

Austin Energy Utility Oversight Committee (AEUOC) meeting Transcript – 12/12/2023

Title: ATXN-1 (24hr)

Channel: 1 - ATXN-1

Recorded On: 12/12/2023 6:00:00 AM

Original Air Date: 12/12/2023

Transcript Generated by SnapStream

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[9:00:19 AM]

>> Thanks, mayor. I'm Leslie pool chair of the Austin energy utility oversight committee of the whole of the Austin city council. See, we have nine council members on the diocese or any one remote out today. So we have nine of 11 here with

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we have nine of 11 here with council members like the mayor pro tem has joined mayor pro tem has joined virtually and great and councilmember Ryan alter hopefully is keeping babies from crying right. And so we are convened at 9:01 A.M. Tuesday. Let's see. This is the wrong information in front of me here. And let's see public communication. We'll start with public communication. See, six people have signed up. And let me go ahead and call the names in this order so you all can come down closer to the podium. Each person will have three minutes. We'll start with Al Braden. I see Al out there. Cyrus reed. I see Cyrus kiba white. Is she here? She may be here a little later. Kamal cook. Mr. Cook, come on down. Timo turn and Shane Johns Ann is

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turn and Shane Johns Ann is time here? Oh, you're okay. Great. And Shane Johnson. All right, Al, you are first up. Good morning. Glad you're here. You have three minutes. If we could keep time. Thank you.

>> Good morning, chairwoman pool, mayor Watson, council members and Austin energy staff. I'm Al Braden, a district seven voter with another old T shirt. This proclaims solar. See gas? No. 2015 council soundly defeated a combined cycle natural gas plant at councilmember pool and now congressman Greg

Casar were among the leaders who reaffirmed that Austin would never build another fossil fuel plant. Solar with batteries which are now available, would be our fuel of choice to eliminate carbon emissions. The dramatic purchase of 600mw of solar set a record low price that bent down the

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low price that bent down the cost curve in Texas. So why this old shirt from 2015? Same message. Solar C gas? No today you will hear from Austin energy about a hydrogen capable combined cycle. Green energy generator. That was the primary focus of their studies. This is nothing but a last gasp. Methane powered fuel plant at burning natural gas until someday in the far future that it might possibly be convert to run on 100% green hydrogen Ann. When will that be? Who knows? What will it cost? Who knows? And whose district would Austin energy build this new fossil fuel plant? These are important questions for council to ask. Huge technical and economic challenges must be overcome before green hydrogen becomes competitive for power plant use. As shown in a 2023 department of energy hydrogen liftoff report. I sent you a graph from

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I sent you a graph from yesterday on email. I've read about green hydrogen's promise for 20 years and could talk at length about its potential value in the renewable energy world. But I only have three minutes, so the short answer is that power plants are at the bottom of the list for beneficial uses. It is unlikely to be available for Austin power plant before 2035. This is simply the wrong direction, the wrong application at the wrong time. By the time it is available, we'll have enough renewables, batteries, smart grid solutions, demand management and improved transmission to not need it. Austin energy is simply modeling a new fossil fuel plant 3 to 4 times the size and emissions of sand hill that we are scheduled to close by 2030 or 2035. Simply rebranding the 2015 gas plant proposal, all while we are actively working to close all of Austin's fossil fuel burners by 2030 or 2035, only 6 or 11 years away. It makes no sense to build

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away. It makes no sense to build a methane plant that would run 40 years or until green hydrogen becomes available. We must do better with our zero carbon climate goals for Austin's energy. We need a well thought out 600 megawatt battery portfolio by 2030. That's where we should place our efforts. I'd appreciate the opportunity to talk to you and your staff about this. Thank you very much.

>> Thank you, Mr. Braden. Mr. Egan, next. And you have three minutes. Good morning, Cyrus.

>> Thank you. Good morning, mayor. Good good morning, council members. Cyrus reed, Sierra club. I'm actually here just to talk about process. I'm a member of the appointed by council member qadri. I'm also the chair of an working group. The planning resource working group. I'll send a note to your offices with the with the website. But we do have a website. We've met a total of nine times. We've asked lots and lots of questions to Austin energy. They have responded to those questions as in addition,

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those questions as in addition, we have examined their scenarios. They have modeled for 2035 carbon free and we have asked them to model some additional scenarios, both to get to a 2030 carbon free goal and a 2035 carbon goal, carbon free goal. Our group, which consists of five members of the four members of the rmcs and about eight members of the community is anxious to see those results, which we expect in January. We are meeting another time in December to begin looking at recommendations and then probably several times in January we will then take those recommendations, send them to the full to all of you and to Austin energy for further input. But I will say, the things that we so far think are on the table and are available right now are more local solar energy efficiency demand response, battery storage. Those are the things that are tried and true that we can do today. Other technologies like hydrogen, like

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technologies like hydrogen, like geothermal, like multi-day batteries are not yet commercially available, and we should be very cautious about making big bets on those right now. We should continue to look at them. So I'm just asking city council to be cautious in betting on a new technology and focus instead, at least in the short term, on those technologies. We know that can meet the demand to get away from energy that produces carbon. And with that, I'll send you the link to the to the website. And we have lots of information. We've had lots of presentations burns on hydrogen, on geothermal , on multi-day batteries. Et cetera. And look forward to working with with you all and with the full and Austin energy hopefully to come up with with good solutions to move us forward. Thanks

>> That's great. Thank you Cyrus. Glad you're here. Kiba white. Good morning, kiba glad you're here. You have three

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you're here. You have three minutes.

>> Good morning. My name is kiba white and I'm here on behalf of public citizens Texas office. We work to speed the transition from fossil fuels to clean, renewable energy to preserve a livable climate. And

that goal of preserving a livable climate is very much in jeopardy. Scientists are telling us in no uncertain terms that we must reduce emissions now by phasing out our use of fossil fuels somewhere along the way, in Austin energy's resource planning, the need for immediate emissions reductions seems to have been forgotten in the current resource plan includes targeted emissions by year until 2035. Reductions were intended to be greatest in the early years. This matches with the community wide greenhouse gas emissions goals adopted in the Austin climate equity plan. These goals were to achieve net zero by 2040 with about three quarters of the reduction occurring by 2030. These goals are both science based and guided by equity

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based and guided by equity principles as established city policy. They should be the bedrock of the update to the resource plan. Austin energy's initial proposal is not aligned with these goals. Bill adding more gas burning generation would increase emissions, calling it hydrogen capable doesn't change that. The best case scenario, which Austin energy staff say is uncertain, is that generators switch to burning hydrogen at some undefined point in the future and that hydrogen is produced with very low emissions. In the meantime, Austin's emissions would go up there are several factors that make the hope of low emissions hydrogen uncertain. Currently green hydrogen produced by electrolysis powered by renewable energy accounts for only about 1 to 2% of hydrogen production. It is expensive and costs fluctuate with the electricity market. The inefficiency of hydrogen production only about 30% once it's burned in a power plant is a primary challenge of the fuel. So ensuring that green hydrogen

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So ensuring that green hydrogen results in minimal amounts of greenhouse gas emissions is complicated. Production must either be behind renewable energy installations or must be closely matched in time with renewable energy production. Otherwise, emissions could increase if electricity made with fossil fuels is used to produce hydrogen and then burned to make electricity again when renewable energy used for hydrogen must be new resources to avoid cannibalizing renewable energy currently being used to decarbonize the grid and hydrogen leakage must be very low. So hydrogen has a 20 year global warming potential about 37 times greater than carbon dioxide. That goes up to about 100 times on a ten year time frame. And as the smallest molecule in existence, it is very leak prone and similar, but actually worse than methane, which is already a problem. Even if the perfect green hydrogen system can be realized. Burning hydrogen still isn't clean. Hydrogen produces up to six times the NOx emissions. Burns

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times the nox emissions. Burns is burning methane contributes to ground level ozone formation, which Austin is already struggling with. Thank you and we look forward to your leadership.

>> Mr. Cook Kamal cook, good morning. Mr. Cook you have three minutes. Welcome

>> Thank you. Good morning. My name is Camille cook and I work with public citizen as a climate and clean energy policy associate. Like everyone else, I'm also here to talk about Austin energy's proposed update to the resource generation plan and I'll get right to it. Austin energy should be very cautious about using an untested technology like hydrogen for our city's power generation, rather, Austin energy should rely on the tried and true mix of renewable resources that have only improved year after year. Hydro gen is touted as the energy world's new solution to many of our problems, but it hasn't been tested at scale and there are widely different estimates for how affordable it will be. Of the many use cases for hydrogen like ammonia production, steel production, or as a fuel source

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production, or as a fuel source for long distance trucking utility scale power generation requires the lowest pricing of every use case to make it viable for to make viable profits. According to the department of energy. This requires all its upstream and midstream infrastructure for like new pipelines, new storage infrastructure and electrolyzers to not only be effective at scale, but also incredibly cheap . Additionally, burning hydrogen is not as environmentally friendly as some make it out to be. Hydrogen needs to burn at a higher temperature than natural gas for the same energy output. Greater temperature combustion creates more nitrous oxide nox, which rapidly reacts in the atmosphere upon combustion to create nitrogen dioxide, ozone pollution and fine particulate matter. All things that pose health risks to people who live near these plants and environmental risks for the Earth. This is all to say that it is very optimistic for to cite hydrogen as being our energy solution when there are so many other options out there. But don't just listen to me. Listen to the utility managers, investors and engineers who are betting on solar batteries and

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betting on solar batteries and wind power in the ERCOT market through 2030, 130gw of solar, 103gw of battery storage and 22gw of wind are set to be interconnected to their ERCOT grid. Do you all know how many gigawatts of hydrogen or gas are set to be interconnected? 13. As of right now, that is, as of right now, that is only for gas like the rest of Texas. We should be investing in proven clean energy solutions like energy efficiency, demand response batteries, wind and solar. Thank you all so much.

>> Thank you, Mr. Cook, timo turn, Mr. Turan, welcome. Glad you're here. You will have three minutes.

