpy curve. So that's the building inventory just from 2015 through 2019.

So then starting from that inventory, we then have a business as usual trend line, which assumes no further action except for the state RPS, which--which decreases emissions from the state's electrical grid. So that, that's the trend line that is expected to occur if Cambridge took no further action under the Net Zero Action.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Okay, but--

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** And then the lower line is the science-based target, again, the 50% lower than the 2015 baseline.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Right. So I understand that. But I still don't understand your projection. So is that based on 2018 to 2019 reduction? Or is it based on 2015 to 2019? Or, or neither?

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Neither. It takes the 2019 actual emissions and then it applies a 3% per year state-level renewable electricity addition to that number, without any further action. So it's just saying this is what will happen. This is--that's what the

trajectory would be if Cambridge, if the Net Zero Action Plan went away and the Cambridge didn't do anything to address greenhouse gas emissions from buildings.

**COUNCILLOR QUINTON Y. ZONDERVAN:** So you're holding 2019 emissions flat and then applying the RPS to it going forward? Okay. So, I mean, that's, I guess that's okay. But it's not very realistic Because realistically our emissions would be increasing if we did nothing, because we're adding more buildings.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Okay, yeah, I see, I see that point.

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** But there is also a trend that the buildings are becoming more efficient, the new buildings, than they were, so. But yes, I mean, this, I think the main point of this is just to say that if we didn't do anything we would not get very far. And obviously, we're proposing to do a lot of things.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Right. I appreciate that and it's -- it's obviously an estimate. But if we're talking about a gap between that and the target, then I do get a little bit worried about, you know, how realistic our, our estimates are. But anyway, I understand.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Yeah, I--I would, I would not look at this as really a projection. It's more just a, it's more just about setting the baseline. The projection is in the graph that I showed later.

So this is the projection where we see a business as usual, that does increase over time, due to growth. And then we have each of the wedges, which represent the expected reductions, the first wedge being due to the state grid, and the remaining wedges due to the net zero actions.

So this is--this is the projection that we've used to actually calibrate the amount of activity that needs to be taken in Cambridge.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Got it. Okay, thank you. Um, you, you mentioned the embodied emissions and, of course, we're also proposing to address that as part of the Green New Deal, both in the zoning amendment that we've proposed as well as Green New Deal amendments that were proposed. So I don't know if--if you're prepared to speak to that.

But in the zoning amendment, we're contemplating as you propose that the buildings be required to calculate

their emissions. And then with their amendment, we will charge them for it. So if you--if you have any comments on how that proposal aligns with what the Net Zero Action Plan is contemplating, and then if you have any suggestions for us, you know, not necessarily on the spot but offline, on how to adjust that policy, if necessary?

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** Maybe I can start. So the--the Green New Deal proposal, as you just mentioned, is a--it is a proposal to calculate the embodied emissions and then assess a fee that relates directly to those emissions.

So they're sort of like, if you have these emissions, you have to make these payments to the City to be used for energy or greenhouse gas emissions reductions efforts.

This proposal contemplates in the medium term, to require a reduction in embodied emissions. So it's, it's whereas the Green New Deal proposal is--is more indirect, meaning that presumably or potentially, by--by assessing a fee, you would incentivize building developers to lower the embodied emissions in the buildings that they're constructing. The net zero proposal will say you, you have to lower, you are required to.

I think it's, and correct me, Seth, I think it's a 20% lower embodied emissions in the--in the medium term.

So there--they are, it's really two different ways of presumably achieving the same thing. And theoretically you, you could do both. So it's a question of how much of a requirement do we want to put on embodied dimensions?

**COUNCILLOR QUINTON Y. ZONDERVAN:** Through you, Madam Chair, thanks for that response. So I think I understand that. But in--in the BEUDO amendments, we're also charging for operational emissions and allowing those alternative compliance payments to count as meeting the net zero requirements.

So are we contemplating a similar approach for embodied emissions? Or are you saying that the building code, perhaps, would essentially mandate lower emissions by mandating specific materials or construction practices that would have to be changed?

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** So the idea is to mandate buildings whose performance, and in this case in terms of embodied emissions, is better than a traditional building.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Right, but would they

be able to meet that requirement by making payments or No?

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** No.

**COUNCILLOR QUINTON Y. ZONDERVAN:** All right. So, so we would almost certainly have to put requirements on the building. But in any case, it sounds like it's somewhat orthogonal, so we could pursue the, certainly the zoning amendment which only requires them to calculate the emissions, and then we can allow payments for embodied emissions while we develop specific reduction requirements in the future.

**COUNCILLOR PATRICIA M. NOLAN:** Is that, Councillor Zondervan, any other questions? Or should I move on and then come back?

**COUNCILLOR QUINTON Y. ZONDERVAN:** I only have two more. So on community solar, I was a little bit confused why you said that there's no greenhouse gas reductions. I understand that the performance benefits essentially get diluted through the RPS, I guess, but, but that's still a reduction. So why wouldn't we take credit?

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Through you, Madam Chair, it's a question of attribution. So if, if you sell your racks through the RPS, which is the mechanism

that we're proposing using for community solar to make the financials work, then those racks belong to the utility or whomever purchases the racks.

And so we're assuming that that ownership is outside the City. And so while it would be part of the state's overall greenhouse gas reductions, they would not be attributable to Cambridge, because someone else is counting it somewhere else in the state. So it's a question of attribution of the greenhouse gas reduction.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Right. I mean, I understand that, but I think for--I think most people won't understand that. And I think we could still say that our community solar efforts are leading to an overall greenhouse gas reduction to the RPS, which we are modeling in our--in our emissions reduction.

