Austin Energy Utility Oversight Committee (AEUOC) meeting Transcript – 4/11/2023

Title: ATXN-1 (24hr) Channel: 1 - ATXN-1 Recorded On: 4/11/2023 6:00:00 AM Original Air Date: 4/11/2023 Transcript Generated by SnapStream

Please note that the following transcript is for reference purposes and does not constitute the official record of actions taken during the meeting. For the official record of actions of the meeting, please refer to the Approved Minutes.

[9:03:18 AM]

I'm Leslie pool. I'm the chair of the Austin energy utility oversight committee. And I'd like to call this meeting of the oversight committee to order it is Tuesday, April 11th 2023 the time is 904 a M. It looks like I have a quorum on the diets. Council members. Alison alter. Velasco's mayor, Watson, council members. Country Fuentes Kelly and mayor pro tem Ellis. Do I have anybody on? Screen remote and I see council member Ryan alter has joined us as well. So welcome, everyone, I called this meeting to order and I understand we have no speakers today for public communication. Is that correct? Thank you. So our first item of business is to

[9:04:20 AM]

approve the minutes of the February 21 2023 meeting of the E U O. C E and I see a motion from council member Fuentes and a second by mayor pro tem Ellis. Are there any objections to adopting the minutes as submitted? Hearing none of these minutes are adopted. We have a couple of discussion items or one discussion item, and then some briefings. I wanted to, introduce and kind of frame. The first discussion item, which relates to committee and council process for agenda items here in this committee and how we may use this committee going forward. So I just wanted to give you a little bit of background on to new topics that I'll be including on our a usc agendas going forward. First you'll see a new and recurring item on the agenda to create space for us to discuss issues or questions that council

[9:05:20 AM]

members may have initiatives you may be thinking about bringing forward we won't take up any items specifically today. What I intend for this item is simply to lay out and explain the new edition of this item. And it's in addition to what we typically have on our oversight committee agenda to give you a little bit more context publicly. So as we know resolutions relating to municipally owned utilities can be notable at the state level. For example, about a dozen bills relating to Austin energy are currently filed at the ledge. Some of you may be planning new resolutions, so I want to create a space here where we can publicly share ideas and ask questions and learn from staff whether and I have seen might direct things our staff are already doing or possibly planning to do. And so you could look at this as a broadening of the standard future items agenda listing. And I hope, too, that with our new action oriented

[9:06:21 AM]

city manager that concerns we express in our oversight committee meetings can be handled in a way that may minimize the need for resolutions and make our processes more agile and maybe even streamlined. And because I have brought several resolutions this year myself, for example, relating to creating a battery rebate program and expanding the number and locations of Evie charging stations. I propose creating a second recurring agenda item focuses on innovations that Austin energy is working on. So we have a near horizon on exciting new solutions to our energy and environmental concerns. I expect a to lead the conversation on these issues and demonstrate one of the city's core strengths, which is creativity and innovation in programming, and I intend these conversations to move us forward. Perhaps even more nimbly saving time and also reducing the number of resolutions to prompt or promote

[9:07:23 AM]

innovative solutions from our professional staff instead. And ideally, our subject matter. Experts will get there before we do. So I'd like to propose that we give this a try in the coming months. I don't see I fcs being eliminated at all. Please do proceed as you and your staff desire, but I do ask that we make use of the committee process for some open dialogue about initiatives that we're interested in or are proposing. And so I'll open the conversation to my colleagues on the diocese. See if there's any questions on the process or how we can make it more efficient in the backup, you'll see an updated list of I F six currently relating to Austin energy. Yes council member Fuentes. Thank you. Thank you. Chair pool. My question would be . Is this a policy and I appreciate you proposing this for Austin energy, with this be a policy that would apply to all committees, or are you looking just to kind of pilot it with

[9:08:24 AM]

Austin energy? Well it's I'm only the chair of one committee and so that my remit is this actually two committees. But my remit today is this committee okay. And so I guess the other question I have is so we would put forth the policy on the next month's agenda that if it's related to Austin energy, how many we were just did one other co sponsor to get on the committee agenda? Is that right? That's correct. No actually, that's not correct. We have three sponsors for Austin energy because it's a committee of the whole. And two sponsors is for the smaller committees, which are for or five and this one because it was a committee the whole a few years ago, we changed the number of co sponsors 23. Okay, thank you. Mayor. In somewhat. Response to councilor Fuentes. One thought has been, and I because of the I didn't have time to do it today.

[9:09:25 AM]

But one thought that has that I've had to help with council meetings. Would be that we utilized work sessions were going to go into a work session. Right after this. We used work sessions will utilize those so that we can. Announced items that we pull feel the council meetings and get that started. You know, I'm you know, somebody suggests I want to have an amendment to this. And so I want to bring it up here and then we can set sometimes granted some days. You're going to have things all the way to the council meetings, and that's not a wipe out that out. But it might just set up a more efficient fashion. And the thought was that what we can use? Would be committee meetings to have things like briefings. So that you would spend less time. Work session, the work session would be a work session. To prepare for the council briefings would go to committees where you would have a full briefing and everybody would

[9:10:26 AM]

know what they are so council member wanted to come, but you would utilize those committees and those that are chairs of those committees would be in a better position to help set set agendas in that way. So I've actually drafted the message board post on that would anticipating the question today , but but I wanted to wait because I have to leave. I may have to leave in the middle of the work session to go take care of something at the capital. But start that maybe next week, but start looking at the committee's as a means to bring those briefings through. So back to your point. Council member Kelly . Thank you. I really like the idea of bringing more of our work to committees and utilizing that as a way moving forward and chair. I just want to say thank you for bringing this to the agenda today. It's especially helpful in these meetings that we have Austin energy expertise with us so that when we discuss

[9:11:27 AM]

these issues, they're readily available. Thank you. Appreciate that any other comments yes, council member Ryan alter. Just one kind of as we do this. I remember talking to my staff a little while ago about some of these issues and one of the things that we had discussed. Is just that some departments don't really have a home in committees and so just making sure that like the parks department, for instance, where would we have that discussion? And I know I'm not offering anything new, but just as we think through this new potential process we think about all our departments that don't naturally fit in certain committees. Yeah that's right. And that was, you've hit on something that is pretty clear and pretty obvious. And so I would say that that how we're handling issues that don't have a natural or specific home in a committee would continue as as they are. I don't see. Initially , we had created 10 committees to cover almost every if not every department that was in the city and parks, open space and