>> Hi. My name is cuauhtémoc. Turan. I'm a lead organizer with Texas campaign for the environment and a resident of district two. Early this summer, I had the great honor of working with some of the offices here. To become the first capital city of a major U.S fossil fuel producing state to call for a treaty

that would end expansion of new coal, oil and gas projects. I'm happy to update the council that soon after the California state legislature and

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California state legislature and the countries of Antigua, barbuda, timor-leste and Palau have endorsed the treaty. Joining us and the Hawaii state legislature. However, I am here today because I'm concerned and Texas campaign for environment is concerned with the proposals Austin energy has put forth in their resource plan update if they happen, it would be a break from the resolution for a fossil free future and impossible for the city to meet its climate goals on time. Austin has the ability to switch to clean energy and demonstrate to other cities and the state as a whole that a just transition is possible. We have the best climate plan in the state. Methane is 80 times more potent as a greenhouse gas than CO2. Austin energy cannot develop new fracked gas plants if we are aiming to undo the risks of climate change. Every day, Austin residents are grappling with the consequences of the climate crisis like soaring energy bills, poor air quality and extreme weather. For my personal experience, the year after year record breaking heat of the summer is resulting in electric bills that are twice as much as those in the fall. And mind you, we have not even officially started winter. For

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officially started winter. For me to compare with additionally, comparing my bills over time, this summer was indeed more expensive than last, including the fall when temperatures should drop. And finally, during a winter storm, when the power lines went down from the trees, my house went a whole week without power. I've experienced an expensive bill, caused a delay in payment, which then is topped by a more expensive bill and a bad cycle of paying them off. I want our city to end to ease these worries from our residents and develop a clean and affordable future for all of us. It's clear that the state needs more clean energy. We have reports showing so. So let's do it. Thank you. Thank you.

>> Mr. Turan. Is Shane Johnson here? Come on up, Mr. Johnson. Welcome and thank you for being here this morning. You have three minutes.

>> All right. Thank you for your time. Shane Johnson, he and pronouns. So echoing what my colleagues and organizational partners have said we want, you know, we are deeply disappointed

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know, we are deeply disappointed that Austin energy seems to want to build more dirty power plants that are really taking us a step backward rather than forward. And in addition to having not done enough to shut down the fayette power plant, we must stop any proposal that is going to increase

pollution and builds a new power plant that will burn fossil fuels for every day. Austinites the climate crisis like Emma was talking about, his experiences has meant record high bills, unhealthy air and unprecedented extreme weather. I don't need to belabor that. I know you all have heard that a lot. But we also we need Austin energy leadership, not just you all to understand that and to put that into practice. When we say they want to build a new fracked gas plant or, or, or keep burning fossil fuels, we're talking about the fact that when you dive into the resource plan

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you dive into the resource plan presentation they gave, they talked about building this hypothetical article hydrogen power plant, none of which exist in the us and don't think any exists in the world. But what it would actually initially do is burn a blend of gas, not of methane and hydrogen. So in effect they would be building a new fossil fuel power plant that they would hope as technology advances, transition into to burning 100% green hydrogen or green, as they claim that would be exceedingly difficult. They've given there is no supply of green hydrogen in central Texas and none in Texas. That would be enough for a power plant of that size. So we need you all to understand that and to oppose such a ridiculous plan . We don't need politics from can't remember when the previous city council last rejected a gas plant 2014 2015. But such ideas

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plant 2014 2015. But such ideas need to stay in the past. We need you to understand that the people of Austin are calling for a responsible resource plan that would not include these gas and or hydrogen power plants that even the hydrogen, if it burned 100% hydrogen, would cause a lot of more pollution and instead as quickly as possible, retire its retires. Our stake in fayette continues expanding assistance for high energy bills increases the battery storage and local and community solar, particularly for renters and multifamily housing, and continues increasing investment in low income home weatherization. And our ultimate goal needs to be committing to go carbon free by 2030. It is unacceptable that our is refusing to cooperate with the working group or consider a 2030 goal.

>> Appreciate you being here, colleagues. We have think 6 or 7

[9:19:40 AM]

colleagues. We have think 6 or 7 items on our agenda this morning. And what I want to do is take our two action items, one and two. First, it and one is approval of the September 19th minutes and the other is approval of our dates for 2024 for the committee. We then we will jump to items four and five which are the quarterly update. Then we'll go back to the general manager's report and we'll take up the

generation plan after that. So so knowing that, do I have any do I have a motion to approve? Move our minutes from September 19.

>> So moved the mayor moves and is there a second council member Vella?

>> Are there any changes or amendments to or any comments? Is there any objection to adopting our minutes, seeing none. The minutes for September

[9:20:41 AM]

none. The minutes for September 19 are adopted. The next item these are the dates for our meeting in in meetings in in 2024. I want to read them the proposed schedule Janet 330 February 27th April 30th, July 6th. Teen. September 24th October 22nd November 19th. Teen and we will continue to do these meetings before work session at 9 A.M. Are there any concerns with these dates? I believe they've all been vetted with your office. Is are there any amendments or comments? Is there a motion to approve? Thank you. Vice chair Kelly moves and councilmember Allison alter seconds the schedule. For 2024. Any objections to adopting the schedule? Seeing none. The schedule is adopted unanimously. Thank you, everyone. Okay, we'll move to the quarterly updates. General manager khan, do you

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General manager khan, do you want to introduce these with your staff? Think we have Stephanie Koudelka for the quarterly?

>> Bob, why don't you still tee it up and then introduce your staff members so that it? Yeah.

>> Thanks so much.

>> Good morning. Good morning. Bob Kahn, general manager, Austin energy. And we're going to do our fourth quarter financial highlights. Stephanie is going to handle that and then we'll have Lisa martin doing the for fourth quarter operations highlights briefing. Okay

>> Thank you so much. Good morning. Miss Koudelka. You have the floor.

>> Hi. Good morning. Stephanie Koudelka, director of finance for Austin energy. I'm presenting to you our fourth quarter results for fiscal 2023. The results are very preliminary and unaudited and likely to change as we kind of move through finalizing our annual comprehensive financial report. But today I will present to you

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But today I will present to you an executive summary. I'm happy to run through any of the slides if you'd like, but I'm proposing a summary as well as give you an update on the power supply adjustment pass through rate performance for the fiscal year, which will give you an idea of kind of how the rate has performed over the rate year as well. Next slide, please. Again, your packet includes our full agenda for the financial report. I'll run through the executive summary, but you have information on all of our financials through the fiscal year. And also we have a couple of slides for you in the back of the packet on the Austin energy's rate performance under the energy information administration's calendar year 2022 data next slide, please. One more. Our executive summary through September 20, 23, our operating revenues and expenses with transfers are over budget for the fiscal year that is primarily due to increased power supply costs. The costs that run

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supply costs. The costs that run through our power supply adjustment rate. As you know, we had very hot summer this year which resulted in elevated market prices as well as some pretty material congestion costs that we incurred over the fiscal year, moving down to our financial policies, we are in partial compliance that's consistent with prior quarters that I've presented our debt and operating policies are in full compliance and cash and reserves. If you'll remember last quarter I presented to you our cash position is well under our policy minimum, which is 520 million. And that policy minimum is set through the budget process. Yes. Which is 150 days of cash on hand for operating costs. We're sitting at 395 million at the end of the fiscal year. We have seen a slight uptick in our actuals, mostly due to some cash that we had parked at ERCOT over the summer for our market exposure, which we are now covering with a letter of credit out. And finally, the power supply

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finally, the power supply adjustment. This is the results as of the end of the fiscal year. I will give you a little bit more up to date information on that slide. But we were under recovered by \$115 million as of the end of the fiscal year. And we can run to slide 11, please. So I can give you a little bit more of an in-depth update on that rate. So this is the standard slide you see every quarter. But just as a reminder, the bars here represent the actual cost against budget for the fiscal year. The blue line that's hovering above the cost is the revenue or the recovered of those costs. Again, this is the fiscal year performance but encompasses a majority of the rate year which started in November of last year. That's when we set that rate. That was increased after the rate which was relatively low and we were on that three year glide path to recovering those power supply costs. Most of the fiscal year.

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costs. Most of the fiscal year. You see the blue line is doing what it needed to do, which is over recover those costs with the exception of December of last year, which we had a winter storm with some elevated market prices over the summer, that's when the over recovery came to a halt. And we saw very material under recoveries for the months of June through September. And again, we are at 115 million under recovered and this graph. But we have had a couple of 5% rate increases. As you know, we had a 5% in October. Our again in December to start making some headway to recover these costs. We have seen some over recovery in the last couple of months and we just came out with our reserve rates for November and we are still materially under recovered, but we've made some headway. We're about 80 million under recovered as of the end of last month with. That's all I have to present to you for the

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have to present to you for the financials, unless we have questions or want me to run through any of the other slides, questions.

>> Councilmember Allison alter has a question for you.

>> Thank you. I just want to make sure that I'm understanding for the psa so the numbers with the 115 is where we were at the end of September or the end of the fiscal year right after the extra hot summer. And you're saying at this point in time, in December, we're at 80 million rather than at 115. So we're trending in the right direction. Action. But nonetheless, over the course of the calendar year, despite the changes that we made last December and the other increases, we went backwards for the year because we were at 107 under recovered before. Is that correct?

>> That's correct. So we have seen lower costs, which we typically do in these shoulder months and the winter, the fall

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months and the winter, the fall winter and we really would need to be expected to be materially over recovered when we enter into the summer period. So in spite of the over recovery, we do need to see those numbers come in so that we can cover the summer. So you're right, it was trending Lang trending well and then the summer it was about 80, 90 million under recovered last year. So you have to be well positioned as you enter into those months to make sure we're not under recovered.

>> And what are the projections moving forward. For the cost or for the rate for where we'll be, you know, going into the summer?

>> So right now, I believe we're at about 4.8 cents per kw H. We are looking at the numbers and likely planning an increase for January 5th percent to present as well. The costs that we need to recover are more like \$0.05 per kw H with, with high costs that we've seen as well as that

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that we've seen as well as that very material under recovered balance. So to get us there, we need to be closer to the \$0.05 as we are looking month by month very closely to see where the rate needs to sit to make sure we're in a good position for the summer.

>> So if I'm understanding correctly, the, the change in the costs though, is partially just higher usage because it was a very hot summer. What portion of that extra cost would we attribute to the load congestion ? Ann and some of the issues that we're trying to address in the generation plan.

>> So I don't have the exact number of the congestion costs in front of me, but I do know that it was a material in 22 and 23 and the rate is, as you know, a look back period. So we're we're looking at forecasted cost in the budget of a similar amount, including congestion cost that's built into the rate. Now

>> Okay. If you could just follow up with me to provide

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follow up with me to provide some sense of the amount that we experienced for the psa and fiscal year 23, what portion was congestion costs and maybe how that compares historically, if that's if that's easy to do, I don't want to excuse me.

>> Sure.

>> Let me maybe this will help. Prior to 21, prior to closing the decker plants, we experienced about 20 million in congestion costs. After we closed them 120 million because we took down dispatchable and dispatched is generation that you know, you say you want to run it. You want to shut it off, it'll run when you want when we close. Decker down we didn't have that in our service area. So costs went up and that's when we experienced the 115, \$120 million.

>> Thank you. That's helpful.