So even if we say, you know, we can't attribute it back to us, it's still contributing to the overall emissions reductions that we're trying to achieve.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** I think that would be the better way to say it. And where we're attributing it is actually in that big gray wedge, which is the statewide emission reductions.



**COUNCILLOR QUINTON Y. ZONDERVAN:** Right, okay. So yeah, I would recommend attributing it that way, you know, maybe with an asterisk so that we can still sense that it's contributing overall.

And then my final question, which I guess is more of a comment is that, you know, in the emissions reductions that you--that you were modeling, that's only the building sector. And particularly, the BEUDO buildings is a subgroup of that overall sector.

And so, you know, again, I think it's really important to make that clear to folks. Because achieving that 50% reduction in the building sector, BEUDO building subset component of that, is only about 25% of our overall city emissions. So we still have to figure out how to get the rest of our emissions down.

And given all the urgency around climate change, probably the safer approach is to be even more aggressive than 50% on the BEUDO buildings because we can be, and buy ourselves some breathing room on the other sectors, which are presumably even harder to, to address.

So, you know, just a word of caution about that. Because if we just apply this 50% by 2030 across all

sectors, we're likely not going to be able to achieve it, because some of them are going to fall short. So we have to be more aggressive than that. Thank you, Madam Chair.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Madam Chair, if I may, just a clarification point for the audience.

**COUNCILLOR PATRICIA M. NOLAN:** Yeah.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** So again, the Net Zero Action Plan is exclusively looking at building greenhouse gas emissions, so it's not looking at the other sectors. But I do want folks to be aware that we are in the process of developing a companion plan for the transportation sector, so a net zero transportation greenhouse gas emission plan. And so that will take on the 10% or 15% of remaining emissions being addressed by the transportation sector. And we hope to have that plan completed by the end of fiscal year '23. So that will help to add a piece to this puzzle. Thank you.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. Yeah, that's, we--that is great and as Councillor Zondervan said that if only BEUDO buildings go down 50%, that means citywide it's only 25% reduction, which doesn't get us to 50, so we have to be firing on all fronts. Councillor Carlone.

**COUNCILLOR DENNIS J. CARLONE:** Thank you, Madam Chair. And it goes without saying to thank the staff for really an incredible amount of information. And it's very impressive that you all absorb this, Community Development absorb this and fully understand it. I must admit, I'm going to have to go back and--and read it, and I'm sure I'll have more questions. But I wanted to thank you for that. You're all very dedicated, there's no doubt about that.

I think our concerns are more what the parameters are and how we will get there? So I know the answer to this question, but it was implied, but we don't discuss this. Which building type or types pose the greatest problem, existing buildings and new?

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Through you, Madam Chair. So again, existing buildings are responsible for the vast majority of emissions in Cambridge.

**COUNCILLOR DENNIS J. CARLONE:** Which building types?

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** So with-- within--go ahead.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Yeah, within those, it's commercial buildings, so.

**COUNCILLOR DENNIS J. CARLONE:** Okay. And within

commercial, which are the most problematic?

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** Laboratories have the highest energy use intensity, on average.

**COUNCILLOR DENNIS J. CARLONE:** Okay, I think your--your presentation has to show that, because that tells me what the problem is in more detail. That we need to focus on the one use that has the biggest window to remain as it is.

I've worked on a lab. I know about labs. And I'm not an expert, but I know a good amount about them and I think that's the weakest link in the whole City approach. I get why, but I'm just saying that.

You have not talked about from--and I realized it's a different hat. The planning point of view of this is what's in the works in the city? IQHQ, North Point, Kendall Square, maybe some other labs in the Alewife area.

Um, we know that most of, well I assume most of those will be built before 2030. So the notion of projecting what that is has to be an integral part of this. And you might have done this and your calculations, but I've never seen it.

And again, we got to get back to reality planning about what's in the works. What I'm leading toward is, if

anything should be reduced as far as approvals, it's the polluters that are going to get in before we really enforce this.

I'm told there's a list of 20 of the worst buildings in the city. I've asked to see the list, I still haven't seen it. So my next question is, assuming those 20 buildings are largely owned by existing developers and institutions, and I would bet most of them are, how do we deal with that?

Since theoretically, they're not going away, or it's going to be difficult to make them go away. So a strategy for that that's much more aggressive will also help you get to where you want to go.

You know, I wish I had confidence in the state. I have much more confidence in you all in the City. But it scares the hell out of me thinking we're relying on the state, which is a much broader, non-urban entity, politically speaking. It scares me, and I fear that.

So I think getting numbers on the amount of new construction that's likely to happen by 2030, and I think all of IQHQ, North Point will be built out, the labs for sure. And, and other areas of the city.

I think our focus on commercial development, I understand why tax-wise. I really think we have to completely rethink that, especially in Alewife, given everything you've presented. It just, it's like fighting one way to get the right things done and then, but allowing other things to happen, is shooting yourself in the foot. So I'll stop.

Oh, lastly, and I've said this even when I was a consultant to the City, the more glass in buildings, every environmental design book and specialist will tell you to limit glass. And I just saw the most recent designs for Boston Properties and their new labs. They're fundamentally all glass.

Again, we're doing, we're--we're getting them to do things and yet we're allowing very high embodied energy, very high sunlight transmission. I've done buildings with triple glazing and we limited it to 40% of glass, which is what the code suggest as ideal for light and energy. And we do nothing about it.

And you're going to say, "Well, it's difficult to do." We did it in East Cambridge, Riverfront, we just made it part of the design review goals. It wasn't about energy

then as much as about architecture. You still can do it.

