February 27, 2025 Climate, Resilience, and Land Use Committee Agenda

City Hall, Council Chambers, 2nd Floor – 1221 SW Fourth Avenue, Portland, OR 97204

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Thursday, February 27, 2025 9:30 am

Session Status: Adjourned

Committe in Attendance:
Councilor Candace Avalos
Councilor Sameer Kanal
Councilor Dan Ryan
Councilor Steve Novick, Co-Chair
Councilor Angelita Morillo, Co-Chair

Councilor Morillo presided.
Officers in attendance: Diego Barriga, Acting Council Clerk

Committee adjourned at 11:28 a.m.

Regular Agenda

1

History of greenwashing (Presentation)
Document number: 2025-048
Introduced by: Councilor Angelita Morillo
Time requested: 10 minutes
Council action: Placed on File

2

Renewable fuels comparison (Presentation)
Document number: 2025-049
Introduced by: Councilor Angelita Morillo
Time requested: 30 minutes
Council action: Placed on File

3

Renewable fuel standards in Portland (Presentation)

Document number: 2025-050

Introduced by: Councilor Angelita Morillo

Time requested: 30 minutes

Council action: Referred to Councilor

Item referred back to Councilor Morillo.

4

Community testimony on climate priorities for Portland (Public Hearing)

Document number: 2025-051

Introduced by: Councilor Angelita Morillo

Time requested: 45 minutes

Council action: Placed on File

Speaker List - Climate, Resilience, and Land Use

	Name	Title	Document Number	Meeting Date
1	Angelita Morillo	Councilor, Committee Chair		02/27/25
2	Diego Barriga	Acting Council Clerk		02/27/25
3	Dan Ryan	Councilor		02/27/25
4	Steve Novick	Councilor, Committee Chair		02/27/25
5	Candace Avalos	Councilor		02/27/25
6	Sameer Kanal	Councilor		02/27/25
7	Claire Adamsick	Council Policy Analyst		02/27/25
8	Richard Plevin	Retired Researcher, UC Berkeley	2025-048	02/27/25
9	Audrey Leonard	Staff Attorney, Columbia Riverkeeper	2025-049, 2025-050	02/27/25
10	Mia Reback	Manager, Climate-Aligned Industries, Rocky Mountain Institute	2025-049	02/27/25
11	Kate Murphy	Senior Community Organizer, Columbia Riverkeeper	2025-049	02/27/25
12	Andria Jacob	Climate Policy and Program Manager	2025-049, 2025-050	02/27/25
13	Melanie Plaut	(Testimony)	2025-051	02/27/25
14	Brenna Bell	(Testimony)	2025-051	02/27/25
15	Samantha Hernandez	(Testimony)	2025-051	02/27/25
16	Nick Caleb	(Testimony)	2025-051	02/27/25
17	Diane Meisenhelter	(Testimony)	2025-051	02/27/25
18	Mike Houck	(Testimony)	2025-051	02/27/25
19	Megan Boutwell	(Testimony)	2025-051	02/27/25
20	lynn handlin	(Testimony)	2025-051	02/27/25
21	Jordan Lewis	(Testimony)	2025-051	02/27/25
22	Marnie Glickman	(Testimony)	2025-051	02/27/25
23	Ron Buel	(Testimony)	2025-051	02/27/25

Portland City Council Committee Meeting Closed Caption File

February 27, 2025 – 9:30 a.m.

This file was produced through the closed captioning process for the televised city Council broadcast and should not be considered a verbatim transcript. The official vote counts, motions, and names of speakers are included in the official minutes.

Speaker: Good morning everyone. Thank you for your patience as we get started. People are just going to be logging in and getting settled. And one of our counselors is going to be here a few minutes late. She had an early morning meeting. But she'll join us around 10 a.m. And i'll give people one more minute to get logged in and settled. And then we will go ahead and get started.

Speaker: Thanks. So.

Speaker: All right. Good morning everyone. I call the meeting of the climate resilience and land use committee to order. It is Thursday, February 27th at 9:33 a.m. Diego, will you please call the roll?

Speaker: Avalos. Ryan.

Speaker: Here.

Speaker: Canal. Novick. Here.

Speaker: Morillo here.

Speaker: Here.

Speaker: Oh! Oh my gosh.

Speaker: Sorry I’m late.

Speaker: What an entrance.

Speaker: I’m here. Right? Yes.

Speaker: I think so.

Speaker: You can take any seat you'd like. Okay. And you're right on time, counselor avalos. So great. Claire, will you please read the statement of conduct?

Speaker: Good morning, and welcome to the meeting of the climate resilience and land use committee. To testify before this committee in person or virtually. You must sign up in advance on the committee agenda at Portland council agenda. Climate resilience and land use committee. Or by calling 311. Registration for virtual testimony closes one hour prior to the meeting. In-person testifiers must sign up before the agenda item is heard. If public testimony will be taken on an item, individuals may testify for three minutes unless the chair states otherwise, your microphone will be muted when your time is over. The chair preserves order disruptive conduct such as shouting, refusing to conclude your testimony when your time is up, or interrupting others testimony or committee deliberations will not be allowed. If you cause a disruption, a warning will be given. Further disruption will result in ejection from the meeting. Anyone who fails to leave once ejected is subject to arrest for trespass. Additionally, the committee may take a short recess and reconvene virtually. Your testimony should address the matter being considered. When testifying, please state your name for the record and address is not necessary. If you are a lobbyist, identify the organization you represent and virtual testifiers should unmute themselves when the clerk calls your name. Thank you.

Speaker: Thank you claire. So the purpose of this meeting this morning is that we are, as we all know, entering a new era of the climate crisis where things are more urgent than they ever have been before. And I think that's going to require that we bring all of our expertise, grit and strength that we have to address this crisis. This committee meeting is going to be a little bit different than usual. And that's by design. We have invited experts from outside of city hall here to share their

knowledge about renewable fuels, to check our assumptions, and to open us up to richer discussions on the impacts of the tools available to us at this time to address the climate crisis. I also want to say that city staff are absolutely indispensable. Their expertise, the research they do for us every day, and the guidance they provide is critical for City Councilors to make informed decisions about how we lead the city. They also have access to us in ways that community members don't always get to, which is why I wanted to open up this space to new voices today. And we are also very grateful that city staff will be sitting here for parts of the q&a portion so they can answer other questions, and hopefully if there's anything that they have, you know, different thoughts on or different ideas about, they can email us with a new memo or information as it comes up. There are no easy options left on the table to address the climate crisis, and this issue is more urgent than ever. So I'm really grateful that we have these partnerships with elected officials within city hall, with experts and advocates outside of city hall, and I'm so grateful that people are taking time out of their day to come and convene with us. The key topics of discussion for this meeting are going to be centered around renewable fuels. This has been a pretty central topic area for the past few weeks in the city of Portland. And as we think about creating a just transition into a new climate era and being one of. I would love for us to be a leader nationally on climate issues. We have to look at the nuance of all of the options available to us. So the invited speakers who are going to be here with us today are renewable fuel scientists, climate lawyers and advocates who have done deep research on the impacts of renewable fuels on the natural environment. And while there isn't time allotted to cover this, to cover something in this committee meeting, in the future, I would like to bring city staff to present a step by step plan of how we will transition away from all the fuels that we have and what other alternative power sources we have, and what the city has

power to actually do about that. So I'm really excited to dig into this topic amongst many others. And this committee has a lot of the biggest issues. We have climate, we have parks, we have land use. So there's going to be a lot of rich discussion here, and I'm excited to work with everyone on that. And diego, who is the clerk today, will you please read the next item?

Speaker: Item one. History of green washing.

Speaker: Thank you. And richard plevin is a phd, retired academic researcher from uc berkeley will be presenting on this topic. Richard, will you come to the front, please? Thank you so much for being here with us today.

Speaker: Thanks for inviting me.

Speaker: And I believe, yes, andre is going to be sharing the slides on your behalf, so just let him know when you want to move on to the next slide. We have 15 minutes allotted for your presentation and then a 15 minute portion for discussion. Thank you so much for being here today.

Speaker: Again, thank you for inviting me. I'm going to be discussing the question of whether biofuels actually help mitigate climate change. Next slide please. Next slide please. Briefly I've been working on this topic for about 20 years. And maybe more importantly, I've worked directly with the california air resources board and the us epa in their efforts to model the climate effects of biofuels. You can find more about me online. Next slide please. This is a very complicated topic and it's very controversial even within the scientific community. I'm only going to be able to scratch the surface of this today. There's four topics I'm going to be hitting on. One is what is carbon intensity of biofuels. How do we model the biofuels induced emissions that come from land use changes that result from expanding biofuel production? The question of how much petroleum fuel is actually displaced by the production of biofuels, and then pulling all of this together to look at the carbon

intensity based policies like the low carbon fuel standard in the clean fuels program in Oregon, and whether these are really as scientific as they're expected to be. Next slide please. The answer to the question in the title is that it's unclear. Still, after decades of research, whether most biofuels have a positive or negative effect on climate change. The fundamental problem is that the effects are estimated on a life cycle basis, meaning we're not just measuring tailpipe carbon emissions, we're measuring the emissions that occur throughout the process of creating and using these fuels. And this is just simply not measurable. It's dispersed. Some of these effects happen internationally. It can only be modeled on a computer. And once you're talking about modeling, you're talking about assumptions. You're talking about data. That may be proxy data because the actual data you need isn't available. And different modelers make different choices in how to how to do this, resulting in different estimates of the carbon intensity which creates all of this conflict and uncertainty. Anyone who claims they have the answer, and they know the carbon intensity of a biofuel and its actual effect on climate, is not understanding the science or perhaps lying to you. Next slide please. There's a lot of subjective decisions a modeler must make when estimating the carbon intensity. And the first is the definition of carbon intensity itself. There's many decisions that go into that simple question. For example, do we just measure carbon dioxide? Do we measure other greenhouse gases such as nitrous oxide and methane? Do we measure particulates such as sulfates, which actually have a cooling effect? Or black carbon, which has a very uncertain but positive forcing effect, meaning warming effect. So the decision on which of these to include and how to sum them together, because they have different effects on the climate, is one of the first decisions you have to make. I'm going to skip the second point because I've got another slide that will touch on it. Two important factors are whether to include the land use change