[9:12:29 AM]

sustainability was one of those committees and, when we were formed the number down from 10 to about six or seven I guess about two years after we had created it. We eliminated some of those committees, and that was one of them that that work has continued apace. And I would argue that it wasn't it wasn't harmed by losing that. In in the case of some of these more technical committees, where the expertise of our staff is clearly at the four, I really did want to bring the conversation more publicly so that people could hear the various things that were considering and talking about, and it may aid in some public understanding elsewhere at some other levels of government of the work that we're doing here. Yes council member Fuentes. Thank you, chair and I support us, going through this process I firm believer and iterative processes, but I still want to keep open the option that we had the legal ability to still bring forward an item to counsel

[9:13:29 AM]

through our regular council agenda in no way would impede or interpose itself between that and our regular processes. Thank you. That's correct. Mayor was there something else? I think councilman Ralph Ellison council member Alison alter. Thank you. I just wanted to, flag that for audit and finance. We are already meeting every month and we have a packed agenda. We have multiple departments that are feeding in that. Some of which, by code have to come to us and other things. So we would have to have the committee we willing to meet longer or more in order to be able to accommodate more and more briefings or to make the space for that which we certainly can do, but it we just have to be understanding that that is going to have to happen because we have too many. You know, as it is, we are. We are already attended out three or four months. In advance. For that particular committee, which

[9:14:30 AM]

could take depending on how you define what goes to work committee could take a lot. Of the work, and so we should just be mindful of that. If we're going to move to that that we are going to need to, I think a little bit differently about how we do that work most effectively. Mayor. That's very close to what I was. Getting ready to say. Look at this council is working. It seems to me working very well and differently as a team on a variety of issues. In addition to that we have new city manager and interim city manager that is approaching things in a different way than what some have grew accustomed to previously. So we're kind of a different pitch point and what that means, I think is that we. We don't need to do committees necessarily exactly the same. And that would raise issues like

[9:15:30 AM]

that if we if we if we try to do something different, but still treat the committee's exactly the same. We're going to run into issues like council member Alison alter just brought up. So the thought process and I think of chair pool has laid out well for this committee is that in the follow up on counselor. Ryan alters comment as well. It may be that what we want to do is have committee X become committee X and Y. So that you do have if we want to do do it through committees, or we may experiment with some of those committees just staying with the council as a whole. This ought to be because the way the council's working together and working with this manager, I think this ought to be an experimental process to get us at our most efficient and so I'm glad you're piloting this. And the when you have ideas like this, put them on the message board. As suggestions and allow

[9:16:33 AM]

for that comment so that we can we can make it. Work better have been, and not have the kinds of problems that we know will happen if we try to do the same old but yet bring about change. Any other comments. I really appreciate the input from you all and look forward to giving this a try and we'll see where we're at and also to kind of have an open mind and to be fluid with the committees and with the point being efficiencies and really getting good work done and being as transparent and open to the public as we possibly can. Great thank you all so much appreciate that. We'll go now to our briefings, and I think our interim general manager Stuart Riley is here today to give us some information, including recommendations for council action, some events and awards information. Good morning, Stuart. I hope all is. Well thank you. Chair good morning chair. Vice chair committee

[9:17:33 AM]

members. I'm Stuart Riley, interim general manager of us and energy. And before I get into the slides this morning for the general manager's report, I would just like to acknowledge the important work we have ahead of us at Austin energy, working with all of you and working with the city of Austin as a whole, our mission at Austin energy is to safely deliver clean, affordable, reliable energy and excellent customer service. But we also know we need to be resilient. Great resilience is one of our six strategic goals at Austin energy, and we are working to do better. To the city council to our customers and to the public at large. We hear you. We here your concerns about Austin energy needing to be a more resilient utility so that we can have a more resilient community. We are well underway with our after action review, which you'll hear about later in the work session today. But I just like to commit to you right now that we are engaging in an open, honest and complete after action review process designed to look at everything related to our operations during

[9:18:34 AM]

winter storm Mara with the intent of finding what we can learn from and improve upon at the end of that process, we will implement actions that will make us better equipped for the severe weather. We're seeing more and more often as a result of climate change. And Austin energy has an immense responsibility of powering everything that happens in our city and in the surrounding communities that we serve. And we are dedicated to service. We take that responsibility very seriously. We're passionate about reliability, and when we don't meet customer expectations , and we don't meet the council's expectations. We are committed to doing better. Thank you chair and I will move on to my slides. The first item is eight an item on the council's agenda for this week. It's item 21 a design build agreement not to exceed \$34 million for the bracken ridge gas insulated switchgear substation. This substation is a key component of our re powering downtown initiative, which is aimed at improving upon the reliability,

[9:19:36 AM]

resiliency and capacity to meet our growing customer needs. You're here in a little bit about another component of our re powering downtown initiative, which is the recently completed Rainey street substation. The other item I'd like to highlight for you today is on the April 20th agenda that are CIA is to approve the aggregate annual rebate approval for energy efficiency rebates for multi family and commercial. Property. Rebates for combined amount of \$6 million. We provide these incentives to reduce energy demand and associated costs, thereby benefiting all customers . So for multi family properties that go through this process, typically each unit gets three energy efficiency, lighting, energy efficient lighting, and this aggregate annual approval process was developed a few years ago in response to our customers' concerns about being more agile and quick with providing the rebate funds. And so this way, we don't have to

[9:20:38 AM]

come back to council each time a rebate exceeds our administrative spending authority. I'd also like to point out that on that agenda item. The \$6 million includes ratification of the rebates issued so far this year as we miss bringing this forward to counsel at the start of the fiscal year, 23 we will be bringing this with the annual budget going forward to prevent a similar oversight in the future. Next slide. Speaking of energy efficiency for the sixth year in a row, Austin energy has been presented by the EPA with the award for energy star partner of the year for sustained excellence. This is energy stars highest honor. Austin energy's 2023 achievements were for our two whole home energy efficiency programs. That's the home performance with energy star program and our weatherization assistance program for qualifying low to moderate income customers. We remain focused on energy efficiency and lower in customer bills. Part of why we have some of the lowest bills in the state. And I'm

[9:21:38 AM]

proud of our Austin energy teams for the work they've done. That's once event again been recognized. Next slide, please. And finally, I have a very short video to show regarding the completion of the Rainey street substation as I mentioned earlier. This is part of our re powering downtown initiative. And this video gets into a little bit about the project as well as the community engagement process for the rainy street district. Hopefully, that's gonna work. Well we will send the link out to all of you. But basically what we did for that substation as we engaged in a community engagement process with the neighborhood to make sure that the features of that substation included public art environmental features, including charging stations, and there was a robust process of