>> And I see that council member Ryan alter has joined us. Do you have a question? Council member great.

>> Just one quick question. Piggybacking on what councilmember Allison alter just

[9:30:50 AM]

councilmember Allison alter just asked. The psa consists of the congestion costs as well as, supply costs, right? Like natural gas. Just natural gas goes up, psa goes up.

>> That's correct.

>> Is there another I'm trying to remember, is there a third element or is it just those two pieces?

>> So it includes is a market settlement, which would include congestion costs, like you said, as well as any hedging costs, gains or losses and the commodity costs for the fuel and I guess either typically or even just looking at this quarter, what what's kind of that balance between congestion costs and fuel costs, is it primarily congestion or is it kind of 50/50?

>> What's the what's the split there?

>> I would say there's more costs for the actual commodity, but I can get you the exact numbers that are sitting in the actuals through the end of the month to give you kind of an idea of the split of those

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idea of the split of those costs. Yes.

>> Okay. And the reason I'm asking this question is, as we look forward to the resource plan, you know, if we move away from some of these fuel sources towards something that like solar or wind that doesn't have that associated with it, just want to be cognizant of that impact that, within the psa element of the entire rate. So okay. Appreciate the help.

>> Absolutely. Response to that. So when we talk about wind and solar, it's not free and it also settles against the market. So if you have, say, a solar contract where you pay \$40 a megawatt hour and then the market settles at \$15, you're going to pay the \$40 to developer, you're going to receive \$15 a generation, and then you still have to buy your load, which might be over 40 or \$50. And so there is a cost associated with natural gas fuel to fuel a power plant. But there's also a cost associated with procuring solar. And unfortunately, within ERCOT, oftentimes the prices are the lowest. When we have the most solar and the most wind. So you

[9:32:51 AM]

solar and the most wind. So you take the biggest loss on your contract when you're producing the most. So there is there is still risk around that as well. Within the market.

>> Absolutely. And I think that we can hedge or reduce that risk when we do it. Localized. Correct so we don't have that gap. I do understand we get even low cost right here in Austin. But if it was was something that we didn't have a ppa for, that we did ourselves, then we are able to better hedge there.

>> That is true most of the time. I will say that that your solar and your load do not necessarily match each other and the highest prices we tend to see in ERCOT is when the sun is declining over the summer

when our load still tend to be high. And so you have a very, very large financial imbalance over those hours despite having a large solar portfolio.

>> Thank you. Thank you.

>> And if you could offer your name for the record, sorry, Michael Anger, interim vice president of energy market operations and resource planning

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operations and resource planning for Austin energy.

>> Thank you.

>> Councilmember pool and council members. The mayor. This is a really complex issue and it's not one where you can say if I do this, I'm going to have this result or not. And so what I would ask when we put this communication together for not just councilmember Anger, but the entire council that we in complexity 101 to when you provide that communicate Ann so you understand all the different elements that are involved in this. And so there's just not a silver bullet that say, if I do this, it's going to solve my problem. It just won't. And so we'll get a little bit into that. During the generation plan. But if you could do that, when you make that presentation, make it as holistic as you can. So we understand and how many variables we have to solve for in terms of similar to achieve the health for this utility, which as you indicate, are our days of cash on hand, are under are off our policy. We need to get that back to policy and there's just not one easy answer to this. And we want to make sure that the mayor and council understand that.

[9:34:53 AM]

understand that.

>> Thank you. City manager. Any other questions for miss Koudelka? All right. Thank you so much. Thank you. Mr. Khan, did you want to introduce Lisa Martin, or shall we just bring her up? Thank you.

>> Lisa is our, deputy over operations, and she's going to give the operations update.

>> Thanks and good morning, miss Martin. Thanks for being here.

>> Good morning. Thank you for having me. Chair pool vice chair Kelly and committee members, I'm pleased to share with you a very positive quarterly operations report covering the months of July, August and September 20th, 23. Before I get started, I want to mention that as we prepare for winter, we are committed to keeping the community informed on our progress on the after action report items from winter storm Mara. We posted our first quarterly update last week on the Austin energy website

with 20 action items complete and we'll publish the next update prior to February of 2024. All right. If you could please go to forward to slide three for the

[9:35:55 AM]

forward to slide three for the executive summary. Our generators were at 100% available this summer. Our reliability performance trend is stabilizing and our renewable and carbon free production as a percentage of load are both on target to slide five, please. So our generators exceeded their summer availability target despite a ton of activity. Record heat means record generation and the resources stayed strong. We also increased our staffing on the weekends and in the evening hours when we anticipated and experienced tight grid conditions. I want to take a moment to recognize and thank all of the power plant employees for their hard work and dedication throughout this summer. Next slide, please. The biggest story here on this slide is the blue line graph in the bottom left at Austin energy's summer peak demand topped 3000mw for the first time ever. And you can see in the top right the amount of energy consumption

[9:36:56 AM]

amount of energy consumption exceeded Austin energy's generation, which is another way of showing the very hot summer. So next slide, please. This slide shows our reliability metrics. And remember, lower numbers are better. Each bar represents a rolling 12 month average as of the quarter. And you can see that our numbers are stabilizing with each one being below or the same as the previous rolling average. And this is a testament to the work that Austin energy teams and crews are doing in the field to maintain and upgrade our distribution system. As you know, our focus is on the worst performing feeders and those in high wildfire risk areas and it seems that we're starting to finally see the fruits of our labor. We will keep monitoring and we will keep adjusting. Next slide, please. One more. All right. So this slide shows the monthly carbon free generation as a percentage of load. The average for the quarter is 60. But I want to show you this data in a slightly different way. As well. Next slide, please. So the

[9:37:58 AM]

well. Next slide, please. So the jagged line on this chart shows the same data as the bar chart on the previous slide. But the smoother line shows a rolling 12 month average and for this quarter, we're at 70% carbon free as a percentage of load. Next slide, please. One more. My final slide to relate to our grid resilience, strategic goal and we have lots of details. I'll let you read for yourself, but I want to hit three highlights. Unfortunately we did not receive the grip grant that we applied for from the department of energy, but we do continue to take action for distribution resiliency in a number of ways. The second point is that we're expecting to come to council with a vendor selection for the

undergrounding feasibility study and the overhead hardening study in early 2024. And my final point, next slide. A quick update on panel and the wildfire detection services that we brought to you about for approval about a month or so ago. We anticipate that the first site will be live in early summer of 2024. So thank

[9:39:00 AM]

early summer of 2024. So thank you for your continued support and please let me know if you have any questions about Austin energy operations.

>> Thanks, miss martin. What questions do we have? Yes. Council member harper-madison.

>> Thank you very much, chair. I have three questions. One, actually you just touched on it and so it might be easy to just start there and you were making reference to the grid grant that we weren't awarded, correct? I'm curious if we weren't awarded who was us? And maybe just for context, can you tell me, typically speaking, what types of cities comparable size, size and need cities would apply for this kind of grant?

>> So I apologize. I don't know off the top of my head, who else did receive those awards? I do know that the department of energy is handing out and allocating funds for grip awards in multiple phases. And so we are working and contemplating applying for a grip grant phase two based on the feedback that we received on our first application. Ann and I can look into the other rest of the

[9:40:00 AM]

into the other rest of the answer to your question because I don't know right now, that'd be great.

>> Just, you know, to have some background and some point of reference. And to your point there about the feedback that you received on our application, I'd also, you know, with that additional information, I think it might be helpful for us as a body to know what was their feedback, why didn't we receive, you know, so award in the first round.

>> I can actually offer some of that here. One of the major components, there's a number of components to a grant application, but one of the major ones that is being hit right now is justice 40. And it talks about making sure that the funding is going to underserved communities. And our application is related to enhancing our distribution system across the city. And as I mentioned, the focus is on the high wildfire areas and the underperformed feeders. That doesn't always map as closely as perhaps other applications do to the underserved populations of our town. We're working on double checking our data, seeing how we can align that a little bit

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can align that a little bit better and better. Present our case moving forward.

>> Thank you. Really appreciate that. It's very helpful. Then the other question I had was, was you talked about a exceeding our megawatt capability for the first time ever, but then you followed up with subsequent information around, you know, how hard folks are out there working in the field for upgrades, etcetera. I'm just curious if you say first time ever, you know, during covid, for example, you know, we heard the words unprecedented more times than I care to recall. So if we had this unprecedented usage, I just want to know what that looks like moving forward, considering the rapid rate of growth that our city is undergoing. And that won't stop anytime soon. So just curious to know those upgrades that you made reference to and the acknowledgment of our workforce working so hard to make those necessary upgrades. Do you all feel confident that we'll be able to, given that we, you know, exceeded the mega wattage for the first time ever? Do you feel confident that moving forward we

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confident that moving forward we won't find ourselves in that position again? And if that is in fact not the case, what should we as a body be taken into consideration to be more prepared moving forward?

>> I think it's an excellent question that I will speak to in much more detail when I come back up here later this morning to talk about the resource gen plan. But initially, I will just say that right, so our our there's, you know, as you mentioned, unprecedented growth, continual growth within Austin. We are seeing that in our demand numbers in terms of hitting over 3000mw for the first time as a summer peak this summer. It's hot temperatures, but it's also just additional growth. We have excellent energy efficiency and demand side management programs that help to kind of temper that growth in years past. But we are we're really starting to see that our load grow. And so I think we'll talk about a multi pronged solution, one that involves generation transmission and demand side management to

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and demand side management to make sure that we can stay ahead of that.

>> Thank you very much. Appreciate it and look forward to the resource gen plan presentation later. Yes, ma'am.

>> Thank you. Thank you. Council member Alison alter.

>> Thank you. Can you put up a slide seven, please. Yeah, that one. Can you just go over the numbers here because you said lower numbers were better, which because this is a you know how long it takes to get your interruption fixed, etcetera. And our numbers seem relatively high this year, so I just wanted you to walk us through the numbers and, and, and go over your conclusions again.

>> I'm happy to do so, yes. So what you see here are three reliability metrics for distribution system reliability. There are two that are duration Sade in the top right and Katy in the bottom left. Those are measured in terms of duration of

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measured in terms of duration of outage minutes and then safety in the bottom right is a measurement of the frequency of outages and that is more of a percentage base, lower numbers, lower outages are better. And what we see here is that each one of these is a rolling 12 month average as of the quarter that you see at the bottom of each bar. So we're looking at a three year look back and you can see that our trends have been in increasing up over time. Right. So we've I've stood before you several times, talked about our distribution, resiliency program and the fact that we need to focus our our resources and our efforts where they're most impactful. That's where we're focusing on underperforming feeders and high wildfire risk areas. The other part of the story to these numbers is that as we have extreme weather days, not only winter storm sherry winter storm mora, but also just

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winter storm mora, but also just the hailstorm that we had in September, I believe those kinds of events go into a calculation called major event days. And these numbers you see in the titles of each one says this is Sade without major event days or sappi without major event days. Well, when you have these types of days that go into the average, it essentially raises the bar for what's considered a major event days. And we're seeing more and more storm kind of data come into these numbers than we've seen in the past. And so that's why you start to see a pretty significant jump in the nearer term than you see back further. So I hope I've answered your question. I will say that we are continually focusing on upgrades and maintenance to our distribution system to work on reducing outages in a number of ways.

