



2040Freight: Community Advisory Committee  
Thursday, October 14, 2021  
Meeting # 6 Transcript

15:59:23 GABRIELA VALDERRAMA GIRON: Thanks for joining!

15:59:28 Hi everyone!

15:59:50 We sent you a PDF

15:59:54 , (Unknown Name): He requested it.

16:00:03 SPEAKER: Are you talking to me?

16:00:07 GABRIELA GIRON VALDERRAMA: Yes, Tom.

16:00:10 SPEAKER: I did not see anyone go through it. Thank you!

16:00:18 GABRIELA GIRON VALDERRAMA: We are making changes based on the statement re-received. It is a very similar presentation.

16:00:27 We did not have a lot of time in the meeting for the feedback. I told her the matters to get told the members to give feedback.

16:00:46 Hello, David!

16:01:00 Hi Rachel!

16:01:05 SPEAKER: Hi Gabriella! Hi everyone!

16:01:45 GABRIELA GIRON VALDERRAMA: I think we should wait a couple more Minutes. I think Felix just joined.

16:04:31 Hello everyone! Thank you so much for joining today's meeting. Thank you for the recording. I will be leading today's meeting as you may have known, Francesca is pregnant and waiting for her baby. She came on September 7. She is on maternity leave now. Very healthy. Her parents are spending a lot of time with her right now. We are really excited for her. Today I will be leading the meeting. You have not met me

yet, I am the due coordinator of PBOT so I will delve into this matter. As part of the team of the 2040Freight plan. Thank you so much for being here for your time, for attending today's meeting we have a lot to cover.

16:05:37 We are so excited about today's presentation about greenhouse reduction best practices. Our consultants have really done a deep dive into best practices that have been successfully entered wanted implemented and putting those strategies in the US and worldwide. This is also a really exciting presentation and we are certified one of those potential strategies, which will be recommended as part of the 2040Freight plan.

16:06:17 We shared the agenda we have for today yesterday. We will start with the public comment, then we will give you a project update then we will dive into the presentation, and as a heads up, we have already presented these presentations to the advisory committee and the Portland freight committee and we have added some of the feedback. In this presentation we have a timeline set for this report to be released. So if we do not gather all the feedback, they will give us today, keep in mind that will be fitting in to the strategies as we start developing more concrete strategies for the 2040Freight plan.

16:07:14 We will try to have a five-minute break and that a group discussion structured around to discuss the potential strategies that have been presented through the presentation, but also some of the strategies we might have missed. Add potential obstacles or might be in the implementations of the strategies.

16:07:41 Let's start with public comment. Please remember to add your full name, to the question box if you would like to comment and we will give you a brief pause, please turn your camera on when you are about to speak and you will have a total minute for that public comment.

16:08:15 NUBIA MILPAS: At this time, nobody has their hand raised. I will give it 20 more seconds.

16:08:24 GABRIELA VALDERRAMA GIRON: OK.

16:08:33 NUBIA MILPAS: OK. I think it's safe to move on.

16:08:37 GABRIELA GIRON VALDERRAMA:: OK. Thank you, Nubia!

16:08:42 Just to give you an update of the existing conditions and future conditions report, they are available online. You can have access to those in our 2040Freight website, and I think Francesca –she is sorry about me missing the last two meetings, to collect interviews from different stakeholders and that summary report is finally published online. You are able to access it. Regarding the HV UT funding we are working, and Francesca mentioned this at the previous meeting, I want to give

you a quick update. We are working on the video and finalized the footage with the Nossa Family Coffee and finalizing it, and working with (Unknown Name) as the company, and food banks. I'm really thankful Kate is here –

16:09:51 thank you for your time during the video, we are trying to finalize the payrolls on those prospective off-line videos. Hopefully the next meeting we have we will be able to share all those videos. Then we are working on the survey infrastructure needs, and a shout out to Rachel Dawson, and Stephanie, who gave us some feedback from the CAC members. On working on improving these infrastructure needs, we are hoping to have that finalized around two or three weeks and we are hoping once we have it ready, to share with you so you can help us spread the word and get that feedback information on location-based needs we might want have to move forward as part of the 2040Freight plan.

16:10:49 Finally, we will have the greenhouse commission report which will be in the presentation that Sebastian and Bridget will give us today! Just a quick update on the timeline. We are working on the needs survey, and the greenhouse research we are working on today, and we are working on finalizing those needs, conflicts, and opportunities on the report and we had a discussion at the previous meeting, and the breakout rooms, we will start on developing those potential solutions for the 2040Freight plan.

16:11:34 The purpose of the meeting today is to go through that review of every opportunity at best practices and identify opportunities to reduce those greenhouse emissions. With that, Bridget and Sebastian you can go ahead!

16:11:58 SEBASTIAN GUERRERO: Thanks, Gabriella.

16:12:06 Would it make sense if people have clarifying questions that they type them in the chat box? We will address them at the end. Does that make sense?

16:12:16 GABRIELA GIRON VALDERRAMA: Yes.

16:12:18 SEBASTIAN GUERRERO: Let's jump in. I will be presenting the findings and some research we have done on the best practices the city could implement to reduce the greenhouse gas emissions from the freight sector.

16:12:33 We have broken up this presentation into three parts, the first part will be a brief overview of some of the climate change leadership both in the city, and in the state. And present an overview of emissions statewide. Then we will talk about these greenhouse gas reduction opportunities and best practices, some of the findings of the research we did around North America and examples around the world. Then we will conclude by discussing strategies the city could implement potentially, to reduce these emissions. So, climate leadership and past efforts. There has been substantial work in this area, both at the city level, but at statewide, really been a pioneer in many

sense, statewide, we start with a 2013 study that developed a vision for how to reduce greenhouse gas emissions in the transportation sector. This was followed up with a study on how to implement that vision to reduce emissions out to 2050, and included some case studies that were implemented.

16:13:53 This has been included with a rule to phaseout older diesel trucks which are the most polluting right now. The city itself there has been a lot of leadership itself. We have had a 2012 the sustainable freight strategy that was published and from the county, and the city together, they have published a climate action plan in. Followed by a progress report in 2017. In 2017 we have an electric field school strategy --vehicle strategy that was passed, published, and in 2020, we have had the city of Portland's climate emergency declaration which essentially requires a 50% reduction of emissions or a seeking of 50% of emissions out to 2030. And a 100% reduction which is that net 0 x 20. These are clearly ambitious goals. That meet the challenge statewide, there is a rule of thumb that is applicable pretty much everywhere in the US.

16:15:18 Transportation accounts for 1/3 of the missions. Industry accounts for 1/3. And in this pie chart, it is industrial and agriculture. Residential and commercial accounts for another third. Oregon falls in line with pretty much the rest of the US. Within the state, you see that the 35% of emissions due to transportation, about 24% are due to what is non-diesel related. Gasoline, mostly passenger vehicles. About 11% are from diesel vehicles. That is mostly going to be trucking. It also includes some diesel powered buses and other types of emissions. But most is going to be related to trucking. Next slide?

16:16:14 Let's jump into the opportunities to reduce these greenhouse gas emissions. This is a list of what we will be covering today. We have broken it up into best practices that relate to technology. This is improvements in the vehicles, in the refueling infrastructure in the technologies of the vehicles themselves that make them more fuel-efficient or idle less. That is one set of strategies. Then we have management and operations strategies. These essentially deal with how we use existing technology, or emerging technology, utter and more efficiently to improve the efficiency of the whole system.