[9:22:39 AM]

working with the community to make sure that it had all the features. And fit in nicely and within the Rainey street district because we realized that that's in a core area of our city and, needed to fit in with the character of that neighborhood. And that's all I've got for you chair. I'm happy to answer any questions. You have interim general manager . I was looking. I just have a question for you and your staff item. Number six is the winter storm after action update and I know that we have some items relating to other departments reporting on after action from the winter storm, and I wanted to know if your staff would be able to stay and make that presentation in the context with the other departments later on today, in the work session, I've been engaged with all those city departments are working together on the city's collaborative after action process, so we've combined forces on that presentation, so I have a section of that as well. So I'll be here for that to interrupt you guys real quickly. I do have the video available if we want

[9:23:39 AM]

to show that sure that's great. It's two minutes or less. As part of the re powering downtown initiative to address the growing need for reliable energy in downtown Austin, Austin energy began developing plans for their newest substation in 2017. The reigning street substation is one project in a series of improvements that will increase the capacity, resiliency and reliability of the downtown Austin electrical grid. This program includes upgrades to existing energy facilities and infrastructure, along with new facilities that will exceed the growing energy needs in downtown. The substation will increase available energy resources in downtown by 33% preserving the quality of life for you and your neighbors for years to come by ensuring the services, jobs, entertainment, shopping and transportation in downtown have ample power to thrive. Austin

[9:24:39 AM]

energy recognized that the substation site was in the heart of the Rainey district, a special place with a unique character. Our team collaborated with the local community to build a space where neighbors and visitors could feel at home. Community values were at the core of the design process. Austin energy prioritized saving beloved heritage oak trees and equipped the new substation with eco friendly rain gardens that improve water quality and drainage, new sidewalks for better walk ability and benches , trees and street lighting to create a community gathering place. There are even electric vehicle charging stations for your eco friendly ride. Rainey street substation is the first in Austin to incorporate these unique design elements, including the one of a kind perimeter wall designed in partnership with the community. This substation is a creative blend of needed infrastructure and a landmark design for all to enjoy. With the patients and support of the local

[9:25:39 AM]

neighborhood construction started in the fall of 2021 was completed on time and within budget. With the rainy street substation energized in January 2023. The downtown electrical grid is stronger and more reliable, powering the bright future ahead for downtown Austin. I'm glad you were able to pull that up. Thank you. That was lovely. Does anybody have any questions for Mr Riley? Great. Thank you so much. Okay item four is next, and that's ercot market and power supply adjustment, and that will be miss. Your spot. Good morning, Erica. Glad you're here. Good morning. Council members. My name is Erica burst back and vice president. Energy market operations in resource planning at Austin energy, and I'm here

[9:26:39 AM]

today to talk to you about the power supply adjustment or the psa and how it is impacted by the our continental market. So the psa is a dollar for dollar recovery of costs that include or cut settlements. You'll see their charges and credits and we're going to delve into that specifically and how that flows to the Sade. There's also all of our fuel for power plants, transportation of that fuel, as well as transactions we enter into to manage the volatility around those commodities. Also included in our power supply adjustments are the power purchase agreements, so those are our renewable contracts. Those are bilateral purchases and sales we enter into to provide price certainty as well as programs like our green choice value of solar and then distributed generation so all of these items are in the psa and that is a pizza is set annually

[9:27:42 AM]

by city council and it's a mechanism to recover the prior year's expenses that we incur to be able to provide electricity for our customers. Next life. So last fall. You may remember that, city council authorized Austin energy to administratively changed the psa as conditions require. That change can only be a plus or minus 5% to the existing say right. For any given month. And council enabled Austin energy to be able to do this to minimize any type of potential dramatic changes. We might experience in the S a in December, Austin energy began sending a memo to council and in this memo, we are providing a status of what the psa balances as well as, indicating whether or not we will be using this administrative authority. We have not used this administrative or exercise this

[9:28:44 AM]

authority to date, but I want to talk to you about provides some background. Ah about some factors. Should we need to use this administrative authority? What could cause us to incorporate this change? Slide. So before we get into how the psa is impacted by arkady, I want to talk a little bit about what orcas role is so one of their primary responsibilities is system reliability, so they are responsible for power dispatched throughout the entire system. They're responsible for maintaining that reliability. That's 60 hertz across the entire network. And they do this by scheduling and managing that power flow through the network. In addition to that they are also responsible for operating market electric market so they are responsible for their kind of like the like a stock exchange for electricity so they provide. They do all the financial settlements for all the sellers and all the buyers

[9:29:45 AM]

that are that are in the in the market. So when I say financial spent settlements what I mean is , how are how are supply or our electric production is valued in the market as well as our consumption, and they're also responsible for open access to the transmission system and what you'll see here on the slide to the right is a heat map, and this is from last week. And all of those dots are notes. There's thousands of them in the ercot market, and they all received their own distinct price. Every 15 minutes every day and what you can see, like in the north part next to the panhandle, that red, red part of the state. Those prices have gotten as high as \$5000. So that's the cap. That's his highest prices can get right now in New York cop market, but they can get as low as negative \$250 as well. And there's just a lot of different reasons why this happens. Up in the panhandle. You see that that's blew it there. There

[9:30:47 AM]

could be some some supply that stranded there's not enough load to be able to consume that, and there's not enough wires to pull that out of that part of the state. So for this variation of prices from a high 5000 down to a low negative 2. 50 is what the pizza is impacted by that variation that volatility in prices and so we'll see a little bit about how that passes through the psa and how we manage that. So this is a snapshot of Austin energy. And we talked a little bit. I mentioned about those charges in those credits that are in market settlements. So a charge refers to all the electricity that our customers consume. Which we buy from market. Credits are all the electricity that our portfolio generates and sells to market. Austin energy has generation resources all over the state.