So I think we're fighting a losing fight, especially when you consider that with all the intelligence we have, including Community Development with, with all the experts in Cambridge, with all the money in Cambridge with two of the wealthiest institutions, we can't do better than 2050?

How is the rest of the world going to make 2050 work if we're just gonna make it work, assuming everything you're trying to do happens? How the hell can other people even come close? We have to be the example.

You know, maybe it's not 2035 But I sure like hell would rather aim for that as a City with everything we have going for us. So I'm--I'm impressed with the amount of work. I have no doubt all the logic, given your parameters that you have to work with, all your logic and intelligence is right on the money. But I don't think we'll get there, not because of you, because of everything else, including just about every lab building being built by 2030. They're all aiming for it. They're all aiming for it.

Thank you. I'll stop there, Madam Chair.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you, Chair.

Carlone. Was there any--there were a couple suggestions,

but also specific questions in there. Is there anything that you wanted to respond to, Assistant City Manager Farooq, or?

**ASSISTANT CITY MANAGER IRAM FAROOQ:** Thank you, Chair. Yeah, just a couple. I mean, there's a lot of--a lot of important points in there. I'll just speak to two things there.

Just to point out that in terms of the projections, you know, if you look, think back to the two graphs that Seth just showed in response to Councillor Zondervan's question, the reason there's a difference is that the more colorful solid wedge chart actually does incorporate built-out projections, looking at what is--what is permitted. So that's been, that has been incorporated into the projections. And it does therefore show that if there is a no-action scenario, which is called the business as usual scenario, it actually, the emissions would in fact increase. So--so that has been thought about and incorporated into the projections and the thinking.

And the other thing is that, you know, one of the, in addition to the work that--that we will collectively be doing around the--the emissions reductions components of



amendments to the BEUDO ordinance, there is work that's happening at the state. And the state has just put out this straw proposal towards the Net Zero Stretch Code.

And I think we all feel like there's room to improve in that. And there's comments that, that we're putting together right now to speak about how that could be strengthened. And we hope others are keeping an eye on that as well, because that is an action that when it happens statewide, can really help impact both--both facilitate processes for every municipality in the Commonwealth, but also, you know, provide a uniform guidance that's going to be helpful.

So--so that is, those are just two things I wanted to mention. And then, you know, many of the points that you're, you're making are--are well taken and we'll be we'll be thinking about those as we--as we advance the work. Yep.

**COUNCILLOR PATRICIA M. NOLAN:** Councillor Carlone, did you want to--yeah.

**COUNCILLOR DENNIS J. CARLONE:** Madam Chair, thank you. Thank you for the update, Assistant City Manager. I appreciate that and I'm glad to hear it. I would suggest on

the chart where residential, existing residential square footage and commercial, I think that was how you broke it down, Seth. I would add permitted section.

Because I think the labs in particular are quite sizable, and that throws things off even more. And I think there's a message there, and I'm including the Council on that, saying it's Community Development. We've approved some things in zoning and I'm a part of that.

But now when you see this in a chart, you realize, yes, we have problems, but we have more problems coming. And that's why I think we have to be even more aggressive like CPAC's letter indicated. Thank you. Thank you all.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you, Councillor Carlone. Councillor Azeem.

**COUNCILLOR BURHAN AZEEM:** Thank you. And through you, Madam Chair, to Assistant City Manager and others. I just wanted to first off by saying I think we downplay a little bit, but I think that having stable emissions even as we've grown so much as a city is actually a relatively impressive feat, and I think that deserves some amount of applause.

I know we still have a long ways to go but I was actually kind of struck by the fact that it didn't increase

more during this period.

I have two points. These are just numbers, not for necessarily this conversation, but numbers that I wanted in general, and I feel like I need to be able to make, for anything that goes to City Council, to be able to make an educated vote.

The two numbers I think I need are one is the cost of these changes, specifically to construction costs. My general fear is that, for example, Jefferson Parks recently cost almost like \$1 million dollars a unit. And I think that, you know, to some extent, these changes will be expensive. And that's all right, and that climate change is a very important problem, and we need to be doing as much as we can to tackle it.

But it's important to know how much the expected cost of these changes are going to be. And especially as a fear that, you know, in some ways, these end up being limitations on new housing, in particular.

But also, I don't think that this is the proper channel to also be limiting commercial and laboratory spaces. Those things may be things that the City Council wants to address, but I don't think that doing it through

energy or greenhouse gas emissions, is the right way to go about it.

The second thing I'm interested in is the cost per ton of carbon removed. And so for example, would it be like \$1,000 per ton of carbon? Would it be \$100? I think that really tells me how effective these measures are. You know, \$234 an hour period, like that sounds to be about an equilibrium. And you can change it, some things are like as low as 20. But if something is costing \$2,000 or \$3,000 per ton of carbon emissions, it makes me wonder if that's an effective way to reduce carbon versus trying to further incentivize carbon offsets or other sorts of things.

And so those two numbers in particular, I'm just really hoping to get as we continue seeing amendments to different parts of our code through these changes, and just wanted to flag them here.

**COUNCILLOR PATRICIA M. NOLAN:** Did you want to respond, Assistant City Manager Farooq?

**ASSISTANT CITY MANAGER IRAM FAROOQ:** I think we--thank you, Chair. I think we are going to need to consult and see which of those pieces are--are available and how we can best respond to Councillor Azeem's request.

I do, and maybe this is not the right forum. But I'll just touch on the point about development because, you know, it is we are not a closed system. And so there's always, when thinking about our greenhouse gas emissions, we can think about them just within the confines of our city and the up and down, and really try to limit them.