16:16:59 Let's talk about something that has been in the news a lot lately, that is electric trucks. These are electric vehicles. We have seen rapid developments in this space in the past five years, especially in the past couple of years. There is a lot of companies marketing and even having very big claims about their electric trucks. This is on the horizon. Currently, motor carriers and companies are inquiring about purchasing electric trucks. There is a lot of interest. Unfortunately, at the moment, production levels are somewhat low. I was talking to a company that was seeking to buy some electric trucks, by some leading manufacturers, and they were told it wouldn't be until 2024 or 2025 until they got that vehicle. Production is ramping up, these vehicles are more

expensive, obviously, at the moment. We see that those costs are 3 to 4 times higher at the moment, they would be expected to decrease as battery technology improves. And with scale, you have cheaper production costs overall. So we do expect these costs to decrease, but they do represent at the moment a significant barrier to wide adoption of electric trucks. Current battery technology has a sweet spot of about 250 to 500 miles. If you go more than that, you are taking up a lot of the capacity of the truck with batteries, and it starts to become not as efficient. Having said that, those ranges are ideal for a lot of urban applications, both in making deliveries to commercial or retail establishments, or homes.

16:19:01 In fact, delivering packages to your homes. Or even making drayage operations. That is when a truck pick something up from a port and takes it to nearby warehouses. It is a relatively short urban trip. Does the type of truck shifts that are more likely to shift to electric first. And again, we expect those numbers to improve as technology gets better. At the moment, there are challenges with charging infrastructure and its availability everywhere. But again, as more vehicles come online, there will be more charging being developed. And we have a series of strategies for how to achieve that. Next slide?

16:19:52 There are other types of drives propulsion technologies that are more energy Efficient and reduce greenhouse gas emissions that are not just electricity and motors. That includes natural gas, there is liquefied petroleum gas, hydrogen has been talked Propane, renewable diesel, renewable natural gas. Many of these are already in use and significant shares for different types of trucking. Some are obviously more beneficial from a greenhouse gas emission point of view than others. But these are currently viable in many types of operations. There are examples, one of the main freight examples is in the port surrounding in the San Pedro Bay in LA and Long Beach.

16:20:53 In 2008, they had a pretty aggressive program to replace some of the older vehicles and their fleet with much more fuel-efficient, newer vehicles. That program has been very successful that the port has implemented. Just like electric trucks, you have to think about the cost, you have to think about the availability of these vehicles, the refueling infrastructure. These are all the challenges that need to be weighed as these technologies become more greater used.

16:21:31 Here, we are providing some data on the truck fleet. This first table here on the top right is showing the major cost drivers for trucking in the US. This comes from very good data from the American trucking Association. From here, you can see that over the life of a vehicle, typically your purchase and operating costs are about 1/3, 32%. Fuel accounts for about 1/4, 24%. And driver wages and fringe benefits, that is about 42% of costs. Some of these technologies become more cost competitive, you are essentially trying to reduce putting ourselves in the shoes of the private sector – you are trying to reduce fuel costs at an increase of those truck purchase cost. We are trying to make that trade-off worthwhile. The information that we have here on the left is also showing, as I said, the composition of the fleet for some of these alternative propulsion

technologies and fuels. CNG, LNG, LPG, battery, hybrid, all of these individually don't account for a tremendous share, but when you add them together, they add up to about 15% of the fleet. That is an important number. This table here on the bottom right is showing a change in the type of trucking activity that is occurring in the US. Just in the aggregate. What we are seeing is a lot more local, short trips that trucks are making. That is a 7% increase from 2011 to 2019. At the same time, we are seeing a decrease of the long-haul trucking, about 4% from 2011 to 2019. That just reflects the nature of how supply chains are changing, and the much greater reliance on home delivery, for example, and those smaller trucks that bring goods to your door.

16:23:47 Next slide? There are other Technologies that could be implemented to improve the fuel efficiency of truck. For the most part, all of these technologies here are off-the-shelf and have a high return on investment. This can include, as we see at the bottom right, improving the aerodynamics.

16:24:17 GABRIELA GIRON VALDERRAMA: sorry to interrupt, there is a question about the previous Slide.

16:24:29 How has trip volume changed from 2011 to 2019? Is this a reallocation or new trips of one type outweighing existing ones?

16:24:38 SEBASTIAN GUERRERO: Yes, so he is asking about the... These percentages add up to 100. What this is showing is a change in the share of trucking activity that is happening in different types of trucking. At the same time that a local delivery has increased, 7% in its share, the long-haul interregional truck traffic has decreased 4% in its share.

16:25:10 DAVID STEIN: Can I elaborate? IM curious about the change in volume, because we could foreseeably have new local and regional trips coming in without a decrease in the interregional and national.

16:25:39 SEBASTIAN GUERRERO: That is a good point. Anecdotally, truck traffic has increased. If you follow the forecast out to 2040, it is expected to continue to increase at a significant rate.

16:25:58 KEITH Wilson: During this time there has been a modal shift where the over 1000 trips have been exchanged. You will see higher local trip increase and lower national or 1000 mile trip decrease. That has been a modal shift. We have seen a huge transition in our industry.

16:26:30 SORIN GARBER: I have a direct answer to David's question. The percentages are based on the number of calls. Not volume, but the number of calls, according to a national survey. Conducted by ATR I. I can share that with you, David, if you would like.

16:27:03 SEBASTIAN GUERRERO: As I was saying, there is a high return on investment, off-the-shelf technologies available. This includes improving the aerodynamics of both the cab and the trailer with side skirts or the flaps at the end.

These make a very significant improvement in fuel efficiency, five or 10%, depending on the type of trucking. California has passed regulations around these, so it is likely that a number of the trucks that you see in Oregon meet or have these type of technologies. There are other technologies that can reduce the need for idling and trucks. Because of hours of service regulations and other reasons, they spend a lot of time parked. If it is very cold outside, if it is hot outside, current practice is to just idle the engine. They might want power so they can charge their phone or whatever, the drivers. It is very common for trucks to idle overnight or when they are stopped during the day. That idling, that is diesel that is being combusted and turns into greenhouse gas emissions. There are ways to avoid that idling. There are technologies at truck stop rest areas where you can hook up, as you see at the top left, and HVAC system into the window of the cab that provides cooling so you don't have to have the engine running. There is also high-efficiency diesel generators that the truck can have, that is the picture on the top right. That generator will produce energy for the cab, and it is consuming much less energy and diesel than if you were to run the truck normally.

16:29:06 Anyways, high return on investment, and off the shelf. There has been a significant push in adopting these technologies throughout the US. As I said, California has implemented regulations. There is a national program called Smart Way. It is voluntary, but it has been fairly successful at incentivizing and encouraging, especially with the larger fleets, to invest in these technologies. There are definitely steps that both the city and the state could do to further encourage the use of these technologies.

16:29:50 Now turning to management and operations. The first one we will talk about involves off-peak deliveries. And what this means is that you are trying to shift truck traffic and truck activity two off-peak hours of the day, and ideally at night. And the benefits are multiple. You avoid traffic congestion, your trucks can arrive at destinations much more quickly, they can find parking, it is not just reducing the emissions of the truck and being stuck in traffic. But if done at a significant scale, it could also improve traffic conditions during peak hours. Because it is taking of the moment.