[9:31:47 AM]

But we only consume energy here in Austin. There is what what is the takeaway? I would like for you to take away from today's presentation is that there is no physical link between these two. The amount of electricity that our customers consume is not dependent on the amount of generation that our portfolio producers. There is no electric provider and market that serves their own load. And under state law, we are required to buy our electricity from market and sell our electricity to archive. So on the right hand side, you'll see that that is our service territory. And that service territory in ercot is called Austin energy's load zone. And that is the price of the price of power is a settled every 15 minutes. And that is what we incur and that passes through the say. All of that generation

[9:32:50 AM]

there on your left, which is diverse and is all over the state. We offer that power into the York hot market. We send them a, price curves and then market tells us what we what they will buy from us because they're looking at the consumption all across the market, so our generation goes to the entire market. And we receive revenue for that generation. So. If our generation doesn't service physically, why do we have it? And that's what we'll talk about. It's a financial link. It provides protection for those high prices that you saw in that heat map. It provides an affordable hedge so that we can provide, affordable power to our customers. So market is really responsible for that physical generation that power flow, making sure that everything balances on the grid. Austin energy is responsible for bailing balancing the costs and the reference revenues that flow

[9:33:52 AM]

through the pizza. Can you go to the next one? So all the way to the left. You'll see an Orange bar and there is our load zone. That is our load zone costs for the last 12 months ending February. That stands at one point a little over \$1.1 billion. That is what would flow through the psa if we stopped right there. But but Austin energy doesn't all the way to continuing to the right you'll see are owned assets are contracted assets. Those programs I talked about and the bilateral and hedging risk management activities that we do that add value to our portfolio and help either offset or minimize the exposure we have to those prices in the market. So over the last 12 months, all of those activities were able to bring down that one point over 1.1 billion, down to \$562 million, so providing a 50%

[9:34:54 AM]

credit 15% offset to rps a, and allowing us to be able to provide more affordable power to our customers. You're the next one. So we talked about what would what are some of those cost drivers? We talked about load zone cost own and contracted assets that P S a is set once a year annually. That rate is approved by city council , but the loads don't cost the owned assets that contracted assets. Those prices move every 15 minutes. We saw that on the heat map. What are some of the things that affect those prices that affect those settlements as credits and charges that we talked about, so there's a lot of things and you'll see them underneath. Customer growth, the amount of power that our customers are pulling from the grid. The weather, whether it's hot or whether it's really cold in that electric heat they need to they need to warm up their homes. The weather also affects our renewable contracts. If the

[9:35:54 AM]

sun isn't there, or the wind isn't blowing, then are that it won't be generating, power for us to be able to, receive revenue. Even things like whether or not our assets are available. So generator availability very important. I need my, my assets to be maintained. So then, when those high prices occur, they can come on quickly and provide the revenue to offset those loads own costs. Natural gas is a really important part of our commodity costs. It's an important feature of the market because there's so much natural gas generation in the market. It kind of sets the price. So whether we have that generation in our portfolio or not, we're still affected by those natural gas prices. And then we saw all those different colors on the heat map. That's transmission congestion. I could have a high price in my load zone, but a low price at at one of my power plants and so it makes it difficult for me to offset those

[9:36:55 AM]

costs, so we enter into different types. Of transactions to be able to bring those prices together, so there's a there's different types of instruments that we use to be able to manage the difference between what you see there. The rate to market price spread, so the rate that I'm selling that power to my customer that annual rate and that rate that fluctuates or those prices that fluctuate every 15 minutes in the market. Every day. So it's gonna look like so this lead right now the here I just want to, to take aways from this slide, and this is gonna show and the same, picture I was showing previously with regards to our load zone cost and then with the generation does for that it shows it to you a little bit differently. But this right here shows where our price what the load zone costs were for Austin energy. By the end of last summer, and if we had just just had the load costs and no

[9:37:58 AM]

generation or no other risk management activities. Then we would have experience and passed through that Orange bar to our customers. But with the generation with the risk management activities were able to stabilize and we're able to bring down, those total costs and we went from \$96 to \$40. One thing I want to mention is that in this past summer you y'all might remember we had one of the hottest Summers, on record. We also had very high natural gas prices. They reached \$9 and mutu and ercot was also very conservative in how they manage that system reliability that I explained the power dispatch and that power flow. Coming out of your E. They were being much more careful about how they manage the grid and kind of added on extra insurance policies. And it's the market participants that pay for that. So part of those high costs were all of those factors that I mentioned. And although we were

[9:38:59 AM]

able to bring debt, we were able to bring down those costs. Quite a bit. We still had an under collection at the end of last summer. And that brings me to the black and gray line. At the end of when we came out of Yuri. We had actually an over collection, our generation and our power plants did quite well and we gave that revenue back to our customers. So we lowered the rate from the black line to the gray 28.62 line, but we lowered that rate into a very hot summer. High natural gas prices in a very conservative management of, the archive bread . So in, November of last year, we raised the power supply adjustment to account for what you see here on the graph, and at that same time city council afforded us that administrative ah, authority so then we can

[9:40:00 AM]

incrementally adjust the psa and have a more fine tuned ability to manage. The customer cost impacts. And is that the last one? So if anyone has any questions, I'm happy to take them. Thanks, Mr Bach. Any questions? Very good. Thanks. Thank you so much. Moving on to item number five Austin energy innovations and program highlights. Electric vehicle program overview and we have the vice president for customer energy solutions with us today. Richard genesee and tell me if I'm saying your name correctly, Cameron Freeburg. Who is interim manager for electric vehicles and emerging technologies. Good morning, gentlemen. Yes good morning chair. Good morning council members. City manager. My name is Richard genesee. I'm the vice president of customer energy solutions, which is many of our customer facing programs

[9:41:01 AM]

at Austin energy. And as you heard, Cameron Freeburg is our interim manager. Of electric vehicles and emerging technologies. Some of you may have known Carl pop, was our previous manager of electric vehicles, vehicles and emerging technologies, and he retired from Austin energy in the city of Austin last last week. Next slide, please. So we have strong electric vehicle growth in Austin. We have record Evie registrations, there are more TVs being driven in Austin than ever before. A major contributing factor is there's more availability of new vehicle models coming into the market. One of the trends that you see here that we expect to continue is an ex continuing divergence between high high plug in hybrid TVs and battery E. V S and that's driven by energy density and batteries and every range

[9:42:01 AM]

getting longer. The plug in hybrid TVs have a gas engine in addition to an electric component that is usually used as a range extender. But as the energy density increases. There's less and less, activity with plug in hybrid E V S, and you'll continue to see that grow so much of our work here, is in support of the Austin and Austin climate equity plan. A lot of what work has already been done in in progress and reducing emissions in buildings. Is, you know through the Austin energy green building program has really, worked to reduce, emissions. Now we're focused on the transportation sector and we are at, Austin is leading the state of Texas and Austin is actually leading the country in terms of the percentage of new vehicle registrations that are vvs vs non mps. As you can see