But it is important to keep in mind that if the development is not happening right in our--our area where it's well-served by--by transit, and it's more walkable and bikeable, and if that same development strategy spreads further out in the region without a commensurate expansion of--of transit and similar levels of walkability, the regional impact of us limiting our greenhouse gas emissions could actually be--be worse at a regional level.

So I think those are just both ideas that we have to kind of hold simultaneously as we, as we advance our thinking on--on this work.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. I believe Councillor Carlone had put his hand up earlier in response also to say something to Councillor Azeem. Is that right, Councillor Carlone? You're muted.

**COUNCILLOR DENNIS J. CARLONE:** Sorry. The materials

with the most embodied energy, metal, glass, are the most expensive in general. So yeah, you could have a very expensive finished material, you know, marble or whatever. But assuming we don't build with those kinds of exterior materials, the more glass you have, the more expensive the facade is. Same with metal.

So what's fashionable now is glass and metal. It's some of the worst materials to use from an embodied energy point of view. Please correct me Seth or Suzanne if I'm off, but this is what I've been told.

And there have been studies on Net Zero and Quinton might have more up to date that adds about 2% to 4% I would say 4% to the cost of buildings to doing it right. It's not a huge amount.

If you use traditional materials on the skin, masonry, you bring the cost down, not up. But that's not what people do these days. They want to be different. I'll be quiet now.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you, Councillor Carlone. Yes, you're right, the Finch Building actually was only a couple of percent more for all of their passive house, net zero Based on the information we received from

the City.

Councillor Zondervan, did you want to respond to this point or something else?

**COUNCILLOR QUINTON Y. ZONDERVAN:** Thank you, Madam Chair. Yeah, I just wanted to do a direct response. I do take issue with the framing that somehow we, we have the balance, you know, how strict we are in our emissions regulations with the possibility that we drive those buildings to some other jurisdiction that's more lenient. I mean, we have zero control over that, right? They, they could decide to build labs on some island in the Pacific Ocean that's completely unregulated.

But, you know, that--that doesn't impact my thinking. And if we're looking regionally at, you know, Watertown, or Walt Hamm, or Lexington, all of those communities are just as concerned about climate change as we are and are actively, in some cases, copying our legislation, including BEUDO.

So, you know, I don't think that's a reasonable framing. I think we need to be, you know, we need to be reasonable about our regulation. I don't dispute that, but we need to reduce emissions as drastically and aggressively

as we possibly can.

And if, you know, developers believe that they're going to go, you know, to the next town over and build bigger polluting labs, I don't think that's how it's gonna play out, because those communities don't want that.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you, Councillor Zondervan. Councillor Azeem, were you--were you done with your question for now?

**COUNCILLOR BURHAN AZEEM:** Yeah. Nothing else for me.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. I'll ask a couple and then we can go around again. I, I must say I agree, given the latest acquisition in Alewife Quad of someone spending 70, what was it? \$72 million for four acres of land? They could have bought 100 acres of land in other cities in Massachusetts for that amount of money, and they chose not to. So it is clearly something that labs want to be here, so I think that's a pretty important piece of data that I was pretty stunned by those land acquisition costs in Cambridge.

So as we know, to remind us all, bring us all back. The focus of this meeting is the overall Net Zero Action Plan. I also thank the staff for bringing this together.



I've seen a couple of different presentations. So thanks, Seth, for going through it again and winnowing it down and expanding on it, as it has over the last year.

One of the questions that we continue to wrestle with, as we know, and I sent this to the staff yesterday, and it was somewhat addressed. But there were deadlines in the original action plan. It was not just to set the table. It was meant to be a five-year plan of action to actually see reductions in greenhouse gas emissions with a five-year review built in, not to then say how can we implement it? But to actually then say, wow, if we're not getting, you know, what's the impact?

And as was presented on the slide, the impact of after five years, the City's consultant review, just to remind us all, said that over the next 10 years based on their review, an external consultant of this plan, there was essentially no, only a 1% reduction over those five years of all these plans.

And what they quoted, it said this means that there has to be a 20 times increase over the initial five-year period over the next 10 years. That is a huge challenge. We know it.

It is, as Councillor Azeem and the staff said, it is quite wonderful that despite this growth over the last five years in square footage and residences, that our emissions did not go up exponentially. However, they did go up.

And in a way, it doesn't matter. We have examples of other places and we should bring in Harvard and MIT who have also grown a lot over the last 5 or 10 years, who have said and some of it may be through offsets or through offset renewables. I don't care why, but they have seen reductions on the order of 20% to 30%, which we have not citywide.

It really was meant to have impact and we haven't seen it. We did have a Gantt chart. I've gone over this a few times. The staff knows, I've been hounding them and I know they--they have tried, but the Gantt chart from the first Net Zero Action Plan also had milestones built in for the last five years, and yet about 80% of those were not met.

So we've now seen a new Gantt chart, I heartily endorse the CPAC and other recommendations. There was more extensive recommendations and Marjorie Davies has written comments that she emailed to the--to the Committee earlier today to accelerate that timeline because we cannot over-

exaggerate or over-estimate the impact of the climate actions for the city.

But the real question for us is, while we've said that we think this next plan could yield more impact -- look, do we need more staff? Do we need more carrots? Do we need more sticks? Do we--we--we--we cannot, one, stick with the current plan, I believe. We have to follow and I think we should take into consideration every single recommendation made in the seven-page extension of CPAC letter. They are the City's committee convened specifically to advise us on climate issues.

But also, how is it that we are going to help you ensure that this Gantt chart will actually be met? You know, that's really the question. Because wherever we end up with the acceleration, what do we need to do? Is it--I believe we may need funding. I mean, it may be as we know, there were the 1,400 houses in the one to four family, but only a handful of them that actually installed solar.