16:30:42 This has been implemented in Europe, the US the most, the most famous example has been New York City pilot which is been very successful at decreasing delivery times and decreasing emissions, and was hailed as a success and a word of caution, they did need financial incentives. For this off-peak pilot to be successful.

16:31:21 The need hours, that can be expensive, for other businesses they did not have that extra person but they might have given the key to the delivery guy so they needed camera technology or security technologies to make sure deliveries were being made it safely. Those are a series of barriers and challenges, and some of those were

able to be overcome in the New York pilot, but there is definitely efficiency gains in these barriers if they are able to be overcome.

16:32:02 All right. Trucking is one of the last fuel-efficient modes on a mileage, or time mile basis. As was said earlier, there has been a shift towards intermodal rail is more fuel-efficient than trucking, these intermodal trains are often carrying hundred containers and if they are double stacked, it could be 150, 170, for much less energy you are able to move that freight from point A to point B, the same thing can be said about moving freight by water. It can be much less energy intensive. Obviously, these are serving different markets. Next slide.

16:32:57 There are opportunities for the city to leverage some of these more fuel-efficient modes. One way is to make sure that the Intermodal Weigel terminals within the city are competitive, that truck drivers and businesses can access those facilities quickly and the facilities operate efficiently, and that will encourage, incentivize the use of intermodal rail for example for connecting Portland to California, across the Midwest, so, that is essentially policies within the city that will reduce emissions outside of the boundaries of the city. Again, because climate change is a global problem and greenhouse gases are a global pollutant, those are cities the could help achieve.

16:33:55 These are possible with maritime, moving by boat, but obviously I see shipping and at maritime is serving different markets. You have imports coming in from Asia, especially auto is one of the big ones. You have some moves to Hawaii, you have to move some bulk commodities also which might be an area – if they are moving by truck currently could move to sea for the differences between the performance of trucking and the travel times of trucking compared to those of Maritime, they make that shift more difficult than moving freight onto rail.

16:34:47 One other – I forgot to mention on the last slide. One other thing to consider is those rail crossings, there are several in the city. Not just are they causing congestion and delay, but that can be directly translated into additional emissions. Both in vehicles idling at these locations waiting for 10 the train to cross, but also in the startup, and slow down creates a lot of traffic.

16:35:17 I have done analysis of how much greenhouse gases emissions are generated by these crossings that have high volumes of vehicles and trains and it can be significant. That is one additional reason you might want to separate some of these grade crossings. There are strategies around the loading and unloading of cargo especially in higher density parts of the city. One of the biggest challenges at the moments in urban freight is obviously, there is a limited amount of space both on the road and the sidewalks. In parking, and there is multiple competed competing uses with nonmotorized transportation, and trucks, Argosy as well as well.

16:36:13 Trucks throughout North America are having a hard time finding parking especially in these urban – high density urban areas, this leads the truck to have to

cruise, you drive around the block and we have seen that happen, these are additional VMT that is additional carbon being emitted because of inefficiency. Often it is common for trucks to park, double park, park in an unauthorized location, that can lead to congestion, traffic, it has been estimated that is a significant source of traffic for high-density cities like New York City. Again, trucks blocking through lanes. This also creates a safety risk and often have to drive onto oncoming traffic or make movers. again, it is an efficient use of the space we have. There are potential solutions to resolve this. Or address this issue. Around the loading dock requirements for facilities, so that the truck is parking on the premise of the facility and not on the street. You have dynamic curb management and pricing, as well. As I said at the beginning, does not only will reduce emissions, but also improve travel times and reduce congestion for everyone in the city. Urban consolidation centers are places that serve two functions: in the distribution system.

16:37:52 In the supply chain. These are places where freight can transfer from one type of vehicle to another. They also form a function of storing inventories. And being able to distribute those inventories more efficiently. There has been a greater move in the past five years, or so, probably starting 10 years. Towards having warehousing and distribution closer to the end customer. So you are seeing a lot more urban warehouses. Definitely those are the strategies Amazon is implanting, building fulfillment centers everywhere.

16:38:30 This creates big opportunities because for one, you are transferring Freight from a big vehicle – potentially big 18 wheeler into a much smaller Vehicle that is better equipped to navigate the urban roadway network. That smaller vehicle could be electrified, or using some of these cleaner propulsion technologies. So, that has opportunities again in reducing emissions. The movement towards more urban consolidation that is also improving customer service. Which is a big emphasis for some of these e-commerce retailers. It also has the ultimate effect of if you are having a good shipped to your house, especially if that last couple of miles for the good to get to your house is done by an electric or efficient truck, then you are substituting, very likely, an auto trip to a brick and mortar store with a much more efficient trip by truck to a household. That is a net reduction innovation. Things to consider, this obviously costs in translating every time you have to move from one place to another increases cost significantly throughout the supply chain, but this is only that e-commerce retailers are balancing every day.

16:40:15 If you are careful and have regulations, we have seen this in Europe where there has been regulations on how we have to have very small trucks operate in our cities, in Europe, just the fact that they have very, very dense neighborhoods, historic, downtown areas with very limited space. They will mandate that we need very small vehicles to deliver freight to this area. What might end up happening is your truck VMT increases, because instead of having medium-size trucks making deliveries, you might need two or three of the smaller trucks making those deliveries.

16:40:50 That can increase emissions if you are not careful.

16:40:54 GABRIELA GIRON VALDERRAMA: There is a question from Hannah.

16:40:56 Can these urban consolidation centers top emergency supplies and description centers?

16:41:01 (Reads) (Away from mic)

16:41:03 SEBASTIAN GUERRERO: Very interesting and pressing questions. I really do not know. Of examples in North America with her has been the case. I am sure there is a lot of cases, especially after the last year and 1/2, how do you have the right levels of inventory to satisfy potential demand? And the whole topic of the resiliency of supply chains has gained a lot of interest as of late in the public sector as you try to plan for a more efficient and reliable freight transportation system, and the companies themselves, the fact that they are not able to sell goods and services in emergency situations is money they are not making, and obviously they want to maximize that.

16:42:08 Right. There is a number of solutions, and strategies, that can be implement or to improve what's called the last mile.

16:42:22 What we mean by last mile is that last trip to make a delivery to a retail center, and establishment, or a household. Usually those are smaller vehicles and you do not have the benefit of the economies of scale of the big very vehicles, and those are the most expensive ones in the whole delivery of goods to consumers.

16:42:52 Often, they can produce very significant greenhouse gas emissions per item you are moving. In terms of mode shifts, you can use other technologies to make that last couple of miles. Either by cargo bikes, which have been used extensively in many cities around the world. Including Portland with the – I believe, what is it called? The b-line. Cargo bikes when you look at the research, it is a very efficient way of making deliveries in a dense urban area. Especially with a truck, you have the challenges of parking and you are faced with the Street congestion, but if you are operating a cargo bike you can bypass that congestion and parked in safe places on the sidewalk, we will talk about regulations later.

16:43:54 There is a lot more flexibility in making those deliveries quickly with cargo bikes. With the drones and delivery robots, I think you can go to the next slide. I think we have seen a lot of interest in this area. These technologies are still emerging. Delivery robots have been used and are being used in cities. But it is mostly trying out the technology and see how it works. With drones, there has been a lot of marketing around drones. It is still not a viable way of mass deliveries in an urban area.