effects that result when biofuels programs are expanded. I will be talking about that more in a moment as well. And the other one is the amount of petroleum fuel actually displaced when biofuels are added into the global fuel system. Once you've decided to model this, you have to either build your own model or choose a model. And there are different classes of models that have different strengths and weaknesses, and which one you choose can have a significant effect on the outcome, or the constraint on the outcomes that the model can produce. I'll skip the rest of this for now. Next slide please. So the term of art for this analysis. That is done on biofuels is called life cycle assessment. And there are two different ways of doing this. And despite them both being called life cycle assessment, they're actually entirely different in how they go about analyzing the situation. The first is the more traditional one, which starts at a end product. Call it corn ethanol, for example, and you look at the emissions in the production of the corn ethanol. Then you look at the emissions of the inputs to producing corn ethanol, and you go backwards up this supply chain to raw materials extraction. And then you sum up the emissions over that entire supply chain, and you assign them to the end product. That's essentially what attributional lca does. Consequential lca, in contrast, is looking at the effect of making a decision or implementing a policy. So you're starting with a world without the policy. You implement the policy in your model, and you look at the difference in greenhouse gases in the world without the model and the world with the model, and you assign those to the policy or the decision that you've made. And this is shown in the diagram as sort of a perturbation around what was the baseline case. These are two very different ways of looking at the problem. And there's no reason to ever expect them to come up with even similar answers. Yet they're both used to analyze the carbon intensity of biofuels. Next slide please. So this question of indirect land use changes one of the

key ones. And I'm not going to describe every element of this figure. But the main point is that if you if you implement a biofuel policy, you're going to divert feedstocks like soybeans and corn into the biofuel market from wherever they used to be sold, and that will be feed for animals or human consumption. And when you divert those feedstocks, those demands for those feedstocks where those used to be sold, those don't disappear. Somebody else has to meet that demand, and that can happen through what's called intensification, which is, say, throw more fertilizer on your crops to increase yield or intensification, which is bring more land into cropland to produce more biofuels. And when that happens, and it can happen anywhere in the world, it might happen in brazil or in africa as a result of u.s. Policies. When that happens, the biomass that's on that land is generally burned. It might be trees, it might be grasses, and the soil is plowed. And the emissions from the biomass occur pretty much immediately. The emissions from the soil can continue to be emitted over decades. And it's these emissions from land use change, which. If, if ignored, can actually undermine the whole biofuel policy. If you include them in your analysis, you're getting a much better idea of what actually is going to be the result of expanding biofuel production. However, it's a very difficult problem because it involves global markets and it involves very heterogeneous ecosystems, like estimating the amount of carbon in a forest is not a simple problem. Next slide please. Like I said, the initial release of carbon from the biomass occurs pretty much immediately. And that results in what you could call a burp of co2 at the beginning of the process. And over time, there's displacement of fossil fuels by biofuels, which result in a sort of paying down this carbon debt that you incurred initially when the land use change occurred. The amount of time you allow for that debt to be paid down changes the estimate of the carbon intensity. If you if you give a very short time for it, the carbon intensity is going to be very high

because you haven't paid down much of the debt. If you if you take a longer period of time using biofuels instead of petroleum fuels, you're going to get eventually to a benefit. This number this time horizon, how long to allow for this is a completely political decision. I don't mean political in a negative sense. I just mean to distinguish it from a scientific decision. It's not a scientific number. In fact, the eu has chosen 20 years for this number and the us policies in california and by inheritance in Oregon. And the national policies use 30 years. And this makes a big difference in the estimated carbon intensity. But this number isn't really based on anything. Next slide please. The choice of the economic model you use to estimate the land use changes is also very important. There's a model called gtap bio that's used to estimate the land use changes in the california california low carbon fuel standard. And again, because those methods were adopted in Oregon, the same model is essentially used here. A problem with this model is it doesn't include forest and pasture land that is not in current economic use, and this probably derives from the model's origins as a trade model. If it's not an economic use, it doesn't matter to trade, right? However, this high carbon land cannot be converted in this model. It cannot be projected to be converted by this model because it doesn't exist in this model. My colleagues at epa and I published a paper a few years ago where we reconfigured a different model called gcam to represent this land use, this land representation that doesn't include commercial, noncommercial forest and pasture. And the result was it. The lack of this natural land in the model resulted in a artificial lowering of the carbon intensity. In other words, if you include the possibility that these noncommercial lands might be converted, you get a higher carbon intensity. If you use a model that doesn't permit that, you get a lower carbon intensity. And this is the model that underlies the fuel policies in california and in Oregon, I would say artificially producing a lower carbon intensity because of

this one feature, among others. Next slide please. To make matters a little worse, the gtap model actually doesn't estimate carbon emissions. It estimates land use changes in area terms. There's another model that uses those outputs and makes a bunch of assumptions and computes the estimated amount of carbon emissions associated with those land use changes. And I worked on this model in california, the one that underlies the low carbon fuel standard. And it's used for all biofuels in california and all biofuels in Oregon, except for corn ethanol. For corn ethanol. A different model that converts these land area changes to carbon emissions is used. That produces much lower numbers. I have links in the bottom here. I sent a. Report to the deq back ten years ago about this, when they were making this decision about why it was a bad idea. Of course, it didn't make any difference, but the report is there so you can read it. As far as I can tell. This switch of this one. This model for this one biofuel resulted from successful lobbying by the renewable fuels association, again pointing out that carbon intensity is very subjective indeed, political and manipulable by various parties because it's not measurable. You can't go out and say this is the correct number. Any number has to be explained in understood in detail. Next slide please. The standard way of thinking about the benefits of biofuels is just to compare them to a fossil fuel, and say that the difference in their carbon intensity is the emission savings. This defies economic logic, because what actually happens is you you're adding supply to the global fuel markets, which reduces prices, which causes some people to use somewhat more fuel than they would have before. And you you get what's referred sometimes as a rebound effect, so that if you're if you're going to produce, let's say, a gasoline gallon equivalent of ethanol, you you aren't avoiding a full gasoline gallon equivalent worth of petroleum fuel, you might be avoiding maybe 70% of one, because there's going to be some extra petroleum used as a result. And if you're if

you're only displacing 70% of that gallon, then you only have avoided 70% of the emissions of that gallon. In other words, by ignoring the reality of this fossil fuel substitution, you're overestimating the climate benefits of the biofuel. Next slide please. And here I'm looking at some language from the deq. But california does exactly the same thing in that when they explain the benefits of this program and how much greenhouse gas emissions have been reduced or petroleum been displaced, they're using this method of assuming 100% displacement. And of course, they're also assuming that the numbers are actually representative of what's happening in the world, which, as we've seen, is not necessarily the case. Next slide please. A study by some folks in minnesota about ten years ago was looking at this for the national renewable fuel standard. And what they found is that if you look at this figure, the white bars that go below the zero line would be the assumed benefits of the renewable fuel standard. If you assume full 1 to 1 displacement of petroleum fuels by biofuels. But if you include the fact that they're not really displacing as much fossil fuel as as that would expect, you get the black bars at the top of this figure, which show that they're actually positive emissions that result from the policy. In other words, the renewable fuel standard is a climate warming policy, not a climate cooling policy. Next slide please. In conclusion, my conclusions. The effects of biofuels are uncertain. And they're going to remain so not because modelers are stupid but because it's a wicked problem. It's it involves modeling global ecosystems and global markets. And there's just no way to do this that you can say is going to be accurate or reliable. It's always going to be an estimate. There's always going to be elements left out or distorted in any model of this scope. In any at any rate, I think we should be modeling the effects of policies, not trying to rate individual fuels so that they can compete against one another. A policy like the low carbon fuel standard or clean fuels program makes sense. If the

carbon intensity numbers were actually representative of the relative harm caused by these fuels. But that's not true. And if you recognize that that's not true in those numbers are very soft, then the policy has no way to guarantee that it's actually producing reductions in emissions. It's kind of a crapshoot. It depends on what the real effects are. And that's not represented by the carbon intensities. So I think these carbon intensity based policies are actually misguided and unreliable. I don't support them. People over the years have said, well, what do you what do you want to do then? Just allow petroleum fuel with no other alternatives? Well, no. The answer's become ever clearer as the years go on. Electrification is the is the solution. Biofuels producers and petroleum companies are now more aligned than they used to be, because both of them want to see the continued use of liquid liquid transportation fuels and the internal combustion engine. Because if you switch over to electrification, there's no there's nowhere for liquid biofuel or liquid petroleum fuel in that, in that system. So they'd both like to see this continue. And. I don't think there's I don't think there's justification for, for these policies that claim to be some sort of bridge. Going forward towards a lower carbon transportation system. That's all. I'll take any questions.

Speaker: Thank you so much for your time, doctor plevin. I see why you're a professor now, because I think we could spend a whole semester with you learning about this. And that was pretty dense and very grateful for your expertise and your time. I'm going to open the floor to any questions my colleagues might have. And I appreciate you closing out with that statement. That's something I've heard from city staff as well, that we're interested in pursuing electrification, and also how difficult that lift is going to be with the electrical grid and everything. So I'm excited to dig into that more, but i'll open it up to my colleagues to see if they have any questions that they would like to ask you. Oh yeah, I guess I should be looking at

whose hands are raised. Sorry, this is my first time. Or councilor avalos first. And then councilor novick, please. Thank you.

Speaker: Thank you. Chair. Thank you so much for your presentation. Dre, could you actually put the slides back up? Because my question is about the second to last slide. So as that's coming up, I guess I just would love you to break down that graph. That chart again. I wasn't clear on what the different markers were. So I think it said like the black was market force. Yeah. Go back one, dre, please. And not microphone. So I didn't really understand what you were saying. So if you could just explain the slide again for me. Thank you.

Speaker: So the assumption underlying a lot of biofuel benefits analysis assumes that every unit of biofuel just just by producing it, the act of producing it causes the equivalent amount of petroleum fuel to not be produced, transported, combusted. Right. You're avoiding the emissions of the petroleum fuel by producing the biofuel if you make that assumption, what you get in this group's analysis of the renewable fuel standard, you get the white bars that are below the zero line. In other words, since the y axis, there are greenhouse gas emissions, the bars below the line are actually reductions. Those are reductions in emissions benefits from the climate policy. But if you make the less aggressive assumption using economic principles and estimate the amount of petroleum fuel actually displaced by biofuels, which can be substantially less, 40 to 70% less by some estimates, then what you get if you add that extra petroleum that's getting combusted because it's not really being displaced, you get the black bars above the zero line, which indicate a net emissions of greenhouse gases from the policy. In other words, the inclusion of this petroleum market rebound effect flips what looked like a climate beneficial policy into a climate hurting policy.