>> So you're saying this data captures more event days that may be a few years ago would

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may be a few years ago would have been considered major event days. They're now captured in this data which otherwise excludes those?

>> That is correct.

>> Okay. Thank you.

>> Great. Thanks. Any other questions for Ms. Martin and she'll be back up with the gen plan in presentation. All right. Thank you so much. We'll move now to the general manager's report. Mr. Con, thank you for being here this morning. Floor is yours.

>> Good morning, chair Powell, vice chair Kelly members. Bob con general manager here. I want to, before I get into the generation resource plan, I want to talk about a couple of items real quick. So I want to start off by mentioning the latest recognition we've received relating to our environmental efforts at the Austin energy green building team has been recognized as the 2023 partner of the year by the us green building council. The award recognizes both people and organizational partners that are advancing sustainability and resiliency. Equity health and well-being in the local

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well-being in the local community, community impact awards are given to people and partners that one demonstrate exceptional leadership. In their contributions to the us green building council mission to support their local community. Work in exceptional ways as volunteers and three achieve a milestone that demonstrate that a legacy of advancing their mission locally. The next thing I want to talk about is the zilker tree lighting. I think a lot of you were there. It went well. Our crews enjoy setting up the lights. There must have been 5000 people there or so. So it was a 57th time. We've we've done that and the tree will be lit through January 1st. Okay. I want to talk about the generation resource plan. Of course, we'll have a detailed presentation by Lisa after I'm done here, but just wanted to give a brief intro and give you my thoughts on this on Austin energy's thoughts. The first thing I want to say is we are on the same page and have the same goal as all the people

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the same goal as all the people that spoke before me in the public comments. Our goal is to be carbon free by 2035. We have the same goal. I think we have a different view of how to get there. As you all know, Austin energy, we have some of our own generation that we own. We have ppas that Michael talked about purchase power agreements. So we have a resource plan that we're looking at. We are a community owned, community based and one thing we thought would be a good idea to do is a survey of our customers to find out what their priorities are. So we did a survey and it came pretty clear that the number one priority was reliability, the number two priority that they mentioned was affordability. And then of course, sustainable ability that came in third. So that is something that gave us some direction and helped us along in our planning. So as I've said many times throughout this process, our goal is to be carbon free by 2035. That's the goal you set in 2020 and earlier, and we plan to do that.

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earlier, and we plan to do that. We remain committed to that goal. But to remain reliable, affordable and environmentally sustainable, we'll we'll need flexible city flexibility to determine the best path forward for our utility and for our customers. The ERCOT market and Texas energy and electric industry is constantly changing and being updated. Mean think you see what happened in the ledger and the and ERCOT during the legislative session when they're trying to figure out what to do to help maintain the reliability of the grid. So wanted to back up a minute to go back to March of 2020 in the action that you took and want to do a little refresher here. So some of the highlights are, you know, of course, carbon free by 2035. And I want to just quote a couple of things from from that plan in the plan was intended to be flexible and dynamic in order to respond to changing circumstances, including among other items, energy prices and technology development while

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technology development while strictly committing to firm carbon reduction and as you'll see from our presentation, what we're doing that we looked at all the technology options. Some work, some don't, and affordability was the primary goal in that plan. And as you'll see from our plan, we're looking at at goal. That's a high priority. They also stated that no new carbon generating assets and included direction that we would no longer purchase contract for or build long term generation that emits new carbon . So why do I repeat this stuff? Much has been happening in the ERCOT market since 2020 and I wanted to just kind of remind you of some of the things that have happened since you passed this plan in 2020. So we had winter storm Uri. We have increased congestion costs as we talked about earlier today. They went from 20,000,000 in 2021 to about 120 million last summer. I think it was maybe 115 million. Some ERCOT market changes.

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Some ERCOT market changes. They're trying to figure out market design, how to maintain reliability, even though dispatchable generation is not being built at the and ERCOT are working on this right now. They still have a ways to go. We have increased customer demand with increased intermittent resource things like solar, wind straining the grid, increasing the chances of controlled outages and then most recently in October, I think you all might have seen in the paper that that ERCOT issued an RFP for dispatchable generation to be available in January and February. And the concern was especially in the February timeframe, that when the sun's not shining and it's early morning and people are getting up and making coffee, there's and the wind's not blowing like it has been forecasted or not blowing at all. There is going to be problems on the grid. And we saw that during the summer, day after day. Conservation alerts, wanted to throw out a few numbers here. So and just to

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few numbers here. So and just to give you an idea of the demands on the grid. So in 2020, the peak in ERCOT was 74,234mw. In 2023, a few years later, it was 85,529. That's a 15% growth. That's 11,295 megawatt increase in three years. And at the same time, there's about 19,000mw of wind and solar put on on on the grid, which is great. So with more solar and wind coming online reliability, reliability issues were created when the sun wasn't shining or the wind wasn't blowing or not blowing as forecast it. But, but the main point I want to make is during that those three years when 19,000mw of renewables went online and there's only and the increase was 11 over 11,000mw in growth, there only 2000mw of dispatch generation put online, that's a huge gap that needs to

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that's a huge gap that needs to be taken care of and we need to figure out a way to do that. So renewables are great. We like them a large part of our generation portfolio consists of renewables, but the city needs and we're recommending a diverse generation portfolio that includes renewables and dispatchable generation to back up those renewables. Also dispatchable generation is important in helping resolving our voltage support issues, which can cause outages. When the two decker units went away, that caused huge voltage support issues and they can also be handled or or, you know, it's really a two pronged approach generation in our service area. And then transmission fixes can really resolve that voltage support issue. The other issue is, is congestion, which you heard about dispatchable generation will help resolve our congestion issues which have increased our sales. As we talked about earlier. So back to the council guidance, a lot has

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the council guidance, a lot has happened since March of 20. And the interesting thing is when you look through that document, there's no discussion on reliability. They mentioned the word dependability. One time, but really no discussion of reliability. And at that time it really wasn't a big issue. Uri hadn't hit. We didn't have the gap in dispatchable not being built. And so that, that a lot has changed since then. All these changes indicate that the risks are too great and we need to make the difficult operational decisions to protect our customers and our viability. As an mou. So Lisa is going to mention and we'll be recommending adding dispatchable generation that while being fueled by natural gas as a bridging solution, the generation will be green, hydrogen capable or fueled by other technologies. There are other technologies besides green hydrogen. We had to model something, right? So we modeled hydrogen developers are talking

[9:55:18 AM]

hydrogen developers are talking to us every day and we can get in that. When Lisa gets up here about green hydrogen, it's not that far away, as some would believe. So after Lisa, you'll hear from deputy general manager Tammy cooper, who's going to talk about our customer communication strategy in advance of the winter season. We all know that everybody's anxious about what we're going to do and what we can do to help out on communication. She's going to talk about that. And of course, we're looking well beyond the winter and the summer and preparing for our weatherization efforts and what we're going to do in the summer when we get all these conservation alerts and how we're going to communicate with the public. So with that, I will pass this on to Lisa unless I have some questions.

>> I imagine most of the questions will be on the gen plan. But Wright for Mr. Khan's opening remarks, does anyone have any questions? We'll move right on then to Ms. Martin's presentation. Thanks. Thank you. General manager. >> Good morning again, Lisa.

[9:56:22 AM]

>> Good morning again, Lisa. Martin Austin energy's chief operating officer. I'm pleased to present an update on Austin energy's resource generation plan and our path to carbon free by 2035. Next slide. So this is an abbreviated version of a longer presentation we made to the electric utility commission last month. But please note that all the slides are presented that we presented there are included in the appendices as referenced and we're happy to answer any questions you may have. But today we'll hit the highlights. Next slide, one more as you've heard many times over the last year, including in Michael Enger's presentation to the committee in September, Austin energy and utilities across Texas are facing many challenges over the past several years, Austin energy has not been able to find an affordable exit to the fayette power project, Texas and Austin are experiencing increasing extreme weather events. There's increasing uncertainty in the ERCOT and regulatory market amidst several rule changes that are underway. The market is

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are underway. The market is experiencing increased market volatility and congestion costs and as we spoke about earlier, we continue to have strong electricity demand growth, which we need to be fully prepared for. All of these challenges have come to light or grown stronger since our current resource generation plan was adopted in March of 2020. And we need to change the way that we're doing things. Next slide, please. I want to pause for a moment on the topic of congestion costs. We spoke about it a little bit earlier today. I want to bring this point home here. Austin experienced local congestion in this past summer like never before, and it is very expensive. This is highly correlated to the retirement of the decker steam units, which were older and needed to be retired. But the lack of enough generation inside our load zone, combined with increasing load growth, creates what we call load zone price separation. Just look at the heat map of Texas, where you see the real time prices represented by colors. Is that Orange or red area in the

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that Orange or red area in the center of Travis county is our load zone and the red color represents the elevated prices Austin energy is paying to buy power in the market to serve its customers during certain times of the summer. The cooler, green and blue colors throughout the rest of the state represent relatively lower prices, which we are receiving for the generation we provide across the state. And you can see this numerically in the line graph to the left. So the black line is what we pay to buy power from ERCOT, and the Orange line is what we receive for generating electricity on this particular day. The difference is, is the cost to serve our customers and that is passed through to our customers on their bills, through the power supply adjustment. This situation happens when our customer demand is within a few hundred megawatts of our new peak, 3000mw. The market shows elevated pricing in our load zone as a signal that there is not enough generation to serve our load and we can't bring power in due to congested transmission lines somewhere.