16:44:39 But with both of these as we will talk later, there is important challenges with the regulations and requirements of these modes. As they compete – with the space, with pedestrians, with other bikes on the road, with vehicles, etc. There has been a series of strategies around taking those benefits of the urban consolidation centers and applying them at a more microlevel. So that, as I said, this picture at the bottom you see freight that has been moved from a big vehicle onto a cargo bike.

16:45:18 It is these micro-hubs that allow freight to transfer from one type of vehicle to another. That might be better suited for the built environment they are making deliveries in. Yet, these essentially– not just reduce emissions, but as I said, they can make the freight transportation system be friendlier in certain types of neighborhoods by having a vehicle that is the right size and correct characteristics for the neighborhoods that it vehicles off the road. That could be a significant opportunity there.

16:45:58 We have all seen these delivery lockers and alternative pickup points. This is a way of reducing some of that last mile trip into people's homes. Which, as I said a second ago, is some of the most expensive part of the trip. This creates major efficiencies, not just for Amazon or the retailer or shipper, but also reducing emissions. If they cannot locate these lockers and places that are convenient, where people are already going to a grocery store and can pick up their package there, or if they are taking transit and they are located in public space. Then you are essentially reducing truck miles off the road, and that reduces emissions. Finally, we have low emission zones.

16:46:59 These have been popular throughout Europe, and as I said a second ago, they have been mostly implemented to just deal with the nature of the cities, especially in historical downtown areas.

16:47:14 This encompasses a whole series of strategies round setting a zone, and saying we want to either require (which is what they've done in Europe or promote certain types of technologies and freight vehicles to make deliveries within this zone. We will combine that with investments in infrastructure that support those vehicles. This concept is relatively new to the US though I think this year we have seen the first implementation of a zero omission delivery zone. That is a pilot in Santa Monica, California. Now, let's talk about potential city strategies. First, there is obviously investments the city can make around infrastructure and technology that improve the fluidity, the mobility of the transportation system. And the routes the trucks are taking.

16:48:34 There is technology that would allow truck drivers to have a better awareness of the conditions throughout the system and avoid congestion, find alternative routes, many of them are already using either your smart phone applications or some of them have more advanced commercial applications. There are ways that technology have been used to improve that. There are also technologies around the management of curbs. As we talked about, giving truck drivers information about where there is availability to park.

16:49:14 Some of that has been done through pricing signals, as in San Francisco. The infrastructure can have, trucks can have certain priority at signals, to make sure that they operate more smoothly. And we have even seen the use of dedicated truck lanes on high-volume routes, which has the benefit of separating passenger and truck traffic. That doesn't just improve the operations, but it also has a great improvement in safety as well. And then obviously we want to preserve and update important freight routes in the city. As we implement strategies, it is important to have performance metrics around greenhouse gas mitigation. You want to know how much you are admitting. It is important that the city continue to have and develop an inventory of where those emissions are coming from.

16:50:25 The current emissions inventory that is made public just distinguish is between diesel and non-diesel transportation. I think it would be important to have a greater level of detail, and no further detail -- diesel transfer station, what are the types of vehicles. That way you can track if you are making progress. The city can play an important role in encouraging the collaboration between the private and public sector around exchanging knowledge on technologies, on fueling, on last mile strategies. As cities around the world, and in fact the EPA with its Smart Weight Program have all set up programs to encourage that knowledge transfer and best practices. The city can pursue funding and incentives that make the freight system more sustainable

16:51:26 There is financial help, either with direct funding from state, local, and federal sources, or through providing accessible loans to truck drivers All of that has been used in California and elsewhere to accelerate the adoption of some of these technologies. Trucking is often viewed, and it is a commodity. And as such, truck drivers and trucking companies have very little profit. They have very little ability to incur upfront costs for a benefits that might materialize two, three, five years down the road. When I looked at the numbers several years ago, the typical breakeven time that a company would decide to invest in a technology is about two years.

16:52:24 If the technology is not paying back those initial investments within two years, then that trucking company is very averse to invest. So what is happened in California and other places, public agencies have guaranteed or provide support so that trucking Companies can get the financing they need to achieve those reductions in emissions, savings, and fuel costs. If they might materialize two, three, or five years down the road. There is also a series of regulations that can be implemented, particularly around anti-idling. Again, not just preventing the use of idling in places around the city, which would have the benefit of reducing particular matter emissions. But also, if you combine this with investments in the HVAC hookups at parking facilities, or electric hookups, or financing to have greater use of those auxiliary power units and diesel generators, that carrot and stick approach can be quite effective.

16:53:46 Around policy, a series of policies to incentivize clean technologies and fuel-efficient, as we have talked about. There is policies around refueling infrastructure and having EV ready requirements for new freight facilities. And also, developing alternative fuel supply facilities. Next slide?

16:54:09 There are policies around operations. We have talked about a lot of best practices here. Some of them, such as the fuel saving technologies and the anti-Abilene idling technology, we know they are high return investment. They work They maybe just need a little encouragement to be used more widely. Some other strategies or technologies might require piloting for you might want to have a pilot program, you might want further study around those off-peak deliveries that New York did, around the pricing of infrastructure, the use of delivery lockers, the use of distribution centers. And all of that, again, to better understand how these strategies would work in the context of Portland. And then be able to have the right incentives that are successful. As I mentioned earlier, and I think the city is working on this, they need to develop— and some of it is statewide and federal as well – regulations and requirements around these emerging technologies. Such as the EE cargo bites, delivery box, the drones. How are they going to be sharing sidewalks, where will they be parking, where will they be stored.

16:55:45 As you come up with this regulation and requirements, you have to keep in mind how the public and the private sector might be using them. Combined, it could have a benefit in reducing greenhouse gas emissions. There is also policy around demand management. That is either a shifting freight activity to other times of day, where it is less congestion, less costly, less emissions. And you want to promote urban consolidation concepts that are changing the types of freight activity on the roads by moving it to smaller, greener vehicles. And then also, the pricing of parking can play a key role in demand management as well. Finally, Finally here, we talked about loading and unloading as being a big challenge.

16:56:46 There is a need for regulation and requirements in this space. Both that establishment, either commercial or industrial, have adequate parking capacity within their premise so that trucks don't have to park on the street or compete with regular vehicles for curbside parking. And they have the adequate number of loading docks and capacity to accommodate their operations.

16:57:18 This is also a factor, and I know in many cities this has come up, with urban-residential apartment buildings. Especially the older ones. They just don't have the ability to accommodate the amount and frequency of delivery vehicles that are coming to those buildings at the moment. I believe that is all for the presentation.

16:57:50 Back to you, Gabriella.

16:57:52 GABRIELA GIRON VALDERRAMA: Thank you, Sebastian. I am looking at the time. Maybe we can have a shorter break, a three minute break, and come back at 5 PM to start a discussion. If we want to hear from each of the members regarding our group discussion. May be we take a three minute break. I think there was a question hear from Eric regarding the electric utility network, doesn't have the capacity to satisfy a shift to EV delivery vehicles?

16:58:32 SEBASTIAN GUERRERO: The quick answer is I don't know. That is outside my area of expertise. What I have read about the subject indicates the adoption of electric vehicles is going to take time. It is happening, they are becoming more cost competitive, but because of getting all the charging infrastructure set up it is going to take time.

16:59:05 It is not a situation where overnight, we need to have capacity to accommodate thousands of trucks. This is likely going to be phased in slowly., over time. Hopefully the grid has an ability to catch up to that.