Speaker: Okay, I'm going to let that cook for a minute. Thank you.

Speaker: Thank you. Councilor novick.

Speaker: Thank you. Chair. Morillo. Doctor plevin, I totally agree with you on electrification, and one of the many tragedies of this new federal administration is that they're going to try to reverse the biden administration rules or are intended to push the trucking industry in the car industry to electrification. And I'm sure they will also try to overrule california's and thereby Oregon's ability to adopt local rules that do the same thing. So here's my question. It's a little involved. Portland can't stop diesel trucks from driving through the city. Portland adopted a renewable fuel standard for diesel that's bought within the city. So and Portland's renewable fuels and Portland's as opposed to california's or Oregon's renewable fuel standard is intended. To include fuels to allow fuels like based on used cooking oil and rendered animal fat, which I think is a byproduct of meat production. But to exclude canola oil, soybean oil, I have to ask them about corn ethanol. Maybe we can have them up to address that. So that's the idea of Portland's standard. My assumption is that if we repealed that standard, well. If the choice, it seems to me is between, we could we could I don't know if we could prohibit any diesel from being sold within the city of Portland, but for the for the sake of argument, let's assume that we could. In that case, people would just fuel up on petroleum diesel outside the city. So, I mean, I think that I mean, what the Portland policy was intended to do is say, well, at least to the extent that trucks do fuel up in the city of Portland, they should use fuels based on this carbon intensity standard, such as the based on things like rendered animal fat and cooking oil. So I'm sure you have a variety of things to say in response to that, but I'd like you to start off by just answering this question in one of three ways either. I don't think that Portland should should repeal its renewable fuel standard. I think Portland should repeal its renewable fuel

standard, because I think that it promotes fuels that are worse than petroleum diesel or I don't care. Thank you.

Speaker: Well, I would choose a if I or number one I don't think it should repeal it if, if in fact it's really going to be based on waste. Waste oils. Waste oils. Avoid these problems of land use change entirely. What they don't avoid though, and I haven't seen an analysis of this. I don't know how it plays out, but if you're taking any substance, if it's tallow, or if it's waste cooking oil, you're taking it from some other use where it was previously being used. You have to ask the question. Similarly, what happens now? Is there some use that is not being met and how is that going to be met? You have to avoid the robbing peter to pay paul problem. But to the extent that these are actual waste in that they don't have some other use, that's going to be backfilled by some process that you have to now evaluate for its carbon footprint. If those are actual wastes, then those are actually almost certainly lower carbon intensity than than any petroleum fuels. There's also not that much of it. So the effect that you're likely to have with this policy is probably minimal. It's I'm not sure if it's if it's very important. And, and if those fuels were being made anyway and they were just being routed to Portland because Portland now has an extra benefit offered for that, then you're just kind of reorganizing the market. You're not really changing carbon emissions. So it's probably better. It may not be subject to more analysis. Really.

Speaker: Thank you.

Speaker: Thank you for that question. I'll move on to councilor kanal and then councilor. Ryan.

Speaker: Thank you. Chair. Thank you, doctor plevin. I have two questions. First, do you have a preferred model? Your slides had five of them. I noticed you mentioned one other than gtap bio on the next slide. Between those other four, are

there any that that you would suggest capture something? Or is it just that the idea of carbon intensity as a indicator is not up to snuff?

Speaker: Well, I think the idea of carbon intensity as, as it's treated, which is essentially as a property of a fuel, much like you could say it's density or it's energy content or things that are actually measurable properties of the fuel. Carbon intensity is not a property of the fuel. It's a property of a model. And you can model it ten different ways and you'll get ten different carbon intensities. And none of them is necessarily right. And you can't know if any of them are right because there's nothing there's no ground truth to compare it to. This is the problem. And you asked about the models. For the past ten years, I've been working with epa, using one model that I think has some very positive attributes. Called the gcam model, it comes out of the joint global change research institute, which is the. The joint refers to the fact that it's both the pacific northwest national lab and university of maryland. Those groups together have developed this model. It has features that I think are very helpful for modeling this, but of course it's not perfect either. It was developed for a different purpose, just like the gtap was developed for trade. Gcam is basically a climate oriented, climate policy oriented model. So it does some things well. You could say it's modeling of international trade isn't as strong as as a model that was developed for trade. But of course it does all the greenhouse gas emissions stuff really well because that's what its initial focus is. And it represents land and land use changes and carbon emissions and all of that stuff. So. To me, it's a better model than the one that's currently being used. But all of the models have simplifications and distortions and weaknesses and so forth. So they tell us something. They tell us useful information. But I wouldn't trust, you know, a single number that, you know, to two decimal places that we're assigning to a fuel from

any of these models. It just doesn't make sense. It's not how they were intended to be used.

Speaker: Got it. Thanks. And then my other question is, although I am supportive of electrification, I'm going to ask this anyway. Is there a way to mitigate the market effect to ensure 100% displacement? So it's the same slide that councilor avalos was talking about. Is there a model that can say, here's what the cost of gasoline would be if this biofuel policy didn't exist, and sort of allow for a calculation that policymakers can use for the optimal gas tax in this example, to ensure that gas prices don't decline due to biofuel production, and increase and therefore increase the level of displacement.

Speaker: Well, part of the problem is the effect is international. So in some modeling work I've done with some colleagues, for example, in a very simplified world where there's two regions, there's the us and the rest of the world. I mean, very simplified. What you find is that. Because you increase biofuels domestically, you're causing there to be more petroleum fuel available on the global market. So even if you implemented some corrective policies domestically, well, you'd have to implement very strong policies domestically to avoid the international part of the problem so that the rest of the world wasn't seeing a lower price for petroleum fuels.

Speaker: So you can mitigate you're you're saying that we can it would induce demand effectively globally, but we only have the ability to reduce that on the scale of the size of the jurisdiction that we have tax authority over.

Speaker: Right. You'd have to you'd have to make sure that the additional petroleum fuels made available by this increased fuel supply, by adding more biofuels to the system, didn't leak out of the us into the rest of the world to lower prices.

Speaker: Thank you for that.

Speaker: Thank you, councilor Ryan. And we only have three more minutes for this subsection, so I'm going to pass it along quickly. And then hopefully people can connect with you afterwards as well. Thank you.

Speaker: Yes. Thank you, madam chair. And it's really been doctor levin. Yeah. It's been great to sit here and be in school. I wake up every day trying to be teachable, and you really allowed me to experience that in a big way. I do have a question. It's mostly around the life cycle. I think that's where my mental model stretched more today. You know, thinking about it from corn producing the corn to the emissions. I think my mental model was more aligned with what I'm sure a lot of people align it with, which is the emission part. Is that fair? So that's that's you deal with a lot of people like me that you're probably trying to educate. Correct. Maybe not. You don't have to answer that. I don't know why. That was a startling question. But here's my I hope you can be open and vulnerable with me. So when I look at the impacts and that slide, what slide was it? It was the choice of time. Horizon matters. Have you done that for electrification?

Speaker: I didn't hear the question.

Speaker: Have you done that same slide for electrification? Like so it starts with the mining and goes to the production. And then we know there'll be some waste. And so I think it's the, the life cycle that you're speaking of. So profoundly today I just hope that we do the same type of analysis and deep study with electrification. Are you on that?

Speaker: Myself personally, no. But other people's have have done this. In fact, the national academies did a study that came out a couple of years ago on life cycle, sort of best methods of life cycle assessment of transportation fuels. Really on topic here. And they had a lot to say about that as well as about biofuels.

Speaker: And your your focus is to the, the analysis of biofuels.

Speaker: Yeah. And even more specifically.

Speaker: On electrification. That's that's okay. That's not your expertise. Okay. The other question I have real quick and it doesn't have to be answered now. It could be later, maybe a number three. But I'd be curious which model the city of Portland currently uses. And you don't need to know that because I don't.

Speaker: I don't know that.

Speaker: But I think it will be fair for us to listen to the staff's perspective on that later on. Okay, thanks.

Speaker: And exactly on time. Doctor plevin, thank you so much for your time. I really appreciate you so much.

Speaker: You're welcome.

Speaker: Great questions and hopefully folks can connect with any further questions later. I would also love to hear the answer to that question about the electrification model. And I'm sure that we'll have more opportunities to hear from staff on the city model as well. So, diego, will you call the next item or will you read the next item, please?

Speaker: Item two renewable fuels comparison.

Speaker: Thank you. And for this portion we're going to have a few. We're going to have three different speakers. They'll each have around ten minutes each. Our first two will be remote. So the first speaker is audrey leonard who is a staff attorney at columbia riverkeeper. The second will be mia reback, who works for climate aligned industries at the rocky mountain institute. And then kate murphy, a senior community organizer at columbia riverkeeper. So, audrey, are you online with us right now? Oh, yep. I see you there.

Speaker: Yeah. Hi. Can I share my screen?

Speaker: Yes, please. Thank you.

Speaker: Okay. Can you see me?

Speaker: Yes.

Speaker: Yes we can.

Speaker: There we go.