[9:43:02 AM]

on the slide, it's 11% for Austin. It is 5% for the state of Texas and around 9. For the country. Next slide. We have a five pillar strategy to support our mission of delivering clean, affordable, reliable energy and excellent customer service. Our approach is unique because it's very comprehensive, including charging infrastructure equity and affordability, fleets and new mobility, outreach and education. And grid integration, all of which we're going to touch on today. I want to make paint for you that of these five pillars. We have 25 programs sitting underneath them. And for us innovation, extends beyond technology into program design and partnerships and stakeholders. So we really want to take a holistic view and

[9:44:02 AM]

approach. To this sector. Next slide, please. Our rebate program has rebates for residential commercial and DC fast stations from 1200 at a low all the way up to 15,000 at a high are plugging everywhere. Driver program is really important because one of the challenges in electric vehicles is an inconsistent user experience across many charging stations, so are plugging everywhere driver program provides that consistent user experience across 1542 level two ports. And then you know, we support DC fast charging. We have 30, DC fast chargers in our network, and we're going to talk more throughout this presentation about DC fast charging as well. Next slide, please. So where is all the E V charging taking place? Well,

[9:45:02 AM]

important to understand that 80% of it is at home and 20% of it is, you know at public stations with which with which are providing that mix of level one, level two and DC, fast charging next slide, please. This slide really? Just make sure that you know we're applying the right charging infrastructure to the right application. There are three levels of charging that we have in our network level one level two and level three. Level one is your standard 120 volt outlet and it's not intelligent. Non communicating, but it's a good application for residential and overnight charging level two. Charging is the majority of our 1542 ports network public charging, that is level two chargers are also available for home or they're available for the public, and they they're

[9:46:03 AM]

faster. And you know we as I said, previously we do deliver or we do offer rebates for their incentive. DC fast charging, are the fastest but it is. It's important to understand they can charge a vehicle in minutes as opposed to hours. They have very high power density. To put it in context, a single DC fast charger. Could draw as much power as a large commercial building, so they have much faster charging speeds. But there needs to be considerations for cost physical space and grid impact. So important to

understand the context of Wright matching the right charger for the right application. Next slide. In terms of our total network. I wanted to paint the picture for you of yes, we have 1542 level two chargers in our network and 30, DC fast chargers

[9:47:03 AM]

. Outside of that there's probably about another 1000 chargers that are not associated with our network and not branded E. But within the ones that are in part of our network. We only own an operating 19% approximately 292 of that 1542. We work with the others. They are our partners. And they are, you know, so that 81% private, participate in the Austin energy network and provide that consistent user experience they sign a hosting agreement with Austin energy and we work with them through that hosting arrangement. You know, in our history of this program, the 1st 10 years we were focused on growth. And you know, we want the next 10 years to be focused on reliability and performance. Next slide. Thank you, Richard

[9:48:06 AM]

in good morning. As we discussed charging infrastructure and operational excellence. I want to give a status of the health of our charging network that we have here in Austin as well. So it is an industry wide known issue that charging infrastructure as experienced severe outages over the last 10 years, and I want to address our portion of that in January of 2023. We looked at a 28% outage rate of our charging network and since have reduced that to 17% through some actions that we've taken to include replacing legacy hardware. Performing regular maintenance on these stations and working with our maintenance contractor to make repairs. We want to take that even further. And then we have an action plan the next steps to reduce the outage from 17% even further to include we're going to be running a preventative maintenance schedule, starting in April to visit all 5900 and 42 of our charging station courts. Where we can do advanced diagnostics on these stations and get direct reporting for us to be able to make repairs as well as to communicate that to our station host partners that

[9:49:08 AM]

have these cited on their property. We're also looking into extended warranty and service plans that conservative stations and then one of the barriers is finding available replacement parts for some of these more modular system, so identifying various streams for these replacement parts and replacing them will significantly reduce that outage as well. Next slide, please. In addition to the charging infrastructure, I'll touch on the other four pillars, the next being on our equity affordability efforts, with the support of the council resolution, we were able to double our rebate for rebate for E bikes. On January one of this year, Austin energy's had an active rebate program for electric bikes since 2013 by starting on January one. We were able to double that to \$600 and then additionally, cap customers or customer assistance program customers. We worked with the asked Austin transportation department to increase that rebate to up to \$1300 for those specific customers as well. Additionally we do outreach and education are sorry on the equity and affordability side.

[9:50:09 AM]

We have a program called TVs for schools where we have worked with Austin independent school district for not only installing charging infrastructure for their local area schools but also working with eco rise on developing a curriculum to create an educational living lab that would be able to be used in schools. It's a bit available in English and Spanish and so far over. 6500 students have gone through that curriculum. Next slide, please. On the fleets and new mobility side. I want to highlight the work that the city of Austin's done an electrifying their own fleet, there are over 275 vehicles that have been incorporated into the city's fleet so far, and that number continues to grow and the cost savings were projected to be around \$3.5 million over 10 years. We're projecting for above that so far, just because of fuel and maintenance cost savings. And then, additionally , as we've installed the charging infrastructure to support this turnover, we've worked with the development service department and getting a new quick turnaround permit for Evie charging established to

[9:51:10 AM]

help expedite the speed of which we can install charging infrastructure. I like to highlight them the fleet side to the work being done with capital metro and their bus electrification efforts. Austin energy's worked directly with capital metro well before even the first busses came in the talent of make sure that they had an electric charging depot in north ops are sorry the north operations center that be prepared for installing future charging infrastructure for their entire bus fleet up there. Next slide, please. You know, on outreach and education. We do a lot of general outreach the public but we also do a lot of targeted outreach for our customers and stakeholders. One of the resources we have available is R E V buyer's guide that we host on our website. That has a real fight real time inventory of both new and used electric vehicles in the Austin area where we work with not only the local dealerships but the auto manufacturers to get that inventory up there. Additionally our customers can see through that buyers. Guy we're charging infrastructure is where

[9:52:11 AM]

incentives would be available, whether it be on the local, the state or the federal level, and then that buyer's guide is also available in English and Spanish as well. In the event space, we worked with the electrify expo for the second year in a row out of circuit in America is that was a electric vehicle, charger electric vehicle specific event that over 13,000 attendees in it where our customers can, you know, do right and drives to the TVs, see new technology and then engage with both us but also a lot of industry experts on on the technology side out there in real time as well. And then finally, I mentioned events for schools as a program, but in addition to the infrastructure and the curriculum, we've also been able to host tirz and with the students and staff. They're both in school as well as that some of our facilities for some of our projects. Next slide, please. And then I'll touch on the grid integration side. As we saw the growth of electric vehicles is growing very rapidly here. So what that looks like for us as utility and how we