So can we find creative mechanisms to actually use our enormous resources as a City? We've done it on affordable housing. We haven't yet assembled that extensive an investment in climate, which of course, is at the heart of

many of our equity concerns as well, because we know who it is that's hurt most by this.

So I think this is a question you heard earlier and I don't feel was completely addressed in the presentation is, what is it that we need to do as a City, both the City Council and the staff and others, to ensure that this action plan, once it is updated and passed, we will see the--the actions actually monitored and overseen and have the impact we want?

And I realize that might be unanswerable. But that's the heart of a question, I think, that we--we need to be addressing and grappling with. Is it unanswerable, Assistant City Manager Farooq? Or do you want to take a stab at assuring us that -- and I know you've wrestled with this and thought about it. I just am putting it out there that we need to acknowledge that--that--that we keep trying and trying and we're not always getting the results that we want.

**ASSISTANT CITY MANAGER IRAM FAROOQ:** Through you, Chair. I mean, so absolutely this is not a straightforward or--or easy -- I'm going to let Seth speak to some of the specifics if he wants to add anything. But you know there,

he in the presentation outlines some of the hurdles that-- that we've encountered. And some have to do with, with what authority we have versus what authority the state has.

Some have to do with just, you know, the time it takes when developing something, something new and it's often longer than--than we might anticipate just to get the -- we may think it might be a matter of--of months, and it ends up taking a year by the time we work out all of the policy and the legal pieces that go to making it something that's adoptable.

But I will, instead of just talking conceptually, I'll see if Seth has anything more concrete, or Suzanne, to add to this.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Thanks. So I would refer back to this diagram, which I think is a helpful schematic of how the Net Zero Action Plan works. It, it's a framework. And to be successful, all these pieces need to work and come together in tandem.

You know, you refer to the emission reduction achieved by some of the institutions within Cambridge, like Harvard and MIT. And it's important to, you know, acknowledge the differences between a community and individual institutions

who, you know, own and operate all of their buildings and have control there.

And the City has similarly lead by example by reducing its municipal emissions by, I think, I think we're at about 30% in 2020 versus 2008.

So, you know, acknowledging the fact that it is an ecosystem and that in order to reduce city-wide emission, all aspects of that ecosystem need to come together.

In terms of your question about, you know, what support and how we can work together to be successful, I think, you know, working together on implementation of the plan in a coordinated manner is really important.

So I think, you know, I'm happy to have regular conversations and provide regular updates, and ideally really work together to, you know, keeping in mind the Net Zero Action Plan is a framework. It's not a detailed--it's not a detailed roadmap. It provides the high-level framework and then implementation of each individual action, that's where we figure out the details and the actual mechanisms that need to be achieved.

So I think there's a lot of potential for collaboration between staff and Council, and with the Net

Zero Taskforce members and other stakeholders throughout the community, to figure out action by action, what needs to be done to--to achieve those actions?

And I think one of the successes of the Net Zero Action Plan in the first five years has been maintaining very consistent stakeholder engagement. And sometimes that does slow down the process.

But with every single action, we design a stakeholder process to engage the stakeholders in that action and bring them along so that, you know, when the policy or the program or whatever it is, is launched, it's coming through that--that collaborative process.

**ENVIRONMENTAL DIRECTOR SUSANNE RASMUSSEN:** If I may, through you, Madam Chair. In addition, we need to do a lot of work on the state side. There are some really, really key issues that the state controls, which has to do with regulatory authority over buildings, as we've discussed earlier in our meeting today.

And we have a lot of ability to influence the, how that process advances when we collaborate with--with our neighboring communities.

So staff is doing a lot of work to engage with Boston,

Summerville, and MAPC and all other communities that are pushing in the same direction to--to expand the regulatory requirements.

Also, on the funding side, there are, there are obviously lots and lots of funds that come through the Mass Save and Mass EC and other programs that--that can be used to directly support greenhouse gas-reducing activities in private property, and that that process rolls every three years. And, and we again, working with neighboring communities, need to work hard to influence the level of funding and how that funding can be used exclusively for non-fossil fuel-free activities.

So the state advocacy, if you will, is--is also a really key piece that both, both staff and City Council have the ability to engage in.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. I appreciate that. And yet, yes, the Net Zero Action Plan is a framework, but it was meant to be an action plan. It was meant to lead to actions that led to, that reduced emissions. All of that what you just showed Seth, was in the first action plan. Every single one of those elements was in the first action plan. And yet, here we are, and



most of them have not been succeeded.

I do know and I recognize and I totally celebrate and you all know I'm a big fan, the City is the one player that actually has reached its goals. But Harvard and MIT claimed they have too, and they're two of the largest emitters in Cambridge. So that means all the others have not.

So again, it's all about impact. And I will say on stakeholder, I agree. It's really nice. However, CPAC wrote a letter two months ago, and I don't see any of their suggestions incorporated into this, unless I'm wrong. It hasn't been updated. I hope, and I would hope that we end this meeting asking for you to all come back and incorporate every single one of their specific suggestions for improving this plan and incorporate.

Those are our stakeholders. Those are the key stakeholders. It was a seven-page letter that people poured hours over. And CPAC sends a letter every single year and every single year, it has said that many of the Net Zero Action Plan isn't on track and yet, we haven't honored that by actually then going back to try to report back to them on how it is that we're incorporating the feedback.

So I think we need to step up our game and ramp up.

And again, it's to you, I recognize you're all working really hard and we have all this staff and yet, we keep getting reports that--that, you know, we're not yet able to meet those goals. And I know we all want to, and--and we kind of have to get there.