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transmission lines somewhere. And not necessarily our own. Sometimes we call this a physics problem. There's not enough generation nearby to serve the Austin area. Demand and without sufficient import capacity, the electrons cannot flow into this area. So load zone price separation is basically a signal that there is a problem and it creates a reliability and an affordability issue for our customers. Today we're going to talk about that some more. Next slide, please. As you may recall, these are the community values reflected in the 2030 plan. We need an overall balance of environmental sustainability, reliability, affordability and cost stability to meet all of the objectives on our path to carbon free by 2035. Next slide, please. So we reported in September that we surveyed our customers and received a tremendous amount of feedback. We had over 7500 respondents and overwhelmingly more than nearly 40% ranked reliability as their number one priority, which was followed by affordability and

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followed by affordability and environmental sustainability and the open feedback responses echoed the customer's importance that they were placing on reliability. Next slide, please. And we're all proud to say that Austin energy is a leader on the path to carbon free. Our generation capacity portfolio is currently 72% carbon free and we can compare that to the utilities in ERCOT and across the United States, which are at 44% and 38% respectively. So consider that we have nearly doubled the percentage of carbon free in our portfolio compared to the whole of the other. The US set another way we've made great strides in environmental sustainability and to meet our customer expectation actions, we need to ensure we're meeting the reliability, affordability and cost stability objectives. As well. Next slide please.

So here's the punch line of our initial recommendation for the gen plan update. And there are five main points. First, that we reaffirm our commitment to carbon free by 2035. Second, we

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carbon free by 2035. Second, we continue seeking a viable exit to Austin energy share of the fayette power project. Third, we will implement transmission upgrades and we are implementing those upgrades to increase electricity import capacity into the Austin energy service area. Fourth, we need to adjust the goals framework for our demand side management, which are those technologies on the customer side of the meter to enable expansion and capture full program value and fifth. And finally, we need to add local dispatchable carbon free generation. We need to use natural gas as a near-term bridging solution to address the reliability and the affordability risks and to enable us to further meet our renewable energy goals. You'll see this slide again at the end of my presentation. But now let me explain how we arrived at this initial recommendation. Next slide, please. We began with a technology readiness assessment, which determined which technologies were ready to serve within the 2030 time plan time frame. And then we moved

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time frame. And then we moved those technologies onto step two, where we did our production cost modeling here. We analyzed the cost of various technology portfolios and assessed how they responded to the risks of extreme weather, local congestion and regulatory changes. And finally we developed our proposed changes based based on both qualitative and quantitative factors, noting that the plan needs to maintain flexibility so that we can adapt as technologies continue to mature. Next slide. And one more so first, our technology readiness assessment, where we focused on supply side demand side and other technologies. Next slide. We based our assessment on five criteria for measuring each with a stoplight color code where red is flawed. Yellow is challenged and green meets criteria. One of the most critical criterion is the readiness hexagon. Meaning is the technology ready or will it be ready within the 2030 plan time frame? Next slide. Here's a summary of the results and all

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summary of the results and all the details are in the appendix Luz. But please note that only technologies with a green in the readiness column moved on to the next stage of analysis and next slide, please. Here are the key takeaways of that portion of the assessment that only one technology was green across the board. That's hydrogen capable generation. And I want to take a moment and speak about hydrogen. Bob mentioned this as well. We're looking for a type of dispatchable generator. It means one that we can turn on or off or up and down as necessary to serve our load, to serve, load in

general. And we need one that runs or will run on carbon free fuel by 2035. So for our model, we focused on hydrogen that doesn't mean hydrogen is the only answer. That's available. We really need future proof generation that might run on a number of carbon free fuels, and hydrogen is so one example I'll the second takeaway is that no. One technology can be looked at to solve all of our resource needs and again, only

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needs and again, only technologies that met the readiness criteria in green were included in our scenario modeling. Next slide, please. This is stage two of our analysis next slide, please. So so let's start with some foundation terms. We have scenarios which are future environments that we might face and we have technologies which are either supply or demand side resources and we call a combination of technologies a portfolio. Our objective is to identify a carbon free, reliable and affordable path forward. For Austin energy that considers the risks and uncertainties that might unfold in the future. Next slide, please. There are three environments or future states that we analyzed. The first is extreme weather. A portfolio cannot survive that. Sorry, a portfolio that cannot survive a winter storm event or one that does not perform well during extremely hot Summers or periods of extremely low wind or solar is not acceptable to Austin

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is not acceptable to Austin energy or its customers. The second scenario environment is local congestion. As we talked about earlier, we have to pick technologies that can solve the physics problem. And finally, we need to find technologies that can survive the regulatory and market changes that we are likely to see over the next few years. Next slide, please. We included the following technologies in our model local solar distributed storage, carbon free generation. Again, we modeled that as a hydrogen capable combined cycle, long duration and local long duration storage and demand side management. Next slide. There's a lot of information here, but the takeaway is that we combine those technologies into 11 different portfolios and compared them against each other . The base case had no added generation supply except for what is needed to meet our 65% renewable energy goal. And all of these portfolios meet those renewable energy goals and provide a path to carbon free by 2035. Next slide, please. And

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2035. Next slide, please. And one more in analyzing each portfolio we generated for dollar amounts, the first shown here in gray is the annual levelized cost to customers. Under normal conditions. As and for reference, the current power supply cost to customers is approximately 585 million per year. One more,

please. This dollar risk in blue puts a dollar value on the annual risk to customers for a portfolio under extreme weather conditions. Next please. Orange is the annual risk to customers due to local congestion and one more and yellow is the annual risk to customers due to market rule changes. The total value represents the risk or cost to customers. For that particular portfolio. We have a slide like this for every with explanation for every portfolio that we analyze. But for now I'll show you the summary results. Next

[10:07:31 AM]

you the summary results. Next slide please. Starting at the right hand side, the gray, blue, Orange and yellow values that I just described are shown here for each portfolio. The total cost or risk is in the center column to the left of that, we show if the total cost meets the affordable metrics set forth by city council and to the left of that, we show that all portfolios meet the goals of carbon free by 2035. The renewable goals and the demand side management goals as those were entry points for a portfolio to be considered at the bottom of this slide, you can see which columns map to each of the 2030 plan objectives . And I know there's a lot on this slide, but the key takeaways are on the next one more, please. So all portfolio has met the environmental sustainability goals by design only portfolios without high percentage of solar or storage overcome the extreme weather risk. And that's mainly due to

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risk. And that's mainly due to those technologies, intermittency or limited duration only portfolios, including the hydrogen capable combined cycle, met the affordability goal and finally, only portfolios with local supply overcome the local congestion risk. So we took those takeaways to understand, found that to meet all of our objectives moving forward, our portfolio must include local dispatchable generation with a bridge to carbon free. This will mitigate the reliability and affordability risks that we're experiencing, and it enables additional renewables to meet resource plan goals, essentially solve the physics problem and then we can add more renewables next slide please. So we return to our initial recommendation burns carbon free by 2035 ceqa a viable exit to fayette power plant implement a transmission demand side management and generation solution and that generation must be local. It must be dispatchable, it must be carbon free. We're going to have

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carbon free. We're going to have to use natural gas as a near-term bridging solution. Ann but it will be alternate fuel capable over time and fully by 2035. This will help us solve our physics problems and once we collapse that, it will enable us to add additional renewable generation to the portfolio. Next slide. This is my second to last slide. Essentially highlights that we need a diverse portfolio of resources to

enable all four customer objectives, as many of these are already part of our portfolio. Ultimately together they will lead us to the carbon free path by 2035. Next slide. And finally , I just want to take a moment and look at the process timeline. We provided several briefings to all of you in spring, sharing the building blocks of the ercot market and how our existing generation portfolio performs. We conducted public engagement in the summer. We've been responsive to the working group questions throughout the fall. We presented all of these initial

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presented all of these initial recommendations to the electric utility commission. Last month and this month we're going to run analysis on the working groups, requested portfolios and receive their recommendation in January. And then in February we will return to the electric utility commission with our final proposal for recommendation Ann and then bring it to city council for vote no later than March Paige so that concludes my presentation and I'm happy to answer any questions you may have miss martin, a question for you at the top.

>> When I met with members of the working group and many of them are here in the audience today, promised that they would be able to get some scenarios run by the staff specific to their criteria. And is that is that happening?

>> That is happening. We received we agreed to do three. They asked if we could up that to four. We received those four portfolios last week. We have a meeting, I believe, tomorrow scheduled to talk about some of the assumptions, make sure that

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the assumptions, make sure that what we're running is what they're expecting. And then, yes, we will complete those runs and give them the results in early January in advance of the electric utility commission later in January.

>> That's great. And I'm hoping to be able to have opportunities to sit with them again and go over those scenarios. And have you come in and explain them as well. We'll schedule that for January. Sounds good. Okay. Councilmember Allison alter, thank you.

>> This is a project, this update that I initiated with my colleagues last December as part of the rate case. And we did so working in collaboration with the with a recognition that things have been changing in the market since we adopted the plan in 2020, that there were changes due to ercot, changes due to the commodity market, changes due to the mix of demand and generation here kind of locally. So I'm pleased that we are working on

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pleased that we are working on this and that we are focused in on our goals. And I want to also thank the folks from the and the working group excuse me, who have been engaged in this process. And colleagues, if you have not taken a look at the working groups website, there's a lot of material on there as well. They've been working really hard to try to move this process forward. I do have a couple of questions. First, you know, you said that the models all assume that we're meeting our environmental sustainability goals. Can you define on what those are beyond being 20, 35 carbon free?

>> Yeah. I'll start and ask Michael Inger to come up and help support me. He's right there. So no previous plans have included a goal to be 65% renewable energy. By 2027. And so we have a number. We're on a

[10:13:40 AM]

so we have a number. We're on a path to reach that now. But we have a number of renewable energy ppas that are rolling off expiring. And so we made sure that we added those into the base case and all of the portfolios so that throughout time as we studied up to 2035, we continue to meet those goals in 2027 and every year thereafter. There. Anything you want to add?

>> That's correct. As well as with growing load, we'll need to add more renewables than we may have intended.

>> Mike you might want to be on the mic. Come up.

>> Sorry.

>> That is correct. And as well as we have seen our load growing faster than we had originally forecasted when we did the last resource plan. And so that will increase the number of renewable or renewable assets we need to add to our portfolio in order to meet that percentage goal.

>> Thank you. So one of the concerns is that I'm hearing is about the hydrogen option and I'm trying to understand if we were to add the dispatchable

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were to add the dispatchable energy via these gas plants that could be converted to hydrogen, help me understand in the short run, between now and 35, what happens is in terms of our carbon emissions and what happens in terms of our portfolio mix.

>> So a lot of that will depend on on how sunny or how windy a given given year is. I will say that the new assets have a much lower heat rate, which is the efficiency. So they are able to generate a megawatt burning half as much natural gas as say, the decker gas out there. Do and so you do have a

lower carbon impact and a lower nox impact per megawatt hour than you would with the existing assets, although those existing assets will still be needed in order to meet the local congestion risk and to mitigate that. And so depending on how often the assets need to be used will impact our our outlook on emissions. But just on a high level, all else equal, they are more efficient. So they should

[10:15:42 AM]

more efficient. So they should produce less emissions per megawatt hour of generation.