[9:53:12 AM]

manage that. Charging the first project we did was a behavioral one where we had a time abuse or time specific charging rate where customers could charge off peak for a flat rate each month. So we went from there and the next project of how it is how we do manage charging or active control, charging, and we're in the phase of launching this right now we're doing customer enrollment, as well as some beta testing with the city of Austin, fleet department and assets, but this is where customers will enroll in a program with its smart charger will be able to control charging during peak periods to root deuce that demand and strain on the grid and then customers will have the ability to opt out of that if they do need their vehicle, so they want to participate in our demand responsible that day. And then one of the areas we started looking into a few years back as well is vehicle to grid in how this will impact our how well actually physically connect these vehicles to grades or homes, and we did a demonstration with our partners pecan street as part of a larger battery grant effort, where we actually connected to Nissan

[9:54:13 AM]

leaf to a home with a software platform overly on top of that. Ex wife, please. So collaboration has been the key to success over the last 12 years of this program without our partners, whether government on private or community none of the work to identify and solve real world needs would be possible. Next slide. All of that partnership and collaboration, in addition to or working with council has led to some really great recognition over these past 12 years as well. So some of which you see on the slide, and I also wanted to just recognize and highlight the team and thank them for their hard work over the years to make all of this happen. So it's an 11 person, strong team and with that that is the end of our briefing, and we open it up for

[9:55:14 AM]

questions. Thank you, Mr Dennis E. I think the city manager has questions. Just a quick question . And you guys mentioned how fast we're one of the fastest growing in terms of new vehicle registrations for

easy and you've talked about the I guess the constraints of our charging system the three levels that you have if that growth continues at some clip similar to that what a capital improvements are you do you have in store or scheduled to be able to deal with. With that issue in terms of strange on the grid, as well as additional charging stations, so we work really in partnership with the other parts of the utility to scope out, and map out, depending on what level charging you're talking about and where it's going to be located. What the impacts are so Lisa martin who you've heard from before. You know, and I work on that and partner with that to make sure that you know

[9:56:14 AM]

they're not going to be, negative impacts on the grid as we continue to build out. I just whenever you guys get a chance at one of our meetings, I just like to know have a little more detail around that. Yes thank you. Absolutely thanks to the manager. Yes. Council member harper-madison. Thank you. Chair. I appreciate it. I have a couple of questions one. I will admit, anecdotally. I have a source of frustration. I have an E. V and I can't charge it here because what I'd have to do is open up my charger point app, run to the stairwell and get it service and then be able to and then run back over in time for it to click. I'd literally can't charge my car here because of the service and the garage. There's no connection between my , I don't I don't know. A T and T people apparently have it great up in here, but I'm T Mobile and I do not have a great up in here. I have to stand on one leg in the corner of my office to use my phone. I cannot charge my car here, so I'm

[9:57:14 AM]

curious if there is some infrastructural consideration that we can consider because I know I'm not the only one. I've seen. People try to make that dash and they can't get it in time. And so I'm just curious if that's something we can do from an infrastructural perspective, or if that's just you know, just your service provider. It's just who you stuck with it in terms of your ability. I'm I'm I want to make sure I understand the question between chargers and then the, network connectivity. Particularly for our own facilities, our own buildings, we would be able to engage in those discussions and consider additional chargers. At our own facilities, so there's no constraint there. There are considerations in terms of the rest of the infrastructure network that the city manager referred to. So yes, that on our list to try to figure out if we can find a solution for that. I appreciate that. Thank you very much. Then the other question I had was about, you gave the slide which I thought was really great. You guys you know, showed us what are the cost savings for the conversion of the fleet? As

[9:58:16 AM]

I'm actively engaged in converting some of my fleet services sites, remediation cost is a real cost. I wonder if that's a line item in your considerations around how converting the fleet will help us out and not one that I'm asking you for actively now. I just I would like to see that laid out if you could. I mean, I'd like to know what it what it looks like for us to not have to do remediation for every single fleet services site. Moving forward. It looks like the city manager may have an answer. Remember? I think you raise that issue before we've got a on our list to figure out what type of remediation gets done and how we go about funding it. And this is my curiosity, though just to be clear city manager my curiosity is just like I'd like to see what that cost is what the real costs. So when they're saying the conversion of our fleet they can, they can show the real cost savings would like to see what the real cost savings is for not having to remediate these sites. That's a thank you. I appreciate it. And then E. V S so I've said this before. I think a lot of folks, especially with the last mile modes of transportation. I

[9:59:19 AM]

don't think people ever anticipated how many people and housing authority projects would use those bikes and scooters and they use them a lot, and they take really good care of them because they become like sort of singular points of access to mobility. I really think they were the last people to be considered in the conversation. In which case I'd like to make certain that as we are moving forward in this TV conversation that we're working with folks like hakka and our other partners to make sure that you know, so there's some incentives that get offered to people who go through various programs. I wonder if an E V at the end of a program about financial literacy or something? I'm just curious to see what we could do their. Yeah, absolutely. And I will tell you we absolutely are committed to our partnerships in those areas and a key insight is both with the bikes and with the vehicles ride and drive. We know that a key to unlocking this with any customer group really is the ability to experience

[10:00:20 AM]

what it's like. To have an E bike ride or to ride in an E. V and that's why you know, we specifically programmed for that we specifically work on those types of events both at electrify expo and at haka and etcetera. So we have that built into our program. That's awesome . I'd love to hear it. So another anecdote. This is tax season. So a lot of folks in district one and probably did two and three and four. They're about to go to the lemon lot and waste all their tax. Return. On a 21% a P. R. Lemon they're going to buy a car that's going to get report or breakdown on them. I'm just curious if we could do some timing around you know, we call it a hood rich when people are hood rich from my April to June. When people have money. I wonder if that would be a good time to just really do some specific, targeted focused efforts, so to avoid them buying that lemon