And yes, it can take time but as we saw the one, one good thing COVID taught us is that when we do treat something as an emergency, we can do things we never thought was possible. And it just feels like, to many of us and many of the stakeholders throughout the community, that despite having declared this climate emergency and calling it a crisis, and literally for 20 years now. We were one of the first cities in 1999, more than 20 years ago, to participate with the International Cities on Climate. And, and, and we're more of a leader in planning and not as much in actually those--those reductions that we seek to see.

Other than as a City. It's just that citywide, we have to find a way to have every single stakeholder in the city buy into the idea that they need to contribute to this.

So I'm hoping and expecting us to be able to improve this Net Zero Action Plan by following the advice of so

many people who have looked at it, accelerating the timelines, being more specific, building in some measures by which it will be, you know, the carrots and the sticks.

And on the state question, I agree, and I hope then the city should be begging, knocking down on our door to have a home rule so that we can do whatever it is that needed to be done that would have been accomplished by the special permit or by the--the special permit which the Attorney General on Friday, that decision led us to place on file our own attempt to try to use that.

Because, you know, we have to figure out how it is that we can influence the state. So we have 20 more minutes, so I will stop there even though I had a couple of other questions. And let's do it, go round again for, I believe Seth wants to respond and then Councillor Zondervan and Councillor Carlone.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Thanks, Madam Chair. I did just want to respond to the specific requests that the Net Zero Action Plan be revised with the with the CPAC feedback. That already occurred.

So, so two things. So CPAC did have an appointed member to the Net Zero Taskforce, who--who participated in

all of the taskforce meetings and was a liaison and went back to CPAC not only in November, but beginning in 2020, throughout all the meetings to get feedback from CPAC. And so, so CPAC had a voice through that member.

But the CPAC letter was in response to a draft of the Net Zero Action Plan and many of the recommendations in the CPAC letter were incorporated. So I gave the specific example of the actions under, the activities under Action 1.1, which were accelerated from the medium term to the short term. Similar activities were accelerated in other actions.

Also, we had an additional meeting of the full Net Zero Taskforce to address concerns raised by Ms. Davies and some of the other taskforce members about the urgency of the plan, and the plan was reframed. A new introduction was written to indicate that urgency.

So I just want to be clear that edits were made with the intent of incorporating that feedback. And that's the plan that's been presented, and that again, the full report, I'm happy to share that as part of the meeting record.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. I appreciate

that. I'm always interested in as much acceleration as possible. Councillor Zondervan and then Councillor Carlone.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Thank you, Madam Chair, through you. You know, I'll preface my statements by saying that Cambridge is the best. We have absolutely the best staff, and you all are doing great job. And it's not your fault, but we are failing.

And the IPCC report, you know, was very clear, right? That only came out yesterday, the whole world is failing. So we cannot feel bad about that, because, you know, we're all failing. And, and the only appropriate reaction is we have to step it up. We just have to do better. And we have to do more.

And as Councillor Nolan said, you have to let us know what we can and need to do to support your ability to do more. Because what we're doing so far, it's just not going to get us there. And, you know, that's just not acceptable. It's not, it's not what we want.

The state is failing. They're not moving fast enough. The Net Zero Energy Stretch Code that they're proposing is crap. And, you know, I'm doing an event tonight with State Rep Mike Connolly, where we're going to talk about that. We

did do a whole petition at the end of last term, asking the state for the ability to implement our Net Zero Action Plan.

We, we're doing a sign-on letter. The mayor signed on. I've signed it, Councillor Carlone and Councillor Nolan have signed it. So, you know, we are doing what we need to do to put pressure on the state but again, we're always, certainly I'm always open to doing more. So you need to let us know that.

I'm not going to comment on BEUDO, as mentioned, we're dealing with that in other forums, so I'm going to skip over that. But I do want to specifically address four, Recommendation 5, rather, from CPAC that I would like to see reflected in the plan, and I don't believe they are currently.

So the first one is that labs should be required to be net zero by 2025, not 2030. So I don't know if you want to speak to that.

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** Through you, Madam Chair. If I can speak to that point. The updated Net Zero Action Plan does not set a date for labs. So the original Net Zero Action Plan set a timeline for new

construction, and labs were in 2025. And the updated Net Zero Action Plan eliminates those dates and says we need to move forward with net zero new construction as soon as possible, per what we can do with the state Net Zero Stretch Code.

So the 2030 date is not in the updated Net Zero Action Plan.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Thanks, I appreciate that. Just to be clear, the original plan said that labs wouldn't have to be net zero until 2030. And what you're saying now is there's no longer a deadline. I'm not convinced that's an improvement. I think the deadline should be 2025. That's consistent with the BEUDO amendments that we're proposing, where we're going to start to require compliance for existing buildings. And the only logical requirement for new buildings is that they be net zero.

So I think we should explicitly say that in the Net Zero Action Plan, that new construction after 2025 has to be net zero.

The second one is the embodied carbon. So, you know, in the spirit of collaboration, I'd love to work with CDD and make sure that the Green New Deal Policy that we're

proposing is aligned with where you're trying to go in terms of embodied emissions.

And then it sounds like, based on this conversation so far, that you're preparing to go beyond that and actually requires specific reductions in embodied emissions, which I fully support.

And again, I think that needs to happen by 2025, not three to five years later. But we should have a clear deadline that says, starting in 2025, just as we're going to require operational emissions reductions, we're also going to require embodied emissions reductions.