16:59:20 GABRIELA GIRON VALDERRAMA: I will add that current studies have focused more on passenger demand, particularly looking at the right location to build these infrastructures. But I think that is definitely a gap in the research that we still need to fill regarding the capacity we need to provide, and how much we need to provide for the EV's.

16:59:49 I think we addressed all the questions there. Maybe 1 to 2 minutes, and we can come back.Thank you so much.

17:02:04 GABRIELA GIRON VALDERRAMA: Hello everyone!

17:02:10 Right at 5 PM. Like I mentioned at the beginning, we want to go and talk about structure, we will request each of the members of the CAC to provide and after there will be a structure, on the next slide and you have that in the agenda. A limited answer of up to two minutes, we are hoping to get everyone in the next hour. We also provided a Jamboard link where you can provide additional feedback, it might not be enough to capture all the feedback from each of you. But at least we want the diversity and to give you the space to give us feedback on this really interesting topic.

17:03:11 Here are the questions we have starting with– which of these strategies should be considered as we move forward? Of the ones Sebastian presented here, and other strategies we might not have considered like the ones he mentioned in his chat.

17:03:31 Are there any obstacles to implementation of these strategies in the city of Portland? And is there a way to overcome these obstacles? You do not have to address all these questions, but the idea is you are giving your feedback and you will address the questions that you want that are presented here. I can also copy the strategies we have discussed, maybe just a main title of the strategies we have.

17:04:00 Throughout all the presentation here.

17:04:08 OK. I am checking the chat here. Thank you, Nubia, for sharing the Jamboard.

17:04:13 I have panelists here, you can raise your hand or I can call on you, let's do that because if you are ready to provide your answer, raise your hand and I will call you. I do not see any hands raised.

17:04:40 Maybe I will just start calling. If that's OK. (Laughs)

17:04:50 I will just call the names in order that I see on my screen. I have Aaron? Aaron... are you...are you muted, Aaron?

17:05:08 OK. We can come back to them later, (Unknown Name) – Amy?

17:05:18 SPEAKER: It is Amy

17:05:23 (Unknown Name) like a slushy. No problem.

17:05:32 For one, I think the city should be exploring as many strategies as possible to reduce emissions with the caveat that I do not think it is important to consider any solutions that continue to rely on some sort of fossil fuel. Not only is our fossil fuels no sustainable from an omission standpoint, but we have other policies that are going to be in place at the state level and probably the federal level that are going to make fossil fuels more expensive, and fossil fuel technologies more expensive, and or phase them out entirely.

17:06:12 Like, relying on natural gases as a fuel source for freight is not really a strategy that the city should be pursuing. I also think that the city should keep in mind that DEQ is in the process of adopting its climate protection program which will reduce – it will Emissions from transportation fuels, and the ultimate cap is a little uncertain. They are proposing an 80% reduction in emissions over a baseline which is based on 2017, two 2019 emissions on averaged on an annual basis. It is possible that it will go down. We will see an even more stringent decline in emissions from the fuel sector.

17:07:07 So, that is great, that will help the city meets its climate goals, and in addition to the truck phaseout requirements within the city of Portland, they will be considering adopting California's advanced clean truck rules which will require a certain percentage of electric vehicles, or non fossil fuel based trucks to be sold in Oregon by certain dates. The standards differ depending on the air. That is all to say that really, it seems like at least from the on road free standpoint, we are moving towards electric vehicles. Any strategies that can help further electrification of freight is important to consider, both in incentive-based, and any local regulatory requirements that can further electrification or provide infrastructure for charging, those types of things I think should reprioritize.

prioritize.

17:08:13 I will stop talking and let somebody else respond.

17:08:18 GABRIELA GIRON VALDERRAMA: Thank you, Amy. Now we have Clint.

17:08:31 SPEAKER: Think when I look at the strategies my first thought is we should be doing— we should be pursuing any strategy that has the largest impact. And so...if we have the opportunity to look at what the mottled outcomes are, we should be going in the direction that reduces greenhouse gases as much as possible. And understanding the desired

17:09:01 I would imagine for many folks to compromise on that, means that we are not going to get to where we want to be that absolutely pursuing the strictest strategies possible, the most impactful strategies. That is what I would like to see is that analysis and how we can pursue those strategies that are going to have the highest impact. When we look at other strategies, I think I will always come back to the fact that urban freight movement is not the greenhouse gas problem. It is the traffic they are stuck in. And how we can pare other strategies and other policies, and other projects to remove single occupancy vehicles from any place that freight is trying to move through.

17:10:04 So, if we are going to take a look at other strategies, I want to see how we will remove single occupancy vehicles from places we want to move freight through. I think the biggest obstacles are always going to be folks bringing up cost. The cost of implementing any of these projects is going to be an upfront cost. Rather than ignoring the problem we have which will be a cost we will bear for the rest of my lifetime, our children's lifetimes, and if so, you certainly have that upfront cost as a barrier. But we should not be talking about that unless we talk about the externalized costs – the nondirect cost. I think that we are also going to see a lot of opposition, from all directions. Whether it be the industry itself, you know, freight operators whether we see it be... folks that are prioritizing their own single occupancy vehicle trips over freight movement.

17:11:14 We will see that opposition as we do with any type of change. As long as we are prepared for that and prioritize greenhouse gas emissions reductions, and lead with that, I think we could be successful. Thank you!

17:11:32 GABRIELA GIRON VALDERRAMA: Thank you, Clint. Next I have (Unknown Name), then David, then Ellen. Thank you!

17:11:37 SPEAKER: Appreciate it! This is the 2040Freight plan, we are trying to build something that happens in the future, electric is the future.

17:12:01 One is that going to happen? It will not happen quick, a lot of these things got brought up – Sebastian brought up great things that are going to have to be, right away,

things we can fix sooner than later. I can tell you, electric from a cupping trucking company perspective, they are great for your car, but if your trucking company, that has to be on site.

17:12:27 Putting infrastructure in for 35 trucks will be difficult, and our margins are shockingly thin. We do not have that money to blow on. We will need state, city, help. Which I'm sure we will get – this will not happen overnight. I like the ideas of new buildings being required that infrastructure. It is a good start!

17:12:49 The other issue is one thing that was brought up and makes sense to have deliveries made at night, good luck finding drivers for that! I saw a comment that the driver shortage is only for long haul. Nope. The driver shortage is brutal across the board. We cannot get people. I can put 10 more trucks on right now, I cannot get those people. That's a problem. One way to get around that is (Indiscernible) which we are working on, we have to get younger people on the trucks, insurance will not let that happen.

17:13:28 GABRIELA GIRON VALDERRAMA: What did you say? The way around that was?

17:13:34 SPEAKER: To get more nighttime deliveries, we have to get more drivers. We probably need younger people to run nighttime deliveries, that have kids, and families and somebody that is 21 or 22 that has not built that family that says they will work at night and make a few more dollars, but not allowed to drive trucks, insurance when all of them. -- will not let them. Insurance is being hammered with verdicts awarding people 20 or \$30 million, insurance currently, I have a driver – a driver has to have two years' experience to drive for me, they are talking about moving that to three or four years, we have a driver shortage that will make that very hard.

17:14:18 There are other things that will have to happen. Nighttime deliveries could be great, but I cannot get anybody to do it. The drivers are in control at the moment, and they will not do that. This is from a trucking perspective, it is all good. These are our current struggles, they are not forever struggles but things we have to overcome. I agree, long term. For me to put infrastructure charging in here we will want help from the state, certainly from the city, and so on. It will not be easy. With the interim, let's fix those rail crossings where vehicles are sitting idle in, I go down Marine Drive and the offices, there are terrible crossings where they haul vehicles in and out of the port, very active. We are stuck in it all the time. That's my personal experience. It was all great points, Sebastian had out there. We will take a bit longer. The low hanging fruit.