Speaker: Great. Well, thank you so much for having me this morning. As you said, my name is audrey leonard. I am a staff attorney with columbia riverkeeper. And today I'm going to be covering a proposed renewable diesel refinery in Oregon. This is out at river mile 53 of the columbia river near clatskanie, Oregon, at port westward. And just a quick note. All the beautiful pictures that you see in the slideshow today are from this area really close to where that refinery is proposed. Or of the site itself. And I'm choosing to cover this today just as a deep dive or a case study into what the potential local impacts can be of producing these fuels. In Oregon. And so I just wanted to go over columbia riverkeeper's mission really quickly so that we can understand not only why we are interested in this project from a water quality standpoint, but our mission is very broad. So it includes not only water quality, but all life connected to it. So we have program areas that are involved in climate and preventing the expansion of fossil fuel infrastructure, which is where my work primarily focuses in. And so we are really we really care about this issue not only from a water quality perspective, but also from a climate impact perspective. So to situate ourselves a little bit in the location of this project I mentioned, it's on the columbia river at port westward. It's also a really important area of the columbia river, because it's the columbia river estuary, and that is where the saltwater from the ocean and the fresh water combine. And that's really important for species of fish, salmon that need to adjust their bodies to saltwater or freshwater depending on which way they're traveling. And a little zoomed in here

you can see we're at port westward. And you can also see I wanted to show these tributaries and dyking district, those smaller streams that are in this area. So this is a very wet area. It's within a dyking district. So it's behind a levee. And a lot of the local water is managed by that infrastructure. So it's pumped in and out depending on whether there's flooding or for irrigation potentially during dry seasons. It's very delicately managed. So there are a lot of really particular issues with plunking a big refinery in a wetland like this. That is so managed already because of all of those systems. And here's a prettier picture of where next will be sited. A lot of folks like to come out here and say that this is a really industrial area. As you can see, there is some industry there at the port. And the, the tanks over there, but primarily where this would be sited is farmland. And in the context of additional farmland. And so getting into some of these local impacts. So if next they're also referred to as next clean. They use a couple different names on their filings. So not to be confused, but first I want to talk about the local emissions of just the what it takes to power the facility to make the fuel. And this is in addition to the feedstock emissions that doctor plevin covered, the emissions that go into farming and sourcing those feedstocks. So these emissions would come from powering the facility itself to make the fuel. And so this facility would use a million tons of greenhouse gas emissions per year. That's powered by the methane gas at the facility. And just for reference, that would be as much gas as the city of eugene uses on an annual basis. So a pretty intense amount of gas. And that will impact Oregon's ability to meet its climate goals. And then moving on to feedstocks again, looking at whether we're using a waste product like a used cooking oil or a purpose grown feedstock like a soybean oil, which is going to be more carbon intensive. Next has not produced contracts or proof or evidence that they're going to be using these truly waste feedstocks. And in fact, those feedstocks are a lot harder to obtain and tend to be

more expensive because california has incentivized those feedstocks in their markets, sort of ahead of Oregon. So a lot of those contracts are spoken for, and there are less of them. Purpose grown feedstocks like corn and soybean oil are more carbon intensive. As doctor plevin talked about. But they're also easier to obtain. And again, next sec filings show us that 75 to 80% of their feedstocks from the start will be these purpose grown feedstocks that are trained in from the midwest. And then looking at end use and whether or not their finished product would be used in Oregon. Right now, they chose to site their project on the columbia river because of that port access. And they plan to ship their finished product from the port of columbia county to the pacific ocean, to markets in california and asia. So at this time, we have not seen evidence that they intend to sell much of their product here in Oregon, but instead that product would be shipped out, creating more emissions in that transit. And then used elsewhere. And to get away from some of those depressing points, I just wanted to sprinkle in. Just more information about the community here at clatskanie and port westward, and just really highlight how vibrant of a farming community it is. I'm from an agricultural background myself and just have a huge appreciation for the creativity and just the grit that it takes to be a farmer, and I wanted to put a little bit of a highlight on the class canal food hub. Here. They have over 70 local producers at a year round food hub in clatskanie, just a few miles from where the refinery would be sited. So this idea that this outside. Out of state economic industry development is necessary to uplift the community is really just not the full truth. There is a vibrant agricultural community that is really doing the most out here. Another example of this, this is warren seeley. He is a fourth generation mint farmer and has he's been one of the folks to show up at all these public hearings and just really attest to how the local hydrology works and how everything will be affected if this

refinery is built. And really just advocating for regulators to listen to the community and not necessarily buy into these false promises from an out of state industry. And just to sort of attest to why that why we shouldn't be placing that trust in the company. We can see that next actually ended up paying a lot less rent to port westward. They went from paying $180,000 per month to $15,000 per month. And this is just sort of against everything that they've promised about bringing economic prosperity to the area. And again, highlighting another local star is the great vows and monastery. This is a really important spiritual place. If built, the next refineries flare stack would be at eye level with the monastery. And would really cause a lot of harm in terms of the noise and just disturbing the peace of this really sacred place. I like to say it would be the equivalent of proposing to build a refinery across from mount angel. This is that significant of a sacred place. And these folks have been showing up to hearings and writing comments as well. And getting into some more local and regional impacts. You have your land use impacts, so converting that farmland into a refinery would require filling over 100 acres of wetlands. And in order to do this, under Oregon law, you are required to do wetlands mitigation. And this involves creating man made wetlands. And so often you hear that as the response to, you know why it's okay for them to fill this amount. But unfortunately, man made wetlands tend to take a lot longer to create and also to produce any sort of benefits. And it also poses a problem in this particular area because of, like I mentioned, the really delicate drainage system that is at port westward. So a lot of the farmers out there are really concerned with what it means to add 400 more acres to an already very soggy, very prone to flooding area. And then you have the addition of the railyard, which is for importing those feedstocks. And the increased rail traffic in the community is a large concern. The community already struggles with long wait times at railroad crossings, and that

could pose a problem for emergency services, especially for folks who live way out there. Again, the local emissions, the flaring from the flare stack are a big concern. Increased barge traffic on the columbia river, which increases the risk of spills. This is again in such an important part of the estuary where we've been working really hard to restore salmon runs. As a state and as a country. So that poses impacts to water quality and salmon habitat. It's also, unfortunately on unstable soil. It's a liquefaction zone. Which poses a huge spill risk in the event of an earthquake. And then finally there's the levee infrastructure, which is around that diking district is not in the best shape. And with the construction of the refinery, driving over that levee back and forth could cause it to degrade even further and pose risks to homes and farms that are behind that levee and rely on it for flood protection.

Speaker: Attorney leonard, thank you so much. We're a little bit over time. I think you just have 1 or 2 slides left. If we could move through these quickly to move on to the next presenter, please.

Speaker: Yeah. Of course. Thank you. Thank you for that. Heads up. Yeah. Just stepping back a little bit. Giving a more of a big picture view. Reuters just came out with this article recently where the biofuel groups have united with petroleum groups to boost biofuel mandates. They're saying the quiet part out loud. They are aligned again in opposition to electric vehicles. And I also attended a hearing on a bill in the Oregon legislature that was intended to incentivize the supply of renewable diesel. And just heard that industry testimony over and over again, trying to talking about permitting as hurdles. And just trying to advocate for maybe more loopholes or permitting shortcuts. And I just want to emphasize that because of these local impacts that, you see, there is no reason to create those sort of loopholes or incentives at this time. And finally, i'll end by saying that the community is also very educated right now because of these actors like zenith and

next. And regardless of your view of the role of renewable diesel or renewable fuels in the transition, we need to be wary of actors like zenith and next who have eroded the public trust and could create a bad name for a product that maybe one of you might see as beneficial. Thank you so much.

Speaker: Thank you so much for your time. Attorney leonard, really appreciate you being here. Our next presenter is mia reback. So if you are online, I see that you're virtual. If you could share your slides with us and give an introduction for who you are and why you're here. Thank you.

Speaker: Hello, and thank you so much for having me here today. I'm going to be speaking about net zero readiness and the role of renewable fuels. My name is mia reback. I used to live and work in Portland, Oregon. I have a bachelor's in environmental studies and economics from reed college, and my master's in energy and the environment and climate change solutions. I'm currently an industrial decarbonization manager at the rocky mountain institute, and you can learn more about my work on these links. Today I'm going to be talking about how liquid fuels can or cannot help us meet net zero. And I'm going to focus on sustainable aviation fuel. Just to get some key takeaways here up front, there is a small potential role for alternative or renewable fuels for sectors that cannot easily electrify. And really we're looking at a very limited application in aviation, marine shipping and a few heavy duty transport sectors. Sustainable aviation fuel is molecularly equivalent to fossil jet fuel, and it's made from a variety of low carbon feedstocks and technologies, and is really a catch all term for a variety of fuel sources. Legally, in the united states, the final saf product should have or must have a ghg savings of 50% or more. That saf product will then be blended with fossil jet fuel, with 50 to 95% jet fuel, before it is used in aircraft. As was previously discussed this morning, life cycle emissions reductions per flight are really going to depend on the

feedstocks used. The production pathway and the blending rate with fossil jet fuel. Because these fuels are molecularly equivalent at the point of combustion, they have the same carbon emissions as jet fuel produced from fossil fuels. The last key takeaway is that saf and other alternative fuel readiness requires addressing seismic health, safety and other resilience challenges associated with storing fuels in Portland, and that the risks to Portland communities of bunkering these fuels is largely the same as storing fossil fuels. As I mentioned, there is a small role for liquid fuels after an additional suite of solutions have been applied to achieve net zero, starting with energy efficiency and electrification, with then a small role for clean hydrogen, alternative or renewable fuels, and ultimately carbon capture for residual emissions term because they require an energy density that electricity cannot meet. Things like aviation, shipping and transport, where electric and hydrogen zero emissions options are not available. I'm mostly going to talk about sustainable aviation fuel, because that is the most pressing topic for how the city could reduce its emissions. To step back and just talk about bio refining 101. This is a simplified process flow diagram, where renewable feedstocks and hydrogen are used to create these products. Gas. Propane. Jet fuel. Diesel these are all outputs from the same refining process. They are then separated at a refinery. Fuel producers might optimize to create more or less of one of these products, but like a chicken, you're always getting every part. Of sustainable aviation. Fuel is presented as one of the solutions that can help the aviation sector reduce its emissions by about one third by mid-century. But it is not a panacea. There is still going to be substantial work needed to be done on fuel efficiency, electrification and other aircraft. And even within a world where we are uptaking saf, there is still going to be substantial aviation emissions by mid-century. It is not a solution that fully achieves net zero on its own. As I mentioned, sustainable aviation fuel is largely a catch all