>> So when we adopted the 2020 plan, we included the reach program, which was an innovative way of addressing the emissions at fayette to the best of our ability absent closing it, are you considering doing a similar model with respect to the dispatch of these local carbon emitting?

>> Certainly the original plan in the in the resource plan that was adopted in March of 2020 was that as we exited fayette, we would put our cost of carbon within our other generating assets as well. And so that would be the next logical step, is that we're going to value carbon within all of our carbon generating assets. So we're really only generating with those assets when the margins are the highest and when the grid needs that support and reliability the most.

>> And do your models capture that? Is that in there already?

>> Currently we're just modeling on economic dispatch with the exception of fayette, with the carbon cost in there, in order to compare portfolio to portfolio on a risk basis as opposed to an outcome basis, we

[10:16:43 AM]

opposed to an outcome basis, we want to we want to look at different portfolios under different scenarios and understand which one mitigates the most risk for our customers.

>> Okay. I would be a whole lot more comfortable if we were going to do that, that we have a plan in place to capture the cost of carbon as well. I don't know about how that fits in with the modeling, but I don't I don't see a scenario where I would be comfortable with the local generation without us capturing that cost of carbon.

>> We can certainly rerun it that way. I will mention that about 90% of your revenue happens in ercot and about 10% of the hours. And so don't believe the numbers will move too much differently than what we're modeling today. But we can certainly do that as kind of an add on to the analysis we've done to show you that I guess I'm trying to understand the implications for the emissions side of it, not just the costs side of it.

>> And I'm not seeing that in the modeling, which as I think ultimately the concern that we have about adding additional carbon generating resources is,

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carbon generating resources is, is what are those emissions and how do we how are we, how are we impacted by that?

>> Yeah, I just wanted to add in so we can't forecast right what the emissions will be, but we can calculate what the emissions are for the production cost modeling for the portfolios that we provided. And that question has been asked. We've asked that question ourselves and we are running those numbers and looking at them. And so we will have some numbers to look at more for comparison. Again, the model can't tell you exactly what is going to run when because it's based off of a set of assumptions that won't exactly mirror the market, but at least we'll have some numbers that will allow you to be able to compare to, again, just like those numbers that we presented, compare risk across models. You can compare emissions output across those models.

>> And as you're as you're modeling and you're presenting the answers, can you also make sure that we have a sense of how we get how we get there in terms of the percentage of carbon free

[10:18:44 AM]

of the percentage of carbon free over time under the different scenarios? Because as you know, the sooner we have the carbon free, the better it is for our air quality, etcetera. Here in Austin, especially if we're doing the local. But it sounds like there may be some quite a bit of variation on that glide path depending on the choices that are made. So I don't know what the appropriate way to share that information would be. But I would like to understand you know, what that carbon free trajectory looks like that gets us there. By 2035, we had hoped to have more of it front loaded, and it's unclear with this a proposed approach whether that would be the case so we can share the assumptions that went into the modeling.

>> You know, what percentage of natural gas and hydrogen actually because of cost they were analyzed at parity. So we'd have to provide some of that. But we do talk about when in the modeling, when the existing

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modeling, when the existing natural gas generation is retired. And so we can share all of those assumptions on the actual path that will be taken will be highly dependent on what we see in the market and also what we see in terms of the availability of carbon free fuel sources. I think this was mentioned before, but our intention is to not become a producer of hydrogen right? But to procure green hydrogen if available, or another carbon free fuel source simply just like we don't produce our

own coal or refine our own uranium. So it'll be dependent on some of that. But there's a great strides that are being made, especially with the department of energy, hydrogen hubs and other work in the space of hydrogen and other carbon free fuels. Thank you.

>> And one last question that I wanted to ask today was about batteries. And it looks like the assumption is that they are eight hour battery is can you talk a little bit about about what type of battery technologies are feasible at

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technologies are feasible at this point? And Ed, why did you just choose an eight hour battery and, you know, you know, how are we using those?

>> So most of the batteries that are commercially available today are some form of lithium ion batteries, and you can stack those out as many hours as you'd like, but you just continue to double the cost every time you double the hours. And so we had looked at an eight hour battery for as our long duration. We could look at that as a 16 or a 24 hour battery. It would just continue to increase that cost and move us further away from affordability.

>> Okay. Thank you.

>> Any other questions? Yes councilmember vela, with regard to the idea of adding a combined cycle plant, is the assumption that we fe it would be closed and the additional gas plant would be added or, you know, and how are those two interacting?

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how are those two interacting?

>> So you need the local dispatchable generation to reduce and mitigate the risk that your load zone price separates.

>> As Lisa presented earlier. As soon as you're able to reduce your load zone price separation, it makes it more affordable and easier to exit a plant outside of Austin, such as fayette, one of the advantages that that fayette has for us financially is that was an asset prior to going to the nodal market. And so all of the congestion risks that local price load zone, price separation versus the asset, all of that is protected through something called a pre-assigned congestion revenue Wright that we are afforded today. And so it does add a lot of additional protection in addition to the generation to our load zone during those high price periods. And so by being able to mitigate that low zone price risk and lower our price of our load zone to the rest of the market, it makes it a lot more affordable for us to be able to exit the fayette power project.

>> Okay. And just in terms of an inventory, our dispatchable assets would be fayette, the south Texas nuclear project, our

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south Texas nuclear project, our share of it. And then the decker and sandhill. Would those be the is that the, the exhaustive list of.

>> That is correct. Although I would mention, I believe the nuclear power plant is more of an output schedule or baseload. It doesn't like to move up and down. It likes to produce the same amount all the time.

>> Okay. Thank you, councilman Ryan alter, thank you very much.

>> Looking at at the stated goals at the outset when we talk about in the complete deck that y'all provided ahead of time, it mentions that it there's going to be 1000mw of retirement. 1400 added and my understanding of that is 600 of that is fayette retirement, 600 sandhill conversion, 200 decker conversion that gets us to the

[10:23:51 AM]

conversion that gets us to the 1400. What I'm trying to square in my mind is we say that it's our goal or not even our goal. It's part of our criteria. So we're not going to add fossil fuel generation. And yet we are while it's a replacing of a fossil fuel asset, we are taking, we are spending money on new, albeit more efficient, but new units that produce fossil fuels, I mean, that run on fossil fuels and produce carbon. And so how do we square even if we say in our best case scenario where y'all are saying that at the beginning we're going to run 75% hydrogen in that case, we are still free, free, we're still adding capacity. That is carbon emitting. You see what I'm saying? >> No, I do. And I believe that

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>> No, I do. And I believe that the reason we're discussing adding the carbon emitting fuel in the near term as a bridging solution is in order to meet the reliability as well as the affordability objectives within our our or our resource plan. And not just the environmental sustainability portion, but trying to balance all four and when.

>> Okay, so then when we talk look in the affordability bucket at the right now the levelized cost of running a gas plant are we assuming that's about the same as the cost to run a hydrogen plant?

>> Yes, we have some information from a couple of the large manufacturers of power plants, Mitsubishi, Siemens and GE. So we have a pretty good number on the cost to build one of these plants. And it is very comparable to the cost of a natural gas plant and I assumed that was the answer.

>> But then what is doesn't doesn't seem to add up in the numbers is when we look at our levelized cost models that y'all have done when you look at just the base case, we keep

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just the base case, we keep doing what we're doing. We've got our our hydrogen. I mean, our, our gas plants that we have right now. We have fayette and, you know, can potentially put that one to the side. But our levelized cost is almost 900 million. And yet when we're saying we're going to add or do some swapping of our gas plants with hydrogen Ann potential or hydrogen capable plants, now all of a sudden our price has gone down \$300 million and yet the levelized cost is supposed to be about the same. So how are we achieving such a dramatic price decrease?

>> It's a significant reduction in the load zone price risk load zone, price separation risk as well as a significant reduction in the weather risk that then brings down the net cost. So it all comes down to a net cost, not a levelized cost of electricity in the price that is passed on to our consumer.

>> Right. But in your modeling, you have four buckets. You have the levelized cost and that is separate from the congestion

[10:26:56 AM]

separate from the congestion cost or the price separation cost and the weather cost. And for one reason or another. And guess would like to understand better. And it doesn't have to be today, you know, send us your information. But why in the levelized cost just the operate cost we are saying that a plant that is comparable to a gas plant is somehow. \$300 million cheaper before we consider price separation and before we consider whether events.

>> Right. Councilmember think you're speaking to the gray box cost for the base case portfolio one compared to the portfolio that has hydrogen capable. So I think the main difference there is that the base case, we still have to pay to serve our load and so we would be buying in the cases where prices are going high would be buying power from the market at whatever cost it is in the market in the case where we have the hydrogen

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where we have the hydrogen capable combined cycle, it it's not that that energy is serving our load directly, but we have that the costs are baked in for capital and o&m for those those that plant but it offsets some of the cost to serve our load by by running that generator. Yeah. Does that help a little bit I it seems like the answer is double dipping on the congestion costs because it's local and the price separation versus the cost to run.

>> Guess what is the cost to run? Generally speaking, of a gas plant versus, let's say a wind farm or a solar farm, not know, ignore the separation costs and everything just o&m. When you know, you put your capital in the levelized cost of energy, there.

>> So the level the levelized cost of wind versus the net cost to the consumer are significantly different, even without local price separation.

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without local price separation. So, you know, the levelized cost of wind unsubsidized load is likely in the mid \$40 subsidy as you probably get a little bit lower than the 30s. But ultimately when the wind is blowing, the most is when that node will get the lowest price, but you'll still pay the same amount of money and your load zone will likely be just at a regular market price or a higher price. And so it's hard to compare levelized cost of gas to wind to understand the net outcome to our customers because we're not a vertically, vertically integrated regional transmission operator. We serve our own load. We're competing in the market where every generator is receiving revenue and your load is paying a different cost. And so a levelized cost of electricity is maybe not the best metric to look at, to understand the affordability aspect within the ERCOT market.

>> So then what is that first category, that gray box that says levelized cost?

>> Well, he's levelized, not the levelized cost of electricity. They've looked at a levelized cost of the ten years on an annualized basis. So they've taken all the cost over ten

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taken all the cost over ten years and then looked at the interest rate or whatever cost of capital are assuming. And then they've done a net present value to try to give you an analyzed levelized cost.

>> Right. And then looking at the reliability question, you know, we've, we talk about Yuri and, you know, to some degree you're always fighting the last war, right?

>> And, and when we think about surviving a Yuri type event, when Yuri happened and we lost, power here or some lost power, that was because ERCOT made us load shed. Correct

>> That is correct. It's an ERCOT requirement.