Third is adopting a solar requirement. That should happen yesterday. Watertown has done it. We've been talking about it for at least 10 years. That just needs to happen. We just need to require solar on buildings where it makes sense. I don't understand why we have a longer timeline for that.

Renewable energy aggregation, that should be 100% renewable energy. If, you know, we need a deadline, maybe I can live with 2025. But really, I want to see that, you know, tomorrow.

I mean, I know you're working on a contract right now.



To me, that contract has to be 100% renewable electricity. That would be the default option in that community choice aggregation. And then, you know, we can think about, including larger buildings separately as well.

And then the carbon fund, which we've also been talking about for the last 10 years, needs to be implemented as part of that. I'm encouraged to see that is being contemplated under the aggregation. But again, it just needs to happen. And that could be our opt in, or opt out, is 100% renewable energy and then the opt in is that people can contribute extra which can be used to do equity and help other people who can't afford it make the necessary upgrades.

And then lastly, we have to eliminate fossil fuel combustion in new buildings. It just, that just has to happen. And I understand that the Attorney General got in the way again, and you know, we have to obey the law. But as soon as the state gives us the ability to do that, we need to turn that into a requirement that says you cannot build in routine fossil fuel combustion. You can have a natural gas backup generator, but not heating and cooling based on on-site fossil fuel combustion.

So those are five specific things that I need to see in this plan. And really the sixth, the carbon fund be part of the aggregation.

And, you know, as Councillor Nolan, we want to see all of CPAC's recommendations incorporated into this plan. And we just need to move faster forward, we're not going fast enough.

**COUNCILLOR PATRICIA M. NOLAN:** Assistant City Manager Farooq?

**ASSISTANT CITY MANAGER IRAM FAROOQ:** Chair, through you. I just have a process suggestion. Which is, you know, as Seth described, those comments, we did take back the-- the CPAC comments, we did take back to the Net Zero Action Committee. The version of the plan that you see before you is kind of their amendments that the group agreed on collectively, because it is a--it is a more diverse group, and many interests are represented on--on that taskforce.

So just my--my process suggestion, instead of sending us back to modify the plan. Because we, it would be very hard for us to modify the plan and not have consensus amongst that group. And we could be caught for a long time in multiple meetings trying to get to consensus on--on

these specific ideas.

It seems like the Council might more easily and quickly reach agreement on what the additional items are that you would like to see. So is it, would it be workable if we left the Net Zero Action Plan the way that it is, and the Council could sort of adopt and then add a set of actions or timeline changes as you've just described, and that we could kind of put together and they can travel together so that there's the Net Zero Action Plan, and it's not, you know, as a policy document, it's not separate from what the Council wants. And those two pieces are together.

And as we are working on implementation, that those, both of those items are our guiding document, rather than having to spend more time in process to get the words right in the NZAP. I'm not sure if that made sense, but that's just a process suggestion.

And I just wanted to say that I have to switch off video because my computer is dying. I'm sorry, and I'm in City Hall without my charger.

**COUNCILLOR PATRICIA M. NOLAN:** I have mine at my desk if you need it.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Madam Chair, through

you, in response. I think I understand the suggestion. I--I appreciate the suggestion. I think it is confusing. It would be confusing to me to have essentially two Net Zero Action Plans that we're trying to work with.

So, you know, while I appreciate the--what you're proposing, I think, you know, at the end of the day, I mean, you're asking the Council to adopt this plan. And we can and we'll modify it if that's what it takes for us to, to adopt it.

So, so almost by default, there will be what the Council adopted, and then, you know, I--we're not in a position to tell you what to do with that. But I think it would be confusing to have two versions.

So I think we would be better off saying, you know, this is the version that the Council has adopted, and that's what we're working towards. The stakeholders, you know, may or may not agree with that, or they may feel that some of that's not possible. But, you know, that's, that's the reality.

We can't, you know, I am not going to agree by consensus to, you know, self-destruction of our civilization. And so, you know, just because some people

don't think we can achieve some of these goals doesn't mean we shouldn't set them.

So I'm not sure exactly process-wise how you can or should deal with it. But I think what we're going to have to do as a Council is say, you know, here's the version of the plan that we are adopting and this is what we are expecting to happen.

And, you know, how you make that happens is as always up to you.

**COUNCILLOR PATRICIA M. NOLAN:** So can I? I think for process, remember, the City Council referred this report to this committee for a reason. To review it, to amend it, to look at it. It was never, I would think, expected to just adopt it as is otherwise, you know, there would be no point for the Council to even talk about it.

But I believe what I hear from Assistant City Manager Farooq is the Net Zero Action Plan draft recommendations are presented to us. And then we won't amend those.

Well, we can amend the recommendations and then it becomes the City Council's recommendations on the Net Zero Action Plan. That makes a lot of sense to me.

I agree with all of what Councillor Zondervan said

needs improvement. And in particular, one of the things that I don't think was changed based on something, and it was included in the CPAC and it's certainly something that is potentially pretty important, is the upgrades at transaction points.

Just to remind us all, that was one of the ones that was supposed to be underway and implemented in 2020. The beginning of 2020, so pre-COVID. And in the new plan, it says that that won't even be implemented until 2027, which makes no sense whatsoever to me.

So that's an example where I would want us to completely accelerate the upgrades at transaction points.

While we focus on new construction, let's remember, as we look outside, wherever we are, in whatever building we're in, if you're in the annex, you may already be here, the entire city of Cambridge has to have no fossil fuel burning in any place by 20--even if it's 2050, the entire city, not just new construction.

So given that, and given just rolling out what it is that we need to do, it seems like the upgrades of transaction points are exactly a sweet spot for us to--to work on right now. Again, it was supposed to already be

done and implemented in 2020. We're now at 2022 and we haven't even done the plan. So that's one I want to see more than the plan.