[10:01:20 AM]

that's going to break down on them. Anyway and then I think there was one last question I had was about senior tech. You guys said something about senior tech. I keep thinking about that watching my mom type in all caps and trying her best to keep up. I recognize that there is a significant gap to her access to tech. So I just wonder what that looks like. You don't have to answer right now. I'm just curious. Moving forward. I'd love to know what the senior tech program looks like and how we as a body could help fortify and support that effort. Lastly scholarships, education partnership programs, workforce stuff around this E V industry. It's clearly not going anywhere . So I just wonder again. This is not a question. You have to answer now. But I wonder one what our efforts are into how we can support those efforts and we can expand on that. But I will tell you that we are actively looking at making sure that we're leveraging all the, federal, you know, all of the grant and dollars that are

[10:02:22 AM]

available at this point, because obviously there's a lot of money floating out there with associated with I, R a and another other sources. So yes, to your to your statement. I appreciate just presentation has been very helpful. Thank you. Thank you. Council member mayor pro tem Ellis. Thank you. Chair I've got just a couple of questions and statements. Number one is how would we advocate for more charging stations in southwest Austin? Can we just set up a meeting and let you know where folks are saying it would be really helpful to have more access to it to them. Yeah, we absolutely be open to a meeting to sit down and, explore that further. Fantastic I'm hearing that a lot of folks have been asking about that, are the statistics for how, how many people are qualifying or applying for rebates? Is that available on the Austin energy website anywhere just so we can track people who are entering the electrification. Market. Yes

[10:03:24 AM]

for each of the programs we have. There's certain criteria on eligibility that makes palpable and all that's available on our our website on plug in Austin .com. Okay how many more people are getting the rebates it? I'm sorry, attracts the criteria and then we have, quarterly numbers that we report out in terms of rebate participation as well. Okay that's fantastic. I know we had done some work with Carl poppa before his retirement on increasing the bike rebates. Especially and on that note. Y'all are sponsoring a cargo bike festival next month. Do you want to talk a little bit about that? I don't have the specific details about about, but I encourage everyone to attend that. So that's great. We just tweeted out some information on it. And it's Austin energy and by Texas partnering to do a cargo bike festival. I know that environment. Texas had done a similar one with Austin energy. A couple of months ago, and they called it an E bike rodeo, but

[10:04:24 AM]

it's not opportunity for people to test ride them, see if they're going to work. For their family's needs. And to really understand who you know which vendors are in town. How the rebates work. What qualifies and things of that nature, so I'll just give it a quick shout out. But it's Saturday, may 13th at 11 A.M. At 900 Springdale road and Austin energy is a co sponsor of that event. Thank you. Thanks thanks, mayor pro tem. I'm going to expand a little bit on a couple of the questions that some of my colleagues have asked it seems every day we are seeing another company, another private company get into the E V charging business. An article yesterday talked about Walmart, to begin will begin installing chargers at their stores, and these would be publicly available in their parking lots, although not every company is making them available publicly like that. So, when we consider where the new expanded mapping for the fast chargers

[10:05:25 AM]

will be located. And given the questions, for example, that the mayor pro tem has asked has Austin energy had had conversations with companies that could provide the public private partnership to expand our numbers more quickly than perhaps the city can on its own? Yes, we are having those meetings and we routinely meet with, you know, vendors like Tesla and others to talk about, you know, you all know that Tesla announced 3500 chargers that they're going to be opening up, of their charger network to non Tesla vehicles, and we're meeting with them to try and understand how many of those are actually going to be in the Austin energy service territory, and they've shared with us their criteria. For considering which would stations they're going to free up in which ones? They're not, considering the first part of your question. We definitely support and advocate a private public partnership model for

[10:06:27 AM]

continued expansion of the DC fast charger network. So that brings to mind an item that I'd like to have included on a future agenda, and that would be an update on where you are with those conversations. I will point out that you were talking earlier in your presentation about impact on the electric grid, and that that is a consideration for the city of Austin in putting its own fast chargers out there. But I don't hear and it could be that I'm just not hearing the reporting or the information from y'all. I'm not hearing that same consideration with regard to private and private entities coming in and installing them. They're going to have an impact on the grid as well and they intend to sell the energy. Just like gas and pump. They're going to make a profit from providing the energy whether it's at a parking lot at a big box or behind the gate at a private residence, or, for, for example, Tesla, so I want to track that.

[10:07:28 AM]

I think the game changer with TVs and a really important aspect of it for this diocese in the city of Austin is the fact that we're converting from fuel powered engines to clean engines, clean energy, but if it's hard to get to those chargers and then that transformation will lag in time. And I think we're looking at issues of equity and fairness there. And in my mind, the landscape would maybe in 5 to 10 years for every gas station that we see on every corner. And every 7 11. Those will have fast chargers there. They will be ubiquitous the same way the gas pumps are and the gas pumps eventually will kind of like payphones or rotary dial telephones. They will be something that we're not just Al gic about, but we won't see them in front of us. So for me at

[10:08:31 AM]

least, and I think most folks who are devoting time and energy to the expansion of electric vehicles and the availability, the ability for just the regular Joe to actually operate one for all that. That includes these are areas where we really need to dig in and provide good information to our community, because I think we are so on the leading edge that we can even push that edge a little bit further forward. Is that something that Austin energy can commit to you? Yes I would say we can definitely commit to that, okay? Yes, council member Alison alter. Thank you, really excited with this update, in 2019, I authored. Resolution. I think council member pool, co sponsored. That you know, look to the electrification of transportation is really important part of our future and ask that that be central part of the climate equity plan, and it

[10:09:33 AM]

is essential pillar in that I think this work is really, really important. As part of that work, the one of the things that we looked at was sort of building codes, which I don't believe that you spoke to today . So can you speak a little bit to the new energy building codes and their ability to, the plans to make those, so that we have TV ready buildings. Sure so we know that electric ready and E V ready is part of the 24 E C. C or we have people that are participating on those committees, and all indications are it will be included on the 24 code. We have not considering the leadership change at D. S D . We have not yet met with the new leader. You know of dst, but I've kind of, you know, schedule those meetings to be in contact with that person and then try to map out. First of all understand

[10:10:33 AM]

where gsd is, is on this issue and then map out a strategy going forward. So with the building codes, we adopt them with a lag or because if it was the 2024 code, it wouldn't be adopted internationally till 24. Then we tend to adopt that with a bit of a lag. Is that correct under 2021 now and then I guess it would be whenever 2024 is adopted. City manager would like to ask that you help facilitate those conversations at the appropriate time. With vsd. We have a lot of council direction already. In that, Bain and the climate equity plan. That's a key element of that, would really like to see that? Yeah I've got that on my list, and we'll make sure that meeting happens and then report back to council in terms of when, when adopted. When would it go into effect? Thank you. And then. With respect to the fleet. What