term for a series of production pathways and feedstocks to create a fuel that is the same as jet fuel. As was talked about before, there are a lot of different feedstocks that can be used. Some of these are waste oils like tallow, which is like animal fat. It can be cellulosic biomass like corn or woody biomass. And they can even start to create these fuels using electricity, hydrogen and carbon capture as was previously discussed. These are very energy intensive processes that have emissions throughout them. The way that saf theoretically achieves emissions reductions is only if it is displacing fossil fuel based jet fuel. Otherwise, it is decreasing the rate of emissions growth. All saf is blended. So when we talk about sustainable aviation fuel, it's really important to make sure you're talking about pre blended or post blended saf. After blending saf will have 50 to 95% fossil fuel jet fuel in it. This is really palatable to airports and airlines because it can be used as a drop in fuel that requires no modifications to existing aircraft or infrastructure. And it's important to note that emissions reductions occur upstream because of the feedstock being used, as was discussed by doctor plevin, and that at the point of combustion, these fuels largely have the same emissions output as burning fossil fuels because they are the same molecular product. This chart I was just going to show some of the different carbon intensities. This is using the icao greet model for the corsia approved pathways. Most producers of sustainable aviation fuel are purchasing multiple feedstocks and blending them together to meet that 50% reduction in carbon intensity compared to fossil jet a, and it's very unlikely that a single facility will have long term contracts for a single feedstock. They will likely be using what they can get that is available for their production pathway. Saf is growing. There are only three commercial saf producers in the us, and there are 37 projects in development. This was really catalyzed by the biden administration's 2030 saf grand challenge that is trying to increase the volume of saf available in the united

states. And this slide here just shows the current saf supply outlook and major saf demand centers that are currently beginning to purchase saf today. There are three projects proposed in the pacific northwest as well as many in california. The largest proposed saf projects are in southern california to serve the california aviation industry. I'm going to mostly talk about saf blending, because I think this is a really critical piece to understand that approved blending rates mean that the maximum saf you can have is 50%. Most airports are blending or receiving saf blended at about 30% to 5% saf their remaining, which is fossil fuels. This does not meet the Portland city code definition of renewable fuels that can have a maximum of 5% fuel content. So again, blended saf does not meet that standard of renewable fuels. And due to blending requirements, it's very likely that a new saf terminal serving markets outside of Oregon could increase fossil jet fuel throughput through the city of Portland. Blending will mostly happen at a fuel terminal for saf that is created at an existing petroleum refinery. They might blend it there and then distribute it. Pre-blended or a fuel terminal will receive fossil jet fuel and saf and blend on site. Airports are not expected to blend because of additional staff, equipment and insurance costs, and they are expected to receive blended fuel. So before it gets to the Portland international airport, this fuel will be blended with fossil fuels. And it really needs to be that expectation that all saf delivered to pdx will already be blended with a maximum of 50%, excuse me, a minimum of 50% fossil jet fuel and up to 95% fossil jet fuel. In order to really see saf become a solution that can work, airports will need continuous delivery of saf as opposed to it coming in batches. That means they might be getting saf that's already blended at a Washington state refinery or saf that is blended in. Portland airlines looking to reduce emissions today can purchase the environmental attributes of saf through a saf certificate. That's very much like a renewable energy credit. I bring this up to say that there are

additional options to reduce emissions that do not require incurring some of the present day risks of fuel bunkering, long term infrastructure planning is needed to align climate and energy goals and enhance seismic resilience, while being mindful of improving community health and safety and a healthy economy. Saf and other alternative fuel readiness will require addressing these seismic safety challenges of fuel bunkering, because it is the same as storing a fossil fuel product. And so while there might be some emissions reductions from these fuels in other geographies due to the feedstocks in a given place, burning saf or burning renewable diesel will have the same emissions output as burning fossil fuels, as well as the same local health, safety and earthquake risks of storing fossil fuels. I went through this content very fast and I'm happy to take questions. Thank you all so much.

Speaker: Thank you so much, mia. We are going to move to kate murphy, who's here in person, and then we will have a about 20 minutes for folks to ask questions, and then we'll move into public testimony. Thank you so much for being here today.

Speaker: Thank you very much for having me. My name is kate murphy. I am a senior community organizer with columbia riverkeeper and I am from Portland. I have my master's in public health with a specialization in environmental systems and human health. Next slide please. So I wanted to just give a brief history. We often talk about the cei hub as something that's just always been there. We've all seen it, you know, most of our lives. And I just wanted to frame that. Native folks have lived on this land since time immemorial, and this was once covered. It was a great wetland covered with lots of trees. There was a lake called lake there that it was between forest park and the willamette river. And that picture in the upper corner with the pipe that was taken in April of 1924, just over 100 years ago, when they were draining the lake. So it's not been a huge amount of time that this has

has been the industrial sacrifice zone that we see today. Next slide please. So this is a current picture of the part of the cei hub with that red dot in the middle representing zenith. And it's in a pretty sensitive area just before the willamette meets the columbia again, just adjacent to forest park. And the history of development. And in this land is a shared history of displacement and disproportionate burdens on bipoc and low income communities from native Americans who inhabited this land since time immemorial, to chinese immigrants who farmed small plots along the edge of the lake in the 1880s to black families who moved to the area during world war two, and to the surrounding communities that are disproportionately affected by pollution from industries in this area today. Next slide please. So I want to address the issue of common language, which is a big problem we have when we talk about renewables, when we, you know, first heard about renewables, it was often referring to things where we weren't depleting the initial source like solar, wind, things like that. But the industry has been really successful in pushing to influence the language all the way up to the federal level. At this point, renewable fuels just refers to fuels that aren't made using petroleum feedstock. So it's a very broad definition. Big umbrella doesn't really speak to a lot of the harms and dangers that some of these products can bring, and also the upstream implications. Next slide please. So let's talk a little bit about greenwashing. For decades, the idea that certain fossil fuels represent transitional fuels on the way to a lower carbon energy future has has persisted in energy discourse. It's a very popular tactic to keep the production and profitability of combustible fuels viable. Is to present false solutions with no real exit plan. So the concept of bridge fuels was introduced first in the 1970s. And we you know, we've seen a great example of that with natural gas. This is some good branding. Started being presented in in the 80s as a transition fuel. It's also known, you know,

more accurately as methane gas or fracked gas. But that's we've seen that productivity over the decades since it was introduced just continue to steadily increase since that introduction. So there's it's very profitable for fossil fuel industry to find ways to capitalize on waste streams or byproducts from their own industry. We often see them claiming, you know, the industry claiming downstream benefits without addressing a lot of the upstream costs. And again, their liability tends to be fairly limited to where they're operating, but their profitability can can increase risks much broader than that. And then, you know, i'll be referring to zenith regularly because that's something local we're all familiar with. And we see this new trick of them kind of, you know, patting themselves on the back for reduction of allowable emissions while seeing onsite emissions potentially go up in some cases. Next slide please. So there's a this has been addressed a little bit. There's just a really wide range of fuels that are considered renewable. So a lot of fuels have the same chemical consistency as fossil fuels. So we face the same risks when it comes to accidents, spills, explosions harmful emissions. And renewable fuels are commonly blended with fossil fuels. So that can look like anything from 5% renewable fuels to 95% renewable fuels. So it's a very different product. If you have something that's 5% diesel versus something that's 95% diesel and still falls under that umbrella term of renewable. And, and you know, with with companies like zenith, we don't even know currently. It's very difficult to find out what blend percentage they're even handling now and whether it's compliant with the city agreement to handle things that have less than 5% fossil fuel content. And then with these fuels, the blended fuels, often combustible fuels in general, often have additives. So that's another stream that we need to be aware of. Next slide please. So just a few things that are considered renewable. Saf has been pretty well covered by mia. So I’m going to focus on the renewable naphtha. That's a product that zenith had

proposed handling in large quantities, essentially a 1 to 1 transition off of their 2022 numbers of crude oil. It's similar to gasoline and chemical consistency. It's highly volatile. It can increase the risk of things like explosions and flashback events, where vapors that are heavy can travel close to the ground to an ignition source, flash back to the point of origin, which is a bad situation in any case, but particularly at the cei hub, where we're storing 90% of the fuel that we have. Next slide please. So these next two slides could be entire presentations in themselves. There's a lot of environmental impacts that we see from combustible fuels including renewable fuels. The risks all along the transportation route from fuel spills accidents, explosions. We see the same types of harmful emissions associated with combusting these fuels and refining them. We see major land use impacts as these amounts of renewables, the throughput or the product that's going through the facility increases. It tends to wipe out the potential emissions benefits that we might see from a 1 to 1 transition. When you have these blended fuels that spill into the water. The data that's starting to come back now that they've been, you know, handled enough to spill, is that those blended fuels tend to separate in the water. And that requires two types of cleanup. So we've all seen the boom that we get out there for the fuels that float. But then when there's blended fuels, some of those fuels can sink into the water column. And that requires a second type of cleanup. And I would challenge anyone to point out any place on the transportation route where they're prepared for that type of cleanup. If there were to be an accident. Next slide please. Again, public health and safety could go on for an hour about that. There's a number of criteria pollutants and toxins that are tracked at the cei hub. There are several routes of exposure. Main routes include the operations at the cei hub. So evaporation, fossil fuel use, fugitive emissions, accidental releases in the form of spills, fires, explosions, etc. And then the actual use of the fuels and

what we see in a nutshell is that every body system is affected by these exposures. So reproductive systems we see low birth weights, negative pregnancy outcomes. We see cancers in all types of body systems. We see issues with lung and heart. Leading to premature death. And we see brain and mental health issues. Dementia and depression. Next slide please. So really want to just drill down on this increased throughput because we've seen this with zenith. You know they've put in new infrastructure assuring deq that that would result in an increase in throughput. And we've seen you know that was in 2019. It was 167 million gallons per year. In 2023 it was over 415 million gallons per year. So we've seen that number steadily increase despite those promises that it wouldn't go up. And what happens, you know, is we have these we do have some pretty good limitations on expanding fossil fuel infrastructure, which can act as a limit on capacity and therefore emissions. And we don't have those same restrictions on expanding renewable infrastructure, so that, again, that increase in throughput can really consume any benefits that we would have seen in emissions. And in fact, what we see in the case of zenith and other places is sometimes after the transition off of fossil fuels to renewables, we see those emissions go up in some cases. And again, the new infrastructure that's supposed to be dedicated exclusively to renewable fuels, which hasn't been the case with zenith, frees up existing infrastructure to increase the fossil fuel throughput, whereas we would prefer them to be using that infrastructure that already exists. Next slide please. So lots of loopholes and despite lots of effort locally, there's been some really good things put in place that the industry is exceptionally skilled at finding ways to find loopholes that they can exploit. So just a few ways we've seen that happen. We've got the Portland comprehensive plan, which does a lot. But it wasn't sufficient to stop zenith from illegally expanding their fossil fuel facility. And then it getting retroactively okayed by decision makers at the