>> And that load shed happened because gas plants couldn't get the gas to the plant to produce the energy and so we had just a dramatic fall off in terms of generation capacity.

>> It happened for a number of reasons, but ERCOT directs controlled outages. When there's

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controlled outages. When there's not enough supply to meet demand .

>> Well, my concern is that if we have a once again, if we're moving to something that still relies on natural gas and we say that we're looking at protecting against these type of events, even if we're doing a blend of hydrogen and gas, we're still. Potentially so I can speak to part of that risk. I'm sorry.

>> Sorry. Yes, I can speak to part of that. And I think Mike can probably catch the tail end of it here. So there are a number of regulations. Well first of all, our power plants performed very well during winter storm Uri. And that doesn't mean that we still had to respond to ERCOT requirements to initiate controlled outages. But since that time, the public utility commission and reliability standards have increased the weatherization and preparedness for plants to continue to run. So from that

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continue to run. So from that perspective, we are also standing in a good spot. And then also Mike can perhaps speak to how we how our what our experience was with receive Singh natural gas and how we mitigated that risk that others faced when the gas couldn't reach their plants.

>> Sure. So certainly one of the things we do is we have firm transportation Ann for natural gas to our power plants where many other merchant generators may use interruptible transportation, which means they have rights to move gas on that pipeline. If there's space available. But we have reserved we have paid to reserve the right to do so. We also source our natural gas from many different parts of the state, not just up in the panhandle where you saw a lot of the freeze offs occur. And so we also have access to natural gas down in the south as well as out in east Texas as well, which helps mitigate the risk of that. And we do have a bit of what I would say oversize transportation contracts as well . Do we have a transportation contract that's a bit bigger than what we likely require for our power plants, what we're going to need on an annual basis

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going to need on an annual basis and we do that intentionally to ensure that we have that additional capacity for reliability. During events such as Yuri.

>> Okay.

>> And just two final notes. We didn't get to talk about it today, but in once again, your, your larger deck, you talk about you have a great chart about the capital cost of various technologies. And I think it's really important to note that the last line there is demand response. And the cost is 10 to 20% of everything else. It's so much cheaper to not use electricity than to build new generation and so I just want to highlight that and also flag, for my colleagues because we have been in my office working for some months now on how we can achieve increased efficiencies, increased demand response throughout our our throughout Austin energy, to, to have more participation in and not have to necessarily build

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not have to necessarily build our way out of this. But to some degree, save some of our way out because it is so cost effective. And the very last question I had for you too, and I just lost it on my page, so maybe I don't have it for you anymore. Let's. Oh, yes. Back to, on the weather question. When we when you priced in the weather, the extreme weather risk, how how I think we can all acknowledge that we're going to see more and more and more and more extreme events that are more extreme. But we do know, like, for instance, for a Yuri type event, it's not something that's necessarily going to happen annually. So did y'all put in some kind of that? You think it's going to happen, let's say five times in the next ten years or or it runs as if every year

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or or it runs as if every year that would happen. How did you model that?

>> They modeled what the weather risk would be if it did materialize and then try to drive it down to an annualized number? We do not assume it's going to happen every year, but we have seen two major winter weather events within the last 3 or 4 years, and we've seen two major summer events within the last two years. So we do assume that over the ten year period will at least see 1 or 2 of those weather events.

>> Yeah.

>> Okay. And to add a point on that, so each of the risk numbers, what I call the blue, the Orange and the yellow that assumed that was the annual, the cost of it happened. You know, over the course of one year, we didn't add it in saying it would happen ten times. So, you know, this total amount represents kind of a worst year scenario when all three of these risks materialize. Again, these numbers are helpful for comparison purposes. It doesn't represent what the cost would be every year. Okay.

>> Thank you. Absolutely

>> Well, thank you all very much. I really appreciate your

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much. I really appreciate your work and look forward to seeing where this conversation goes.

>> Thanks. Council member alter chair yeah.

>> Council member manager. I appreciate the analysis that your office is doing with respect to conservation. And what I'd ask is that Elisa and other appropriate folks from the utility try to understand your assumptions so that we make sure that as we do these modeling that we understand the assumptions that you're using to arrive at the conclusions you're arriving. I think the professional staff that are working on this, they live it every day. They want to ensure that we meet the standard of reliability, the standard of affordability and sustainability. We're trying to thread the needle on those three competing policy priorities, and I trust their judgment because this is the business they're in. And we're happy to visit with members of your staff so that we can ensure that we understand the assumptions they're using so we don't arrive at contradictory conclusions because we used a

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conclusions because we used a different set of assumptions. So if you'd give us that a courtesy , we would be happy to work with you.

>> Absolutely. We've been working with the Austin energy staff quite extensively. They're they're wonderful. So I'm happy to continue and share that info.

>> That's great. I wanted to ask the green hydrogen and the bridging Singh natural gas as a bridge fuel to the green. Hydrogen is caused some concern and we've heard from members of the public about that. Could we talk a little bit? We also heard some timeline information. Could you talk a little bit about what timeline you're expecting on that? Green hydrogen, the access to it and the plant and who would own it and what Austin's role would be?

>> So right now we have a number of different developers that are that are interested. So in order to want to invest in an electrolyzer or something to make green hydrogen, you want to ensure that you have demand on the other side is where we're Austin energy and our power plant would come in. We have a number of developer Luz that are

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number of developer Luz that are looking at potentially structuring an arrangement with us to where they could deliver green hydrogen as early as 2027 or as 2028. And with the current tax credits and tax

subsidies available, assuming that we can average the price of power input to the electrolyzer of around \$30 and we can do that 65% of the time, we should be able to drive that down with the production tax credit for wind, the production tax credit or investment tax credit for solar and the tax credit for green hydrogen of \$3 per kilogram should be able to drive that price of the green hydrogen down close to the price of natural gas, which you see out in the forward curve today, which gets back to affordability. There are transportation concerns when it comes to green. Hydrogen has been mentioned earlier. The longer, you know, longer the pipeline and the more expensive that may be, which does introduce the idea of green ammonia, which is a lot of what you're seeing down in the hydrogen hubs down in the gulf coast that they're looking at doing. You can then transport green ammonia much more effectively than than green hydrogen, and then you can deconstruct it or decompose it,

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deconstruct it or decompose it, Frack it or crack it back into hydrogen Ann as well with, with very small heat input. So that may be another way to get the green hydrogen there as well. And be able to leverage what's already going on down in the gulf coast. So there's a couple of different pathways. But guess in short, to answer your question, we believe that we could start getting some amount of green hydrogen delivered by 2027 or 2028. If we start moving earlier as opposed to later.

>> So maybe in four years. Yeah

>> And if I may just add an additional point, because we spent a lot of time talking about the modeling and the assumptions, and council member Ryan alter spoke about the, the assumption of adding in 1000mw and retiring 1400 megawatts. Want to be clear that those were numbers built into the model, that what we're talking about is initially building probably a 200 megawatt dispatched generator that then assessing how things change over time, seeing what the fuel capability are in terms of available Katy. And then we would also be looking, I guess, to convert

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looking, I guess, to convert some of our existing natural gas to a carbon free fuel as well. So that's kind of the initial phased approach. It's not the plan won't have a staged every year. This is how much is built because it will really depend on how technologies mature and how the market responds, how our portfolio responds and Ed could you talk about the merits of increasing our local solar goals to solve our local congestion challenges?

>> And this may be the last question for you on that. It looks like councilmember vela has one after that.

>> So local solar will will do a lot to help the local price congestion issue, with the exception of when we tend to see the highest load in the winter which is prior to the sun coming up. So when your load is the highest is when you might see the prices the highest. So it kind of hits you kind of from both sides as well as when the sun goes down during the summer. We typically still have very, very high loads,

sometimes up at 3000mw, and that's when you'd see the price go the highest and your load zone when your volume

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your load zone when your volume or your consumption was the highest. And so while it can help out for a number of those periods, it it will not help balance out the financial risk and financial impact to our customers.

>> And local solar doesn't well, solar, whether it's local or not , doesn't survive the extreme weather risk scenario.

>> Gotcha. Councilmember and think this close us out and then . Oh okay one more member qadri then and so and again I'm trying to grapple with and understand all the different scenarios and their interactions, but my, my sense of the presentation is that we can either have a lower. Level again, a I'm just trying to summarize what you all are saying, but we can either have a local dispatchable source that that would help with.

>> Again, affordability, reliability, because that power is generated here and stays here essentially. Or if we don't have a local dispatchable source,

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a local dispatchable source, then we are going to have to purchase power from outside of the area. And that comes with a very high financial cost because of when we do need to purchase power is usually when that power is extremely expensive. It's the same time that everybody else is. Is that the general kind of am I kind of conceptually understanding that correctly at a high level that that would you buy all of your power from ERCOT and you sell all of your generators Ann but as your if you're generating at the same time you're consuming power, oftentimes they offset in cost.

>> And so, yes, when you when you have less generation, you are relying more on the market for your for your net cost, for your power. So yeah, I would say that high level.

>> That's correct. And when we're buying power off of ERCOT, that power there is largely fossil fuel power or is it a pretty broad mix? Again no, this changes from day to day. But,

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changes from day to day. But, you know, again, thinking about our more kind of extreme summer days, those kinds of situations where are we landing on that?

>> So it varies throughout the year. But typically when we're buying the most power from ERCOT or when we have, the less the least amount of generation is because it's not very windy and it's not very sunny. And we have almost 3000mw of wind and solar in our portfolio. And so, yes, typically if the sun is going down, the wind is not blowing. It's a call for conservation and we're serving our load. That's when the power has the highest carbon intensity and that's when essentially all the natural gas peaker plants are up and running and trying to keep the grid good. Yeah all those 1970s, 1960s plants that are still sitting out there, up there running at that time, all right.

>> Well, thank you very much.

>> Councilmember Qadri.

>> Thank you. So just one quick question.

>> What do you think the cost of getting to 75% of green hydrogen, hydrogen and running such a plant would be. And I think it's from what I know, there's currently no green hydrogen

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currently no green hydrogen power plants operating today at scale. And that's correct. Right

>> I believe there's actually one green hydrogen plant operating right now, and I believe five have been announced earlier this year. And so I would liken it to the early periods when we started seeing wind develop in ERCOT, back in the early 2000. And then, you know, in that 2012 to 2015 range, we started to see solar develop. Is there was not a lot of wind or solar online at that time, but you could see a lot of support from the government to try to kick start those industries. And then we really saw it take off. I think we're seeing a similar setup in the ERCOT market right now for hydrogen capable type generation.

>> Got it. And would you have any sort of assumption on what would the cost would be, though, of.