[10:11:34 AM]

do we need to do to accelerate? Adoption by our fleet. Of E. V S even more. Good to have a camera because we do see in the news quite often. Other cities that are taking those light trucks and doing more with them with respect to TV or hybrid. Then it seems like we're doing even police cars they have, you know other cities that have been able to figure out outweighs to do that. Sure I'll say the vehicle model availability is kind of put that in the fast lane to, especially when the F 1 50 lightning started coming in. So having more, segments of our fleet to have vehicles, availability. What this city bus fleet does they look at, kind of told service assessment of like miles travel for these vehicles as well as the functions they perform, and then sort of an electric first policy of how those matchups so the biggest, I think push factor is going to be that vehicle availability especially is beginning to medium and heavy duty vehicles as well. Okay so it's really a

[10:12:35 AM]

market that the trucks aren't out there for you to buy at this point, correct? Yes, some of the mileage is have been less than what the service needs would be. And so no, I don't want to sacrifice any sort of operations for that transition. But those those are increasing as time goes on. Thank you. And then, we've discussed cap metro, some and their electrification of their fleet. I know I S D is also committed to electrifying their bus fleet. How are we supporting that work? With with a I S D. We're going to work with them specifically on what? That they're charging depots would look like at their school. So everything from getting the service established from a parking lot that had very little electrical load into kind of a large service as well as some of the software needs and charging needs that they would have for electrifying those busses. The infrastructure is very key part of that. Thank you. I'm city manager. I really appreciate your question at the beginning about you know, what do we need to do in terms of our infrastructure to be ready. I think that's extremely important , especially if we reflect back on the rape cases we've had and

[10:13:36 AM]

the challenges that we had with Austin energy, one of the reasons that we needed to re changed the way the rate structure looked was because people were conserving energy more. And so they had moved down. The cost curve. And if people start to use electric vehicles will be using more energy, which has an impact on the business model that we need to be prepared for with respect to generation. In but also in terms of how how we are thinking about addressing challenges that we have within our system and as has been pointed out, our ability to make that transition depends on how much we plan in advance. For the level of demand and infrastructure that is required. And finally, just as someone who's driven and electric vehicle for, almost 10 years now I really encourage more of those programs where people have the opportunity to try driving any V. It really is very different, experience and, you can save a lot of money on

[10:14:38 AM]

the gas. You don't have to go to the mechanics. It really is a wonderful way. To drive if you're going to be driving, so I think those programs that you have for people to experience that and try that out are important. Thank you. Thank you so much. Council member, and I agree with you on that. Yes, Ryan alter. You want to close this up? Just a quick question. It's a really a lack of understanding on my part, the charging stations that we build out or what are the financials here? Do we pay for the charging station, and then we lease it to a third party? The third party pays for it, and then they lease it. To it. I I'm just totally unclear on your sure there's a few bottles so we physically purchased, the 1st 125 or so charging stations to grant funding. We expanded that out where now private companies or businesses will pay for the charging installation that will offer an incentive in the form

[10:15:38 AM]

of rebate to join our charging networks. So the upfront investments made by, private companies, whether it be retail , multi family properties, workplaces, and then we'll give a financial incentive in the form of a rebate and take over some of the operations of that to join our network to create that seamless customer experience. So and is the rates set to be met? Neutral or are we making money on this? We're losing money on this. We have to rates for access. We have a subscription rate and then a time based rate so we offer we offer both in the subscription. It kind of acts like a gym membership. The values more on how much you use it. And then we have a time based rate for customers that may just be in town, visiting or with the amount of charging at home, public charging might only be minimal for blood of customers. And so how are we doing? On a system wide. Are we making money or we got even. Or even I'd say that the time based rate, actually, helps out more from the subscription based rate, actually. Thank you.

[10:16:41 AM]

so much. I think from this item Mr Riley and city manager to future items would be on the fast chargers. Updates on the conversations with the private companies to see how that progress is being made, and the location of those were looking for an expansion of the fast charges throughout the city. I'd like to see more than 30, for example. And then I think on slide eight. There was some indication of a drop in the percentage of number of charging stations that were out of that were out so the outages had reduced from 28% down to 17% want to track that, and I also want to understand how long the outages extended what the duration was for those. Alright seeing no additional questions. Quick question. Sure council member Fuentes. Thank you customer Ellis for bringing up the need for charging stations in southwest Austin. I also want

[10:17:42 AM]

to highlight the need for charging stations in southeast Austin. I think this really underscores another example of our south Austin gets left behind an infrastructure needs. So more prioritization, and I know that chair. Pool also has a commitment to equity as we build out the charging station infrastructure. My question is around recently the purple line with capital metro was delayed a couple of years. Many in our community are frustrated with the delay for the pleasant valley line, and one of the main reason for the delay is the charging station or the charging infrastructure. The electric busses. You talk us through any conversations you have had with cat metro and or is there a partnership opportunity with Austin energy and cap metro to help expedite the infrastructure needs of the purple line? I can speak to the interactions that we currently have with them. We do have very, robust conversations in standing means between their build out of where

[10:18:43 AM]

they're going to need en route, charging, to include, you know, supplying the electricity there as well as some of the infrastructure needs for the actual charging stations. So we do have very active communications between our service delivery team as well as cap metro staff of where they're planning to build this out, and so, I'll look into what those complications maybe in terms of the timing you build out. But we do track all of all of that work associated with project connected and how it impacts cost energy. Thank you. I appreciate that any anything you can do to help with the process is great. Thank you can weigh in just a wee bit on that cat metro piece. I think it was issue of the bus is not being available. It was gonna was taking longer for them to be delivered. Thank you. Thank you, Mr Freeburg and Mr genesee. I think that's it for questions on these items. We are taking the winter storm after action update, up during the work session with the other department reports. We've

[10:19:43 AM]

mentioned a couple of future items so far. Any other future items at this point? Yes, council member cap. Thank you. Chair pool. I'd like to know more about customer service and engagement with Austin energy. I think it's important that we discussed customer service and engagement strategies employed by a customer satisfaction, communication efforts and outreach efforts and also like a briefing about strategies for promoting workforce development and training programs at a E. And maybe something about the regional science fair. That just occurred. And then I want to just take a moment and thank everyone who came here today to speak to us from a and R meeting. Thank you. Thanks so much and thank you to the staff and it is now. 10 21 and I will adjourn the meeting of the Austin energy utility oversight committee. Thank you all so much.