city and also at deq. We've got the resolution that opposes expansion of infrastructure for transporting or storing fossil fuels through Portland, or adjacent waterways. This was used in 2019 by the office of community technology to deny the three pipes under front avenue, and part of the reasoning for that was because it was freeing up existing infrastructure to use for fossil fuels, which we know is still the case. But there was some amendment to the franchise agreement recently, and those pipes have since been approved under front avenue. It's unclear to me why that resolution wasn't still applicable. We've got the Portland renewable fuel standards, which unfortunately doesn't really apply to companies that are in the business of storage and transport, which is another loophole for zenith. A lot of that regulatory language about fuels is really directed around fuels that are purchased and sold. And it's a big loophole for companies that never own the product, but just profit from moving the product. And then we've got the fossil fuel terminal zoning. Which focuses a lot on limiting the increase in storage tanks for fossil fuels. But when we add allow a lot of additions of new infrastructure, what that allows is for industry to push that straight through loading from train to marine barge, without having to technically store the fuels. And they can still continue to increase that throughput. And then we see, you know, zenith looking to capitalize on loopholes for aviation fuel that I think were intended to be meant for airports as end users. Next slide please. So some things that can happen with the loopholes. Obviously we see that there's been some success on industry side to be able to put in new infrastructure and harmful projects and potential new uses in the form of blending. And all of this leads to additional threats to public health and safety in our communities. Next slide please. So from the community's perspective, there's been just a lot of ambiguity about who's in charge of enforcing this. You know, a lot of us have gone back and forth between eqc and deq and Portland and

at the city of Portland, and not so much the current City Council, but previous incidents with city and, you know, a lot of times violations are treated as just part of doing business. We see that there's agreements and promises that get made. It's unclear who's enforcing those agreements or whether they're enforceable at all. You know, we see different standards like the city requires a minimum of, you know, 95% to be called renewable, but the state only requires a minimum of 5%. They're inverse ratios. So it's really hard to know that if there's a deal made with the city that that that's also enforceable at the state level, unless it's specifically written into the air permit. And so there's also just been a lack of capacity that's led to violations going unnoticed for years. And the costs are, in the end, paid by our community and the environment. Next slide please.

Speaker: Kate, I want to make sure we have time for questions as well. For your panel. So I'm going to give you about one more minute. And then.

Speaker: My last slide.

Speaker: Oh perfect.

Speaker: Yeah. So I just want to end with focusing on the issue of uncertainty. Right. There's so much uncertainty around the companies operating locally and around renewable fuels in general. We just don't know enough to go all in. And things should be protective. Language should be established before we're permitting these new products. We must focus on the solutions that lead to a reduction of harm. Actual real world reduction of harm should be the filter we're looking at, and we have to hold polluters accountable, focus on reduced use, and work together to be bold and protective and preventative actions. Next slide please. That's it for me.

Speaker: Thank you so much. I really appreciate your time and you being here today and sharing all of your expertise. If you want to stay up at the front and if the

folks online are still there, we have until I would say 1102 for questions. And I see that councilor novick has his hand up, so I will pass it off to him.

Speaker: I had two questions for. Thank you, madam chair. I have two questions from mia rebeck, actually. One is you referred to airlines alternatively purchasing environmental attributes of saf via book and claim system like a rack. And I just wanted to be sure I've read various things about airlines buying, you know, carbon offset credits and those often being described as scams. So I was just wondering what a book and claim system could be that that actually does result in reduced emissions and is not a scam.

Speaker: Yeah. So the way that this works is through purchasing what's called a saf certificate, which separates the environmental attributes of sustainable aviation fuel from the fuel product itself. Similar to how a renewable energy credit might work, where I think the city of Portland in the past has purchased renewable energy credits or has renewable energy credits that it uses. And so I think that the key here is that the saf market is really nascent, and it's really early, and there are a lot of challenges with figuring out the right way to safely store this fuel. And so for a city such as Portland, where fuel storage solely exists in a soil liquefaction zone, and there are really high risks to local communities, saf certificates might be a viable near term option for airlines who fly out of pdx, who might want to participate in this market. While the city can engage in a longer term process to figure out how to safely store these fuels, the saf certificate market is separate from other carbon offset markets that you might have read about or be familiar with.

Speaker: So you think this to be simplistic about it. You think the saf certificate markets are good and result in real reductions in emissions?

Speaker: The saf certificate market is largely being used today to help saf producers get projects off the ground, so this is a really early market. There are

only three companies currently producing saf in the united states. Some of these, what they will do is they'll sell their saf certificate to get that environmental attribute sold, and then they'll sell their saf fuel into the same jet fuel market. I think that all of these things, the devil is in the details. And so what might work as a short term solution is not necessarily going to lead to the long term emissions reductions that we so critically need.

Speaker: Okay. My second question was you said something about how depending on the feedstock used, saf can reduce global emissions but not local emissions or something like that. And I just wanted to clarify, I mean, when you're talking about carbon dioxide, it's the global emissions that matter. So I was just wanting you to say what I mean is, is it true that even if what we're doing is just reducing global emissions, that's that's still good.

Speaker: So saf and other renewable fuels are molecularly equivalent to fossil fuels. That's what I think makes them appealing, is that, you know, people who have internal combustion engines, whether it's in trucks or planes, can use that same fuel. And so at the point of combustion, it has the same emissions as a pure jet fuel product, where emissions reductions theoretically can happen is through that lifecycle assessment that doctor plevin was covering. And there it's really going to depend on the model used and how that shows emissions reductions, what that feedstock is. And so theoretically, you know, a biofuel will capture carbon dioxide when it is growing. But if you then burn that same product, the emissions are going back into the atmosphere at a different location. And true emissions reductions from biofuel burning requires utilizing carbon capture and storage to further sequester these emissions. And so this is really detailed and wonky, just to say that theoretically, there could be a small emissions reductions happening, likely that is going to be happening thousands of miles away from the city of Portland. And

Portland's footprint itself. And the actual emissions from a single flight are not going to change.

Speaker: But again, even if the reduction happens miles away from Portland, I mean, the concentration of carbon dioxide and other greenhouse gases in the atmosphere is a global thing.

Speaker: Yeah. And aviation, I think, is a really unique sector because it is one of the few industries where emissions are rising rapidly throughout the world as there is an increase in air travel. And so it also has to look at what is being displaced. If this added fuel is being used to support a growth in the industry, we are adding emissions. The real displacement and emissions reductions will only occur if saf or renewable diesel or these other products are actively displacing a fossil fuel product that would be used.

Speaker: But how does anybody ensure that that simply by requiring, you know, limiting the production of the regular jet fuel.

Speaker: It would be incredibly difficult for the city of Portland to be able to have control over that for fuel that is solely stored and then sold elsewhere from the fuel terminal. The way that this theoretically could work is if the existing fuel suppliers to the Portland international airport start purchasing saf instead of jet a or fossil fuel jet fuel, that could lead to some emissions reductions. However, as doctor plevin covered, these are lifecycle emissions reductions. They're they can be very difficult to monitor and prove that they are happening in the real world.

Speaker: I just wanted to let you know.

Speaker: Thank you.

Speaker: Thank you. I think we're actually are there any other. Oh, there are more questions. Okay. You two have five minutes for your questions, counselor Ryan. And then councilor kanal.

Speaker: Thank you, madam chair. Five minutes total. Yeah. So two, 2.5. All right, here we go. Thank you. Panel. That was great. I think all of you have done a marvelous job of making the case on why renewable fuels are not what a lot of people thought they were. And you've broken that down very thoroughly. The professor earlier did the same thing. Yet when we look at solutions, I want to hear more concrete solutions. We're not hearing much about solutions with electrification except to, say, electrification, is it? But is there any? The professor said he has friends and colleagues that can make that case. They're not here perhaps today from the berkeley or elsewhere, but maybe the three of you are some of those friends that can give us the life cycle of electrification, and why this is such a value proposition to move towards.

Speaker: And I can speak to that. Councilor Ryan, I allotted this to really have an in-depth discussion on renewable fuels. It's a very complicated topic, as we've seen today. But we can have that discussion in the future and have experts come in from those sectors as well.

Speaker: Thank you, madam chair. It's very necessary. It's hard to move forward without solutions. And I also hope that we have time for staff to talk about how we're analyzing our our use of renewable fuels and what the value proposition has been on that. So to bring it back to the city that we oversee. Yeah. Thank you. Is that in the. Next number three, item three.

Speaker: No, that's going to be public testimony in the next session. But councilor kanal.

Speaker: Hopefully we can have the staff join them.

Speaker: Yeah, it's more of a comment to something councilor novick said. And I want to acknowledge that. So if there's a better time to do that, I can wait. But first, I did want to say thank you to the co-chairs for last meeting. I mentioned wanting to

prioritize addressing fuels based on their propensity or ability to burn or explode, not just the perspective of fossil fuels. So thank you for this entire discussion. I also appreciate the observation that the transportation of fuels is itself an emissions issue from miss leonard. Miss reback, about the risk being identical to fossil fuels has been really helpful, and the history of the cei hub as well as I want to follow up with you with that, our on the public health and safety impacts that you mentioned we might be able to do and councilor novick and I share it. I want to speak to the it's the global emissions that matter most. I don't know that I agree with that on an absolute sense, due to the length of time at which the impacts are felt. I'd prefer not to have liquid fuel laden trains anywhere, but if I had to pick, I'd much rather have them across the world from us. Because of the propensity for it to affect people, you know, trains running through d2, possibly crashing in d2, possibly catching fire in d2 and destroying the air quality in d2 at or at the airport, which is right outside, impact my constituents more directly and immediately than other places. And I appreciate that. There was comment on the density and the level of which we have, both within air and water. The different levels at which you'll find those different parts of the fuel mix. So I think that that's something I think we should explore more in this committee. The what? The degree to which it is helpful to reduce the local versus the global. So thank you.