17:15:19 Let's talk about idling as much as we can, and start switching these new buildings into electric and get electric trucks on when they are available. I have yet to see one on the road. The next one I see will be the first one. That is my two cents!

17:15:37 GABRIELA GIRON VALDERRAMA: Thank you. Dave.

17:15:42 DAVID STEIN: I really appreciate all the comments that have already been said. I generally agree.

17:15:55 I would like to see more of a focus on lowering the weight of vehicles. That is probably something more within our control, if we are talking within the urban context. We can't change the size of the vehicles, most likely, that are coming in and out of town. But within town, we should be looking at ways to incentivize things like e-cargo bikes. We should also be looking at reducing BMT where we can.

17:16:28 As much as we want to go to electrification, electric, electrification is not a great strategy in itself. The batteries that you need are massive. It is just not going to happen in time for anything, and it does not absolve us of any pollution, any toxins coming off of brakes and tires, which is completely unregulated.

17:17:03 Also, every day in my neighborhood, I see UPS and FedEx delivery trucks, I see other random delivery trucks. It seems like those types of activities we could incentivize to happen on a less frequent basis, where maybe you only have a certain delivery day in certain geographies for... I went to call it nonessential. But finding ways to make it so that things that don't have to be expedited are not just out there circulating all the time. That is putting out more demand for drivers, and increasing the amount of distance that vehicles have to go. Those are the main things that I picked out of there. Thank you, and I look forward to hearing everyone else.

17:17:50 GABRIELA GIRON VALDERRAMA: Thank you.

17:17:53 SPEAKER: I joined the meeting at the exact moment the presentation ended. I hope to listen to the recording and give you some feedback in a written form. For right now, I am just going to listen to other comments that are coming in.

17:18:27 GABRIELA GIRON VALDERRAMA: Felix? Gary? And then Hannah after That Gary?

17:18:42 OK, let's go to Hannah then. Oh, Gary is here. He might have some issues... Maybe Hannah for now?

17:18:57 HANNAH SKUTT: I really agree with pretty much everything everyone has said so far. I got really excited when we were talking about bikes, I like that vision for the city. I think it needs to be coupled with reducing our overall personal vehicle use. That is in alignment with our clinicals as a city. climate goals as a city.

17:19:30 One thing I want to push back on, while I love Dave's optimism, the coming crisis is on a different timeline than 2040. We are expected to reach that point of no return in nine years. For me, when I think about the freight 2040 committee, I am

thinking big. How can we drastically change freight? I know that is unrealistic for a single city.

17:20:01 I have seen culture shifts happen from implementing not even a regulation, but encouraging people to stop idling around my school. It completely changed the culture for the rest of the time that I was there. I can't speak to after that. I think that could work well. One thing that we haven't mentioned that I wanted to throw out there, as we have seen a lot of these supply chain shortages, I am just curious about... This is a crisis. Many different crises coinciding.

17:20:40 How might we consider triaging this, and sending out or prioritizing types of goods that are absolutely needed? Perishables, medical supplies, stuff like that. Is there anything in place that already does that?

17:21:07 GABRIELA GIRON VALDERRAMA: Thank you so much, Hannah.

17:21:25 We can go to Keith Jones then.

17:21:28 KEITH JONES: I had a few thoughts. One on the urban consolidation centers. I think one thing it would be helpful is to have a survey of locations. Where we could put them to be most effective would be interesting to see. Another thing that I proposed in the chat can we look at the existing bike network as a way to move freight around with bike freight? More importantly, can we use this idea of freight delivery network for bikes to also advance Portland's bike network?

17:22:17 There is a Portland bicycle plan for 2030 that a lot of people feel is lacking and behind. I just checked it, and there is a section there about the freight system master plan that had been developed at the time.

17:22:32 The bicycle plan was run by the freight committee, and the recommendation was to make sure that automobile freight traffic was separated from bike traffic.

17:22:46 Maybe we should start looking at bicycle only streets, and force this more throughout the city, instead of just having a big Greenway, you actually have different lanes for different modes of transportation which could include bike freight. That might be a way that we could make an influence on the existing bike network right now and help advance that.

17:23:14 GABRIELA GIRON VALDERRAMA: Keith Wilson, and then Gary?

17:23:22 Keith Wilson

17:23:27 KEITH WILSON

17:23:34 We have a fleet of trucks that primarily uses fossil diesel.

17:23:39 We have six electric trucks on order, but they are not going to Arrive until the first or second quarter of 2023. They are very expensive and then the infrastructure to add the charging stations alone is very expensive.

17:23:55 We have incentive help, which is wonderful. The focus is greenhouse gas reduction. Staying on that main target, when we do get the electric trucks, I was just looking over the new Oregon Department of Energy greenhouse gas reduction for different energy sources.

17:24:12 The grid, the electric grid as it stands right now, going from a petroleum diesel to an electric truck is going to allow us to lower our emissions by 37%. But the company that I have right now, we use 100% renewable diesel for our Oregon operations. My entire fleet is no longer using fossil diesel. Because we replaced it, renewable diesel today is about the same price as fossil diesel. There is no cost to my operations. But we are delivering 66% Greenhouse Gas reduction today. More importantly, when my truck drives by you in downtown Portland, there is 38% less black carbon or particulate matter.

17:25:00 There is less poison in our neighborhoods. That is today. If we are looking at that 2040Freight plan, we should not be waiting. We should be using this energy source right now, and we can do that through that 2040Freight plan, and say "This is our target, we need to remove fossil diesel and move to clean or renewable diesel." Another strategy we did not really talk about is road (indiscernible) charging used charging. Federal tax rate is still \$0.24 per gallon. We have had six Jurassic Park movies since we made that change! If we actually charged for the road in an appropriate fashion.

17:25:44 If you are going to drive downtown, the cost should be higher than if you drive in East Portland. But it should be dry higher than if you draw drive in less congested market. That will force carriers and people who use single occupancy vehicles to have a value-based proposition: do I want to spend the \$0.12 per mile driving downtown Portland today? I would really like to start focus on road use taxing, which lowers

17:26:19 Greenhouse Gas. Thank you.

17:26:21 GABRIELA GIRON VALDERRAMA: Now we have Felix, and after that Erik. Felix.

17:26:32 SPEAKER: Can you hear me?

17:26:36 Great. Almost everyone has already touched base on the areas I wanted to actually discuss. I am going to try to touch three aspects. When it comes to safety, and when it comes to traffic. I am going to focus on the full truck load, especially in down left town Portland. Town Portland.

17:27:08 Since we are looking into the future, we should be focusing on using more cargo bikes, especially in the downtown area. If we eliminate traffic and eliminate (indiscernible) I had a program one time where my brother ran into a truck that was backing up to a building downtown trying to upload some (indiscernible).

17:27:45 Dedicated lanes, and if there is any need for trucks to be downtown, they can use a cargo bike. They can be assigned a warehouse that may be miles away from downtown that has these cargo bikes going and pick up these loads and take them down to where they need to be. That would eliminate traffic. Most people are very scared when they are driving alongside a full truck load, especially depending on if it is flatbed, or whatever truck they are hauling.