I think for process, it would make sense to keep this report in this Committee. Those of us, we can report back to the City Council to say anyone who has recommendations or any amendments, they might want to see this report, you know, send them to me as Chair. I'll work with the City staff to--to see where it is that we can, how it is that we can move forward in order to very quickly, you know, bring this back to the full Council with a recommendation from this Committee on what it is that should be included.

Because I'm not sure in the time that we have, the three minutes, that we are in a position to actually formally propose those amendments and then send it back to the Council.

Is that your sense also for the Committee Members here? Okay, so given that it's almost the time in the meeting, I don't physically see it -- Councillor Azeem if, if that's something you also understand, we would all then in this Committee continue to work together. We can review the various input we've had from different stakeholders,

and from the Council itself as we review it.

And, and frankly, part of what continues to change is even from when this report was made, the IPCC reports just continued to flood us with new information that even as little as a year ago, it may have seemed, well, this is a good timeline for us to use. And yet the IPCC reports are so clear that those timelines, even as a year ago, are not ones we can use now.

And also as Councillor Zondervan certainly has pointed out and many of us in the City know, we are at a point where the technology has changed certainly since five years ago, the first Net Zero Action Plan, and we have seen examples of labs being net zero. The City itself has reduced emissions 30%. I also want to see more progress on, I'm very frustrated, you know, right now, our community electrical aggregation program. The only thing that has above some others is an adder, which is significant, generates about \$600,000 I think, a year or every two years.

And yet our--our option for residents is far, far, far below surrounding communities, some by a significant percent for the standard offer. So that's certainly an



unfortunate situation based on us positioning ourselves as climate leaders.

So it's almost time for the meeting. I see Councillor Zondervan's hand up and then we will be adjourning.

Councillor Zondervan.

**COUNCILLOR QUINTON Y. ZONDERVAN:** Thank you, Madam Chair. I agree with that summary. I just wanted to add one more thing which we have discussed in passing, the question of funding or other resource needs from the staff. Because I think that's really important, particularly as we're going through the budget season right now.

So if, I'm assuming that you will schedule another hearing for this Committee, but--but in the meantime, as we work on amendments to the plan, if the staff can begin to think about, you know, if we're going to accelerate some of these tasks, what resources and funding do we need that we can incorporate that into the budget?

**COUNCILLOR PATRICIA M. NOLAN:** Right now here, I want to respect staff time and other Councillors' time. It's a busy time of year. We either have, it's one o'clock. We either extend for five minutes or say that what we're going to do is keep this in Committee, pay attention to the

funding, incorporate it, Councillor Carlone, and I in the Finance Committee, circle back to the staff about both, all three of those questions.

What are the things we want to see changed? What is the staff requirements needed to do them? And then what is the funding that might be included with that? Councillor Azeem?

**COUNCILLOR BURHAN AZEEM:** I have a 1:00 p.m. meeting if that's okay. I'm happy to have another meeting.

**COUNCILLOR PATRICIA M. NOLAN:** Yeah, no, I think that's why we're thinking we should adjourn instead of extend, because many of us have.

Okay, so everyone in sync? We're keeping it in Committee, and we're going to work with the staff on--and ourselves. Yes, Councillor Carlone.

**COUNCILLOR DENNIS J. CARLONE:** Just a quick question, we have the presentation today. Is that the report or the report is separate?

**CLIMATE PROGRAM MANAGER SETH FEDERSPIEL:** The report is separate. It's available on the website, but I'll submitted it to the Clerk to have --

**COUNCILLOR PATRICIA M. NOLAN:** Yeah. So I just got

noticed from the Clerk we are over time. So unless we're going to extend for two minutes, I think we're done if that question was answered, Councillor Carlone. I don't know if we need to move to adjourn or if we're already adjourned.

Okay. Clerk Wilson.

**City Clerk Anthony Wilson called the roll:**

Councillor Burhan Azeem - Yes

Councillor Dennis J. Carlone - Yes

Councillor Marc C. McGovern - Absent

Councillor Quinton Y. Zondervan - Yes

Councillor Patricia M. Nolan - Yes

**Yes-4, No- 0, Absent-1. The motion passed.**

**COUNCILLOR PATRICIA M. NOLAN:** Yes. And let me confirm by just adjourning, we automatically kept this in Committee. Is that right, Clerk Wilson?

**CITY CLERK ANTHONY WILSON:** That is correct.

**COUNCILLOR PATRICIA M. NOLAN:** Thank you. Thank you all.

**COUNCILLOR DENNIS J. CARLONE:** Thank you for all the great work.

**COUNCILLOR PATRICIA M. NOLAN:** Yes. Thank you. Bye. We're adjourned.

The Cambridge City Council Health and Environment  
Committee adjourned at approximately 1:00 p.m.

**C E R T I F I C A T E**

I, **Susan Ireland**, a transcriber for Datagain, do hereby certify: That said proceedings were listened to and transcribed by me and were prepared using standard electronic transcription equipment under my direction and supervision; and I hereby certify that the foregoing transcript of the proceedings is a full, true, and accurate transcript to the best of my ability.

In witness whereof, I have hereunto subscribed my name this 25th day of January 2023.

A handwritten signature in cursive script that reads "S. Ireland". The signature is written in black ink on a white background.

Signature of Transcriber

Minutes Acceptance: Minutes of Mar 1, 2022 11:00 AM (Committee Reports)

A communication was received from Seth Federspiel, Sustainability Planner, transmitting presentation for the Health and Environment Committee meeting on March 1, 2022