Speaker: Thank you. Well, I think if there's are there any final questions. We have about three minutes left in this section. But you can also give me back some time. Okay. Thank you all so much for being here. I'm really so grateful for community members for coming in. And again, I just want to emphasize this was a unique space because community doesn't always have access to us in the same way that staff experts always get to email us, send us memos, give us presentations. And so this was an attempt to open it up to community. We're experimenting with these

new committee systems, and I hope that we can be creative and try out new solutions and respect everyone's expertise and different ideas in this space, because there are no easy solutions. There are lots of different perspectives and questions on the climate movement. So as a whole, I hope that we are taking all of this as information that will help us come to better, better conclusions overall and to serve Portland the best that we can. Oh, and I see that councilor novick raised his hand. Sorry, I would've taken up less time.

Speaker: My apologies, madam chair. It just occurred to me that I did want to ask city staff one yes or no question, which is would our renewable fuels standard exclude corn ethanol? So somebody from city staff could come up and answer that one yes or no question. I'd appreciate it.

Speaker: Yes.

Speaker: Good morning. Co-chairs morillo and novick and committee members. For the record, my name is andrea jacob. I am the climate policy manager at the bureau of planning and sustainability. I was the policy manager in charge of the renewable fuel standard code update in 2021 and 2022. The code amendment did not touch the ethanol requirements, so we didn't spend any time talking about ethanol. But to answer your question, councilor novick. Yes.

Speaker: Thank you.

Speaker: You're going to get an award for the most efficient answer ever given during a committee hearing. Thank you so much. Oh my goodness everybody. We're right back on time. Okay rebecca, could you please read the next item?

Speaker: Item three.

Speaker: Sorry.

Speaker: My script says rebecca. I'm sorry. Diego.

Speaker: No problem. Item three. Community testimony on climate priorities for Portland.

Speaker: We will now hear community testimony on climate priorities for Portland. And we're going to have to limit it to about two minutes per person just because we have more testimony than we had anticipated after folks signed up this morning. Diego, please call on the members of the public signed up to testify. And then at 1125, I will cut folks off to give some closing remarks, and then we will close the session. Thank you.

Speaker: First up, melanie plaut.

Speaker: Good. Amazing.

Speaker: Good job on pronouncing my name. Thank you. My name is melanie platt. I'm a retired physician who volunteers to support action at the intersection of health and climate. Thank you. Chairs morillo and novick and councilors. It seems that recently, the struggle to take action on climate change has gotten more complicated. There are a lot of solutions that are presented to us, which at first glance sound good because they have the word renewable in them. But when you dig into them more deeply, it turns out that not only are they a waste of precious time, but they may be no better for the climate than fossil alternatives. We need to consider whether renewable diesel falls into this category. There are some good things about renewable diesel compared to fossil diesel. It keeps engines cleaner and creates less local air pollution. And as you've heard, there are some ways in which it is not any better than fossil diesel. Its creation requires energy from fracked gas, its refineries, like fossil refineries, are disastrous for people in nature. Nearby. Its transportation and storage have many of the same risks in terms of spills and explosions, and it is still something that gets burned, burned, creating health risks and carbon pollution. The big question is, does it really help the

climate? It is important to remember, as you've heard, that carbon intensity is not a chemical quality of a fuel that can be physically measured. It is a hypothetical conclusion based on many different factors, including feedstocks, land use, and economic effects. There is a lot of controversy about these models. Fossil fuel handlers have an immense vested interest in continuing to use their existing infrastructure and fuel burning equipment. So you will see that overwhelmingly, they are the voices pushing hardest for these renewable fuels. We all know there are cleaner solutions like electrification, which can achieve carbon reductions, which renewable fuels can never approach. And although there are bumps in the road, many of these already exist or will soon any interim measure which may or may not help the climate just diverts resources, delays the real solutions and continues to put our community at risk. Thank you very much.

Speaker: Thank you so much. And diego, if you could call a multiple people at once so they could be prepared to go in order, that would be great.

Speaker: Next up, brenna bell, followed by samantha hernandez.

Speaker: Hi. I'm hastily trying.

Speaker: To get a minute less of my testimony. My name is brenna bell and I'm the forest climate manager with 350 pdx. And first of all, this is great. I love this format. Thank you. Second, I want to invite us to think about what we need to do now to get to the future Portland we want. Right? One of the main things that I think about is tree canopy. And right now the city of Portland is at 32% tree canopy below what was already intended. And the new draft forest plan has us at 45%. That's great. But the problem is that every year we're decreasing the tree canopy. So we need to both stop the trend of decrease and reverse it. It's a combination of climate change development and poor planning that got us there. And I want to invite you to think about how to create more space to plant large form trees, and also how to protect

the existing code. And just yesterday, I heard that the governor's new housing bill, again, includes a provision that would preempt local tree codes in order to spur housing development. And this is a false dichotomy that I ask you to vigorously push back on as the city of Portland, to protect your ability to manage our urban forests, but also to get to that more resilient city, we need to radically change our approach to energy use. We've heard a lot about that today. Substituting one combustion based fuel for another does little to address the issue of carbon emissions. And industrial farms and forests have a deeply negative impact to soil, air and water. So imagine a future city that is much more energy independent and resilient. Imagine, rather than investing in more combustion based infrastructure, that you invest in microgrids and local generation. Imagine a city full of wind turbines and solar panels on every roof, where large energy companies do not run rampant over public process and the environment, because what you imagine and what you choose to do or not to do, matters so much to the city's future. And I really thank you for taking on that responsibility, and we're excited to work with you in it.

Speaker: Thank you so much.

Speaker: Next, samantha hernandez, followed by danny noonan.

Speaker: Good morning councilors. My name is samantha hernandez, and I am the healthy climate program director at an organization called Oregon physicians for social responsibility. We are an organization of health professionals and public health advocates working to address the gravest threats to human health and survival. And today, I'm here to expand a little bit more about the health impacts of renewable fuels. Like anything being pushed by the fossil fuel industry, who is degrading our climate, air, water and land, it is worth interrogating and questioning. Studies have shown that the agricultural activities involved in creating biofuels, for

example, can actually increase nitrogen oxides, which are more potent in global warming potential and may offset any carbon dioxide reductions. As folks have already said, this is especially concerning with carbon intensive feedstocks such as corn and soybean. We must also take into account the emissions involved in the transportation of these fuels. So, for example, diesel emissions from train engines is actually a significant health hazard and adversely impacts air quality. Diesel emissions, which include fine particulate matter, black carbon and volatile organic compounds, are associated with increased illness and death from lung, heart and vascular disease. Zenith energy planned on transporting something called renewable naphtha into the city. It's a highly volatile product. It's a highly flammable liquid and vapor that is toxic to aquatic life. Health effects include skin irritation, drowsiness, dizziness and then, as folks have already said, there's the public health and safety risk of storing and transporting these fuels, especially in the event of a train derailment or earthquake. Due to the possibility of a spill or explosion. And so, just to further what brenna said, I think we want to be careful about what we choose to invest in. Scientists think that our 1.5°c goal is out of reach, and we will likely go over that threshold. And so much. Thank you so much.

Speaker: Appreciate you. Danny noonan, followed by diane meisenhelder.

Speaker: Hi to everybody on the committee. I'm obviously not danny noonan, but he is my colleague at breach collective. He couldn't make it today because we're all going to a conference in rushing about. So I'm going to sub in for him today. I'm the climate and energy attorney at breach collective, which is a local climate justice organization. Thank you so much for this discussion. It's really important. I appreciate the focus on solutions and figuring out where we want to go, but it is very important to develop a shared vocabulary and understanding of sort of what's available to us and where we go. So this this discussion is immensely important and

one that hasn't happened in a few years. So just like with the work session, this breaks ground and brings community into the discussion in a really good way. As you can see, there are a lot of passionate and knowledgeable people that want to be part of this conversation, and the more that we can prioritize that, the better. I also appreciate councilor canal pointing out the local impacts in your district. District two. It is a highly burdened community, and more attention on that is certainly warranted. Understanding what greenwashing and false solutions are is key to facilitating a just transition. And that's what this community is asked for. Prior to the pandemic, I would say we were on a pathway toward figuring out how community could lead a just transition with people designing and promoting things like the Portland clean energy fund. We were restricting fossil fuel infrastructure. We were declaring climate emergencies, and in the past few years, that focus has shifted more toward, I would say, partnership with corporate like companies that are offering solutions and that we kind of jump out and try to provide incentives for. And that model is just antithetical to adjust transition. It's not what Portlanders want. And so I'm pleased to see this change. I also wanted to mention that we are really eager to have the conversation around electrification. There's a lot of nuance there, of course, but I definitely support having another section to talk about buildings and electrification and transportation electrification. I think that would be amazing in some common language setting and learning some assumptions together and figuring out the shortfalls and advantages of different approaches. And to that point, my colleague danny noonan recently sent you all a letter about buildings and electrification that I hope you'll have an opportunity to review. But thank you so much for your attention to this. We appreciate it. At bridge.

Speaker: Nick, can you say your name for the record?

Speaker: Nick. Caleb. Sorry. And I am a registered lobbyist.

Speaker: For diana mason halter. Extinction rebellion. While the whole issue of zenith and the sci hub needs prioritized in terms of public involvement towards real climate and safety policies, we also need to be looking at the big picture. The latest data on global warming and the albedo effect are terrifying, and the things are escalating much faster than scientists predicted. We need to really address reducing emissions as the emergency it is, and quickly formulate city work plans with fresh eyes to push this forward. In reality, this will involve a huge shift. Public Portland could model for the nation. I read alana's piece yesterday about envisioning Portland. And yes, we need to reimagine towards a wellbeing economy and move job and development creation around transitioning to a green economy that prioritizes our strengths while focusing on basic human needs as the drivers, health, human services, affordable housing, building, decarbonization, local food production, active in public transit, community controlled energy, environmental restoration. Community resilience, arts in public spaces and fair wages through organized labor and cooperatives. This new council will really help reframe and coordinate policy in this direction, and I'm very concerned. I'm concerned about hearing yesterday about $20 million to fund the clean industry initiative, which you really need to understand our historical perspective on. I'm worried to hear that the blue green deal is being tabled as as was the hard fought, bipoc led build shift program. I'm hoping that this committee can be brought up to speed quickly, as all these things and more desperately need your policy guidance, please keep involving the public in the sci hub and all climate environmental policy development. We need real opportunities for the public to truly dialog with administrators and council, so that you can then make good decisions based on what you see and hear. We're thrilled that this committee exists and hope it will become the focal point for future policy development. And thank you for your time.

Speaker: And consideration.