17:28:26 If we can focus on those strategies to increase safety and reduce traffic, especially in the downtown area, I think that would be a great idea.

17:28:36 That would be something we should all start considering, especially how we are going to do it technology wise, or how we are going to make this happen prior to the implementation.

17:28:49 GABRIELA GIRON VALDERRAMA: Thank you, Felix. Erik then Rachel and Ryan.

17:29:00 The focus for me should be on easy for delivery vans. We should be looking to increase the rate of return to the trucking companies, so that it is much more financially suitable for them to do it. The way I would want us to consider that is to look at ways to increase labor productivity by giving parking priority for delivery vans to EV's.

17:29:33 As we saw in the case of New York City, there have been some significant savings that are available to a trucking company, a delivery company, that would be able to accrue to that.

17:29:47 The other thing that I would like at least somebody to consider is off peak pricing for the electricity. And make it so that if somebody is running a delivery service that runs during standard business hours, it is very inexpensive for them to charge the vehicle overnight.

17:30:12 That only requires a 220 line, not a ridiculously expensive Tesla version 3 supercharger station. You can easily get that thing charged up for 100 KW battery system which is appropriate for the EV delivery van. Thank you for all the comments that I have heard. I appreciate it. The next one, David? After that, Alan.

17:30:44 GABRIELA GIRON VALDERRAMA: Thank you, Now we have Rachel.

17:30:56 RACHEL DAWSON: I appreciate everybody's comment before me and I will not repeat them. I was impressed by that chart that shows the growth in that neighborhood regional freight and the priority needs to be paid placed on those last Mile trips, the electric bikes are all interesting ideas that weren't warrant further study into.

17:31:35 It is a lot of the single occupancy vehicles. I really like the idea of congestion pricing. I know there have been a 17:31:43 number of studies being done by various jurisdictions in the area. So, I like that idea. I do not think – I do not know if this was mentioned, now try Matt TriMet are in certain routes getting priority signals where they are able to have priority through an intersection. And half that technology talk between the boss, and the signal, I wonder if that is possible for freight to have as priority to get those signals throughout the city.

17:32:17 What Keith said about renewable diesel I think is really interesting, and I wonder why that is not used more widely than it already is. If it is the same cost and you have that sizable reduction in emissions, I would be interested in learning more about what the barriers are for that is soft and why it is not reduced more. Those are my comments.

17:32:46 GABRIELA GIRON VALDERRAMA: Thank you. Now we have Bill, then Erin.

17:32:52 SPEAKER: There are so many things that have been discussed and talked about today. It is been hard to coordinate it all. From Dave's problems with finding drivers, and Keith's fuel issues, they just go on, and on, I am concerned that a lot of it is not going to come together at the right time.

17:33:14 I am concerned about the city of Portland. At how disconnected some of the bureaus and agencies are within the city. When somebody comes up with a good solution, somebody is out there finding a reason not to do it. And I am a little bit concerned about who is going to carry the water on all of this. Who is going to pull it together?

17:33:46 I do not have any confidence the city of Portland is going to do it. Does anybody have an answer of who is going to pull all this together?

17:33:57 GABRIELA GIRON VALDERRAMA: Thank you, Bob. We have Ryan, Erin, and Sarah.

17:34:08 SPEAKER: I just want to say that so far, the ideas I've heard in the presentations and the comments has been in the right direction, it is a matter of implementation and strategy, and how we will deliver on these. As the freight network changes it will create more opportunities and allow for both innovations to be required, but also to allow innovation to flourish as well. For example I run a cargo business cargo by careerist, until COVID-19 we delivered the Portland Mercury every week and we do

2000 copies from Goose Hollow, and others, we do it faster by tricycle than we could by truck. This is a case where we were able to put a real world dollars and cents application it allowed us to branch out, and focus on manufacturing. We manufacture cargo tricycles for people all over the US and the world.

17:35:14 Some of the things we are seeing our customers are employing are no subsidies as other governments like the British Columbia government is subsidizing e-trike for small business operations. Brussels in the EU is doing massive subsidies. We are seeing customers emerge in the subsidy markets. They are trying to create opportunities for cargo bike businesses to flourish. One of the other things we might want to consider is there is another way to have small businesses test out where a cargo bike might be able to be useful in their operations. I lastly want to echo the push for road use charges and making sure that as businesses, we are not externalizing our costs onto the wider public and really find ways especially specifically with the weight miles charge to have the cost we all bear be part of those business and financial decisions we make. Thank you all!

17:36:23 GABRIELA GIRON VALDERRAMA: So much, Ryan. Now we have Erin, then Sarah, then Stephanie.

17:36:31 SPEAKER: I really appreciate everyone's comments. I want to touch on the e-bikes because I manage the ones downtown, and it is a really cool system. It is definitely something that the city and more companies should look into. The one problem we run into is it is hard to move the volume— I would have to run 10 of them for one of my package cars, so, it is a lot more people. People are hard to find nowadays, I am having the same issues as other people on the meeting of finding people even with the high wages we pay. A lot of people are not wanting to come to work and it is really driving the logistics, as per our business with getting people coming into the business at this time of the year, alternative fuel, we run hybrid downtown. They run phenomenal. They use no gas, no nothing, all electricity. And think if more companies invest in that type of thing, it is beneficial downtown.

17:37:46 I personally deliver downtown for 10 years for UPS, I experienced a lot of things in regard to the congestion freight brings, Sam eyes waiting for docs, myself, other carriers waiting for docs, it creates safety issues at intersections. A good point with the TriMet lane, if we could design a way to move freight throughout the city and the same lanes as Trimet, or designated lanes, I think that would bring a lot of safety and efficiency to the overall logistics of downtown. That's just what I got.

17:38:36 GABRIELA GIRON VALDERRAMA: Thank you so much, Aaron. Now we have

17:38:39 Sarah, Stephanie, and finally – Tom. I think that covers all of the CAC members?

17:38:45 SPEAKER: Thank you. Thank you for the thoughtful comments, I really appreciate poinsettia been made. First I want to say I agree with Amy, I really want to see number fossil fuels (Laughs) Getting burned in Portland for freight mobility and wherever we can move toward that. That's great. It makes a lot of sense to put a focus on what the city controls instead of putting time and energy into things the city cannot really affect or can only affect around the margins, I think a lot of folks have talked about pricing and while a road user pricing is really important for this, if we look at what the city controls, we need to talk about curb management and parking pricing, and those being really powerful tools here. I would like to see the city throwing its weight into curb management right after back that would be something I would love to see. I also think – it is easy with us to narrowly focus on freight and say, what small things what things can we do with just freight that will make a difference?

17:39:53 What is so integrated into the city's overall transportation planning, and I think Keith Jones hit on that by talking about how we have a bike plan that we have not implemented. Let's go ahead and do that. It also ties — we will do things with this that will make things harder for existing businesses, and I think Dave brought up some of those points and we need to acknowledge that and think how we can make life easier for existing businesses in other ways and how can we reduce single occupancy vehicle downtown congestion to have a more reliable and predictable travel time? Are there dedicated lanes we can use? Because while we need to be internalizing those externalized costs, we need to recognize we have a whole existing network and system at people and businesses set up around the weight are, and how do we transition away in a way that is just, and fair? It really ties into this. We have to keep an eye on the price there. Getting back to that cost issue we also need to remember we are not weighing an upfront cost and we are weighing an apparent cost against the externalize cost, we need to be thoughtful about who is paying, who benefits, whose burden Or the reminder of what I think we all know is we need to be always thinking about those things in these decisions. That is all I've got I really appreciate the thoughtful conversation and the points that have been raised. Thanks!