Speaker: It's a bunch of stuff I want to tell you that I cut out.

Speaker: Please email us.

Speaker: I will.

Speaker: Mike hoke, followed by megan boutwell.

Speaker: Two minutes. Mike houck, urban green spaces institute I would urge you to read the 5 or 6 pages I prepared for you for this, but i'll summarize. My first recommendation is that you should bring forward a formal policy that elevates the importance of climate adaptation and should require integrated adaptation strategies and on the ground actions into all bureaus. Second recommendation is to recognize parks urban forestry as infrastructure and formally declare Portland parks and recreation and infrastructure bureau. The third recommendation is to create a new natural resources bureau in the city of Portland. And I was looking at the org chart for the city. And there is a reference to citywide operational natural area management under vibrant communities. I would move I would first of all say it should be a citywide operational natural resources bureau, not a natural area bureau that covers many more issues than the land the city owns. My fourth recommendation is to empower a new natural resources bureau to move the draft blue green deal, which has been drafted by the City Council forward. And I understand it has been pulled, but the new green deal has a lot of information in it that relates specifically to climate change. My fifth recommendation is to allow pcef revenue to fund city efforts to mitigate and adapt to climate change. Thank you. And I did pass out, by the way, a very important document. I would hope you would read. I've got a great quote from and I don't have time for now, but john charles olmsted in 1903 described how the landscape of the city of Portland would in fact address climate change in the future.

Speaker: Thank you so much. I was wondering who brought those for us. I appreciate it, we'll take a look at those.

Speaker: Thank you.

Speaker: Megan boutwell, followed by peter platt.

Speaker: Hi.

Speaker: My name is megan boutwell. I am a Portland resident for 25 years and a resident of district four. I'm also the president of stillwater associates, a transportation energy consulting firm focused on the energy transition. I'm proud that Oregon is a leader in decarbonizing transport and the programs that Oregon has developed encourage a portfolio approach to decarbonization, which requires using all the tools available to reduce carbon now in the current fleet, while creating new incentives for the investment of new technologies and infrastructure to reach deeper carbon reduction in the future. Since the cfp, the Oregon clean fuels program was adopted, the average carbon intensity of the diesel fleet has decreased by about 15%, based on the most recent data from deq, and that's based on the cfp model. In contrast, the average carbon intensity in the light duty fleet has seen an average 2% carbon intensity reduction. This disparity is because the current best solution for decarbonizing the light duty fleet is through ev adoption, which is slow. In contrast, renewable diesel and biodiesel and some other fuels are easy to use in the current fleet. We will continue to need these types of fuels to decarbonize heavy duty transport and to meet our goals. Ev adoption is happening in Oregon and is a positive step towards decarbonization. However, converting the majority of the current fleet to future ev fleet will take time and some models it looks like 15 to 20 years. A successful conversion will require enormous public investments in power and charging infrastructure, as well as personal investment in electric vehicles. A final thought. The energy transition will

be bumpy and expensive and will require everyone's participation. That includes fuels, companies that are necessary to use the energy we need, but in many respects have lost public trust and need to be held accountable. When they breach that trust, we will need to work with people with whom we don't always agree and accept imperfect solutions whose benefits outweigh the their risks. Renewable fuels aren't perfect, but nothing is, and this is what we can use now to decarbonize the fleet we have. Thanks very much.

Speaker: Thank you for your time.

Speaker: Peter platt, followed by lynn hanlin.

Speaker: Not seeing anybody here. Can we move to the next folks?

Speaker: Lynn hanlin is joining us virtually, followed by jordan lewis.

Speaker: Hi. My name is lynn hanlin. I'm with extinction rebellion pdx. I'm speaking on for myself today. First of all, I just want to say I am so encouraged by this meeting and I thank you all. And I really hope that the mayor and the city manager are paying attention to this. I don't know who all is there, and I think that a recording of this meeting should be required homework for anybody in the in the city dealing with climate issues. So really thank you for that. About renewable fuels at best they are supposed to be a bridge fuel. But they can actually make the problem worse. As other people have said better. And just adding more fuels into the into the stream is going to make fuels cheaper, make people use them more. It's the whole induced demand thing, you know, build it and they will come and it just doesn't work. So adding in renewable fuels, not necessarily a great thing. And I understand that there's like situations where, you know, we need very limited amounts, but certainly we should not be those fuels should not be on the cei hub. And certainly any fuels to be used elsewhere should not be in the worst place in Oregon to store such things on the liquefaction zone. And I think that we really

need to focus more on reducing the use and the need for all fuels, including electricity. And that's things like really paying attention to programs like the build shift program. You know, it's a small local thing, but it would go it it would help. And, you know, I'm sorry that that seems to be sort of sidelined. We need much better robust public transportation, biking and walking infrastructure, better building standards. And i, I really think that we need to focus more on that. And as far as aviation fuel, it's very complex. And I understand tiny amounts are necessary. But really we all need to be flying less and we need flying should cost a lot, a lot of money. It shouldn't be cheap. It should be very expensive to fly and, you know, private jets? Absolutely not. Anyway, thank you so much for doing this this forum. Appreciate it.

Speaker: Jordan lewis followed by marni glickman.

Speaker: Good afternoon. Climate and sustainability committee co-chairs. Novick and morillo. My name is jordan lewis and I'm a district four resident. A climate is my motivating issue even though I work in the chemical industry, so I understand more than anyone how our personal consumption is intertwined with the broader climate crisis. But I want to thank doctor plevin and agree that electrification is the answer. There's a reason oil companies are getting into biofuels, but not electrification. But anyways, that's what I love about good governance. Through systems like here, we can break the cycle of reliance on oil and leave some of it in the ground. My fear is when government would rather take easy, marginal wins than do the hard work to truly draw down emissions. For example, a talking point I've heard a lot is that people are going to fly, so the fuel may as well be sustainable. Well, sure, but there are 18 flights today from pdx to seatac alone. How many trains are there from Portland to Seattle? Seven today. And those trains will actually get you downtown to downtown faster. So why are there three times as many flights?

It's a fact that taking the train causes an order of magnitude less emissions than flying. So maybe shifting trips from plane to train where viable and i-5 corridor is viable needs to be a part of the conversation. At the risk of going over time, I also wanted to talk transit in Portland. The city has made a lot of efforts to green transit, though alternative fuels and electrification mandates, and that's great. But I think we're losing sight of the fact, the fact that transit is already green and the dirtiest bus is cleaner than the cleanest single occupancy car. We know this because a bus splits the emissions of an eight liter engine among hundreds of riders, while a single occupancy car gives everyone a two liter engine to themselves. That's my first principle that transit is green, period. My issue with trimet is that trimet trimet ridership is down. It was on a slow decline pre-covid. Then we lost two thirds of ridership in March 2020, and five years later we're back up another third. So two thirds pre-covid. That needs to change, and it seems like trimet really doesn't have the funding to shift service post-pandemic. But the city maintains the right of way, and there's a lot of power in how we do that. So I'd like to see transformative changes in a transit right of way. Thank you.

Speaker: Thank you.

Speaker: Good afternoon, councilors. I'm so happy to be here. My name is marty glickman. I'm a resident of district two. During the development of the city's renewable fuel standard, the public submitted testimony on missing safeguards because we all agree that ongoing community engagement is essential moving forward. I'm sharing some of the policy priorities that the public submitted in the past and are still important today. First, we must focus on safety. We need to set standards to reduce harm as well as for safe storage and transportation standards. We insist that product transfer documents include a right to know feedstocks, related land changes, fuels used in the processing, and fertilizers. Companies

should not be able to be grandfathered in on old permits. Facilities need to be brought up to date on all code standards and hopefully with more stringent protective policies within a year. Self reporting is not good enough. The enforcement and penalty sections are too weak. There should be a three strikes and you're out policy on violations so that permits get pulled on bad players that endanger Portlanders wildlife and contribute to climate chaos. I'm so excited to be here again, and thank you for listening.

Speaker: Thank you so much. How many more testimonies do we have?

Speaker: One more individual signed up for testimony.

Speaker: Thank you.

Speaker: Ron buell.

Speaker: I brought.

Speaker: Each of you a screen reduction program. It's called reading and it's paper. And so I hope each of you will take the time before you leave today to get your your own kit and take the time to read the material about climate change is so complex and difficult. And I had prepared actually six minutes of testimony about a five part plan for reducing climate change impacts in Portland because right now. We're not making reductions in vehicle miles traveled, nor in the resulting transportation carbon emissions from from our cars. And we're not making reductions in vehicle miles traveled. We're not even close to meeting our plans or goals. You got to recognize that in fighting climate change and global warming, you'll be fighting upstream against your own Portland bureau of transportation and its 1000 employees. Odot has plans authorized by the Oregon state legislature and Oregon transportation commission, totaling more than $10 billion to be spent on highway and freeway expansion, including the rose quarters, i-5 expansion and the interstate bridge replacement project. The. These plans have made it through the

city of Portland in the past, but they can be reversed or modified, and these existing plans dramatically expand. Future vehicle miles traveled and also expand our co2 emissions substantially. I've got a five part plan here, and it's detailed and it includes high speed rail. It includes transit. It includes the electrification of the city's fleet. You've got 370 vehicles now. Fewer than ten of them are electric. There's a plan for reducing the number of. Am I out of time?

Speaker: You are. But we will definitely get those documents from you. Thank you for giving us a written plan. I really appreciate that. And, yeah, i'll make sure that my colleagues get it. I'll come grab it from you before the end of this. Thank you everyone so much for taking time to be here today, to share your expertise, and for allowing us to experiment a bit with this new committee structure and have different voices at the table. I think all of these voices and this expertise is really important, and I'm excited for all of us to come together to have the best conclusions that we can on some of these big climate decisions that are ahead of us as City Councilors. I also want to say that for the next presentation, our committee, climate and land use deals with parks, and we're going to be getting the city budget tomorrow, the first proposed budget, and we're going to be dealing with some really difficult challenges ahead with the $100 million shortfall. So chair councilor novick is going to be taking the lead on a parks budget presentation during the next committee hearing. So if that's something that is of interest to you, please feel free to tune in. That meeting is going to happen on Thursday, March 13th, and we look forward to partnering with community, with our staff, with everyone at the table, to make sure that we are doing right by the community and right by Portland. So thank you all so much. And with that, I will adjourn the meeting.