17:41:31 GABRIELA GIRON VALDERRAMA: Thank you so much, Sara. Then we have Stephanie and Tom!

17:41:37 SPEAKER: Thank you Gabriella.

17:41:37 I was thinking about – I liked the idea of low emission zones. And also thinking about designated parking for loading and unloading zones, I have spent a lot of time in Northwest Portland and I know that is a huge safety concern for everybody involved in the congestion on the more narrow streets. From a pedestrian perspective, not just people on the road. It creates a lot of dangerous situations. I know that people are hesitant to get different parking, but we have to face the reality we have to cut into parking allowances in order to make some of these other things happen. And reducing single occupancy vehicles, in addition to bike infrastructure, thinking about ways we can encourage people to take public transportation more, and what can we do to continue

building out rapid transit corridors and adding frequent weekend and evening service, so it is a viable option, alternative for people who do not travel by bike? Especially thinking about commuters, as well, that is essential to this conversation.

17:42:57 I really like the point about taking inventory of spaces we can use potentially for urban consolidation centers. My mind goes to the current vacant lots, or parking lots, places we can repurpose to better purpose and potentially for electric vehicles charging and spaces again. The other point was talking about implementation and getting greenhouse gases with vehicles off the road, it will not happen overnight necessarily. If we look at consolidation centers in urban areas and being mindful of the equity impacts people living in those areas, where those might be established. I think that would be important.

17:43:48 GABRIELA GIRON VALDERRAMA : Thank you so much, Stephanie. Tom? The final CAC member.

17:43:55 SPEAKER: Do I have the last shot here? Oh, good! I really appreciate all the things that have been set. Some really, really good ideas. One of my important questions as we are looking at the 2040 plan that is 20 years from now.

17:44:18 The implementation that you just mentioned, Stephanie, is to me kind of the big deal. We can look at the overall big picture – how do we want is to look for 20 years from now? In the first five years, I think Keith had a very, very good example of taking – what does it cost, and how are businesses going to change in the near future? To achieve those goals. If the cost is way out of whack, the plan may miss, or the marketplace (Static) I do not believe I am describing it very well, but I have been enough on enough of these communities where it is important to bridge that gap from the marketplace and the costs, in order to make that achievement. Maybe we will do that here, but a couple of folks, Ryan who is a good example of here are the nuts and bolts of what they do, and how they deliver, how they have changed. I think it is very – a big deal. I think it's important to focus on the implementation, and particularly the first few years into the plan.

17:45:33 GABRIELA GIRON VALDERRAMA: Thank you so much, I am so excited that we got through all the members. That was really enlightening. If you think that was not enough time to provide feedback, you can always add your comments to the Jamboard and we can summarize that for you We will have additional time if you want to provide extra. Ellen, I will be sharing the PowerPoint of the presentation from the beginning.

17:46:09 I don't know if there are any questions right now. that you would like to ask our team, or Sebastian or Sorin. Are there questions or additional comments?

17:46:31 David, we can leave the Jamboard open for one week. So you can provide

additional feedback on that. We can also share the PowerPoint so that you guys can have it to remember the potential strategies and provide additional feedback on that. I think that would be useful.

17:46:53 Are there any other questions, comments? Concerns? Stephanie?

17:46:58 SPEAKER: I have a question for the group in thinking about the driver shortage, and how the city might be able to...What you might be able to do to incentivize people. Especially if we are thinking about reducing greenhouse gas Emissions and pairing that up with getting the labor that you need and the agreement and infrastructure you need. What could the city do to get people to work those jobs? I am really curious about that.

17:47:39 SPEAKER: Can anybody hear me?

17:47:48 GABRIELA VALDERRAMA GIRON: It would be great to get some additional feedback or context if they had identified the potential costs of the driver shortage.

17:48:06 SPEAKER: I just got my audio working, forgive me. The driver shortage piece, the city is doing a program now -- right now, particularly with garbage haulers and recycling companies. As a member of PHA, they are working to provide funding for folks to get their licenses

17:48:41 We are going on our third cohort group, which starts October 27. It is a great concept, because we are working with different agencies with the city helping to fund it, to the garbage hauler's helping to support it financially, with extra resources as far as rent, food, and daycare help, to be able to attract folks to get into the industry.

17:49:20 That is one of the things that the city is doing. It would be great if we could expand on that, and have it not just be for the garbage callers and the garbage and recycling group. If we could expand it a lot more.

17:49:39 We have been having great success with the program thus far. We have a group of about 15 or 16 people that are graduating, and this is a three month cohort. Every three months, we are graduating 15 people who are getting jobs.

17:50:01 That is one thing that the city is doing, but I think they could actually do a lot more. There is a lot more industries that need it. If there was a push onto the city saying that this is something, this is a program we like, we could use it to recruit more drivers.

17:50:21 As well, what we are looking at right now is electric vehicles as well.

17:50:27 We actually have an order for two of the Tesla trucks. But they are so far out, we didn't want financially to have 40 grand sitting in the Tesla bank account.

17:50:38 So we canceled the order. But we want to look at that as well, how do we bring that at the early stage, when people are learning how to drive. We talk about idling and things like that as well. Those are the things that the city is doing.

17:50:57 But the program could actually be expanded a lot more. And the way that we are actually going to recruit, we keep it at because we try to work off quality, not quantity. But we are constantly having a waitlist of 15 to 20 people. Every three months. I think that is the intentionality of us and how we are doing the recruiting.

17:51:22 That is one of the things we are trying to do as far as the driver shortage piece. I will invite everybody out, our next graduation will be January 28. I will give whoever I need to give the information to give to everybody. You can come out and learn about the program.

17:51:41 GABRIELA GIRON VALDERRAMA: You can send that to me, and Gary can share that information with us.

17:51:51 NUBIA MILPAS: No problem.

17:51:55 GABRIELA GIRON VALDERRAMA: (unknown name), you had a hand raised? No? We can also provide... I don't know how much information you have, but yesterday, one of the pricing options. They have done a lot of focus for freight, the resolution got approved yesterday and city Council. We can share that information with you, several of you have raised that issue. Of pricing and road congestion as a potential solution.

17:52:46 SPEAKER: I just want to say that I think this conversation is so great. I am in a lot of freight projects across the country, and it is so exciting how innovative and thoughtful this group is. And diverse in terms of all of your different backgrounds of business and civic work. I am really excited to try and push the boundary of it more here a bit more than we have been able to do in other places.

17:53:26 GABRIELA VALDERRAMA GIRON: Yes, we are so excited. With that, I think we made it through in good timing. I am so excited...d! We will be sharing the PowerPoint. I think we can leave it until next week, to provide all of the feedback, if you want to add anything else.

17:53:52 Our next meeting will be on December 9. Hopefully by then, we can show you the videos ready, and share some of the results of the survey that we will have online by then. We will also share that survey link with all of you. And we would appreciate if you could help spread the word around the survey.

17:54:20 Thank you again so much for your time.

17:54:23 SPEAKER: What was that date again? It cut out on me. Of our next meeting?

17:54:29 GABRIELA VALDERRAMA GIRON: December 9.

17:54:37 OK, thank you so much. If there are no more questions, so happy to see all of you. Thank