>> So right now, based on our conversation with Siemens, Mitsubishi and GE, we believe the capital costs are very similar to natural gas. And based on our conversations with a number of developers that want to supply us with green hydrogen, with the tax credits available, we believe the cost will be very comparable to natural gas.

>> Great. >> Thank you. Thank you. Chair.

[10:45:18 AM]

>> Thank you. Thank you. Chair.

>> And with the building of that, be like a p3 public private partnership with the city. Be building that plant or would we simply be purchasing the fuel, the resource from a private.

>> I believe the intent or desire would be to put the development risk on the developers and have us be the off taker of the fuel at a pre-agreed fixed contractual arrangement so that we understood what the price was going to be in advance.

>> Okay. So the city of Austin would not be building.

>> Your answer was about the fuel for the fuel.

>> We would not be building for the actual power plant. I believe. Yes. We'd want to do we'd want to build and own that power plant.

>> Say that again for the actual power plant that that generator we would want to build and own that power plant.

>> But for the fuel, we want to contract for it.

>> Okay, that makes sense.

>> Thank you. That was a little bit unclear. All right, mayor, did you have any questions? Nope. All right. If no other questions on the gen plan, let's move to Tammy cooper, who will talk to us about the

[10:46:19 AM]

talk to us about the communications. And this will be our last briefing from staff. And then we'll move to the work session on.

>> Good morning, chair Powell, vice chair Kelly, mayor and council members. My name is Tammy cooper and I am the deputy general manager of regulatory communications, compliance and legal services. Today I'm here to provide you a high level overview of our customer communications with the responsibility of serving more than half a million customers. We understand that it is critical for us to use multiple communication channels to spread important and timely information , whether it's a blue sky day or an emergency situation, we understand the importance of ensuring that our customers are informed. We follow best practices and routinely check in with our utilities and industry experts for guidance. Next slide . Specifically today, I will cover the ways we engage and empower customers through

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empower customers through multiple communication channels. I will talk about our emergency communication in stages and I will also talk briefly about the ERCOT grid condition levels and the recent changes made to emergency energy alert threshold is now on November 28th. You heard a report from director Snipes that provided a briefing on the city's winter preparedness, including communications improvements. With today's presentation, my focus will be on Austin energy specific customer

communication activities that occur throughout the year, as well as during emergency. His next slide. So one important aspect of our communication efforts is our strong relationships with the local media, including print, television and radio. Through our media relations strategies, we focus on sharing timely and accurate information and building trust with the public. We understand that the significance of proactive communication throughout the year so that customers are

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year so that customers are prepared. We also provide media training for key spokespeople within Austin energy to ensure that they can stay on message, address difficult questions and be a credible voice. Next slide. So social media is the fastest way to communicate information to a wide audience. Social media provides a platform for us to share our story with photos and videos and keep our customers up to date with the most important information. Ann particularly during an emergency. But we know that all of our customers don't use social media. We also know, however, that the local media looks at social media and they take the information we post and share that with their customers, their viewers, through a variety of different platforms. For example, a few weeks ago, there was an outage in north Austin caused by a squirrel. We posted that information on social media and sure enough, the local news stations quickly picked that up and shared it with their

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and shared it with their viewers. Next slide. The Austin energy website has a wealth of information just from the homepage alone. You can see how much of our power generation mix right now is being produced by renewable resources. Customers can find out information about rebates and incentives, and they can log on to their customer account through the city of Austin. Utilities they can learn about information from the medically vulnerable registry and importantly, they can get information about what to do before, during and after a power outage. You can see on the right hand side, there is a specific page that has current condition of our system. Next slide. And we are able to reach customers who are signed up for our outage alerts and who have provided us with their email address through automated and broadcast messages as we typically will send automated text messages through the outage map based on

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the outage map based on predefined criteria for a specific customer outage. We also have the ability to send broadcast text messages proactively with a customized message for example, this summer, when ERCOT issued those multiple conservation notices, we sent broadcast and texts and emails to customers to provide them advance notice of potential emergency conditions and to encourage them to conserve

energy. Next slide. As I've discussed, we want to make sure that our customers are prepared in the event of an outage . That can happen for a number of reasons. As I mentioned, animal interference, bad weather, car crashes and drones, kites or balloons that go into our power lines. In March, we launched our get ready stay ready campaign, Ann. This was aimed at equipping customers to know what to do in the case of a power outage and it provided tools and resources for them to help them feel more empowered. We reached our customers through

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We reached our customers through a variety of different ways, through dedicated web content, media relations, emails, web banners, bill inserts, billboards, as you can see here, along with radio and print ads, community outreach and social media. We targeted our message in several ways. For example, all of our digital and traditional communication lines, such as radio and billboards, were in both English and Spanish . We analyzed customer data to identify those zip codes where we had a high number of customer assistance program customers located, but a lower than average outage alert sign up. So we targeted billboards in those areas in a three month period. We signed up over an additional 22,000 customers to receive outage text alerts. Next slide. An Austin energy recognizes the importance of reaching customers by translating much of our communications into to all of the tier one languages identified by the city. Those languages include Spanish,

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languages include Spanish, Vietnamese, Chinese, Chinese, simplified arabic, and Korean. Additionally, we are working to incorporate messaging into French and hindi. We also have staff on our communications team that are bilingual and they provide media interviews to Spanish language news organizations. Next slide. We also have a physical presence in our community with our utility customer service centers. Those service centers are located in north, south and east Austin. Additionally our customer care call center and our Austin 311 are staffed by representatives that can answer customer questions in many different languages and of course, our customers have 24 over seven online access to the city of Austin utilities account, where they can access details about their bill, as well as information about programs and services. Next slide. Another way we reach our customers is through community outreach. This year alone, we have attended or hosted more than 50 outreach

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hosted more than 50 outreach events for example, last week we kicked off our annual weather winter weather pop up event and throughout the week we hosted our city partner agencies at our utility service centers for information, demonstration and giveaways. This will help the community during

times of crisis and these activities are essential to assist customers prepare for an emergency. We provide useful items for customers at these events, such as solar powered phone chargers and flashlights. And we also have magnets with important phone numbers. These items are very popular and they are a great addition to any home emergency kit. We brought one of these chargers, a refrigerator magnet, and a flier for each of you today so you can see what these items look like. Next slide. An emergency communications. We use many of the same platforms we use on a daily basis, except our communication is faster and more focused in an emergency. We phase our communications prior

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phase our communications prior to an event. We use the preparedness phase where we leverage existing messaging and campaign tools to help the community prepare for emergency situations in the advanced notice stage, we provide information on potential emergency commission conditions. This can be something that is coming imminently, such as a weather watch or an ERCOT grid alert. Notice in the active phase, we are actively restoring power and we work with our city partners, with ZO and other city departments to assist with messaging. Next slide. A few weeks ago we sent you a newsflash alerting you that ERCOT, who is the statewide electric grid operator, recently changed the threshold levels for the energy emergency alerts and this graphic is provided by ERCOT shows the various condition levels of the grid and we use these levels to inform our community action efforts. Now, as part of this recent

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Now, as part of this recent change, ERCOT increased the megawatt threshold trigger for emergency alerts. And what this means is that we could see the alerts triggered sooner and more frequently than in the past. ERCOT has explained that it made this change to allow it to access tools to stabilize the grid sooner for and based on the rare occasions that ERCOT activates the emergency alerts, we know that it can go fast and not necessary in order, for example, in September, when ERCOT issued a conservation appeal, we went straight from a conservation appeal to an emergency alert or level two. And if ERCOT reaches a level three, Austin Energy is legally required to rapidly respond to an ERCOT mandate to execute controlled outages. And of course, we actively communicate with our customers during this time with all available information. Next slide. So we know that providing our

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know that providing our customers timely, accurate information is imperative and we are continuously exploring new ways to reach our customers and we encourage our customers to use resources available, including the website and to register for text outage alerts. Thank you for your time and I'm happy to answer any questions. Thanks, Miss Cooper.

>> Any questions on the communications strategy? Council member Allison alter.

>> Thank you. Appreciate this update and all the work and improvements that we've seen. I was just wondering if you could speak to the outage map and improvements that have been made to the outage map so that it can handle heavy traffic?

>> Yes. And I'm going to ask Greg flay, who's our vice president of information technology, to speak to that. Thank you.

>> Good morning, Mr. Flay. Please introduce yourself.

>> Greg flay, vice president of technology and data at Austin energy.

>> So just really wanted to understand what updates and changes have been made to the

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changes have been made to the outage map so that our customers don't experience the same frustrations we've seen in a number of incidents.

>> Yes, the primary things that we addressed fairly early on had to do with basically how many customers could attach at the same time to the outage map and outages that people were getting in terms of round trip time to get information from our systems like our advanced distribution management system. So those were implemented fairly quickly. They've been in place probably for since March and a number of other things we've done have been to well, there's, there's three parts to the outage map. There's the outage Ann reporting system and there's the notify text messages and there's the outage map itself. So one of the challenges that we've had with large scale events is that when

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large scale events is that when people are trying to look up I out, that's a challenge with the outage map. So we originally with Yuri had Ed polygons around areas and that was not successful. Well then we tried it without polygons and that was also challenging for some folks. So we've introduced outages, outage information by zip code, which we're hoping will make it easier for folks to figure out if their area generally is suffering from outage. They can always, of course, look up their individual premise with the outage reporting and status system as well as via the notify text messaging.

>> Thank you. And have we fixed the messaging part of the text system? So it's clear when you're going to get messages, when you're not going to get messages like why you're getting a message when you're for your

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a message when you're for your outage is still happening, but you're being told it's being restored, right?

>> So we have all of the options turned on now for messaging when events occur. So when an outage first happens, when there is a crew that's been dispatched, when there's a available, all of those things have messaging turned on. Right now. We've gone through a database refresh. There was some in complete information that was in the system, the outage system outage, map system. We've done a complete refresh with the information from our customer care and billing system and as customers reach out to Austin energy for whatever reason, they might might do so we try to capture updated information around emails and mobile numbers to ensure that that data is as fresh as possible. >> Do we if report an outage and

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>> Do we if report an outage and there's multiple knell or it's an extensive set of outages, am I going to be waiting more than 24 hours to be hearing back from us in energy? Even if my power is not going to be restored? And that was a source of frustration .

>> Ann Wright. So the you should get a confirmation back that, you know, you've, you've we've received your, your message and then as those events get triggered, like if an etr is available or if there is a crew dispatched, then that updated information should come to you via text.

>> But if that were to take days, it would still be days before I got it.

>> Yeah. So the communication, just to be clear, the communicate portion of outages does not impact the order of restoration that's handled via operations.

>> Guess what I'm trying to understand is one of the frustrations we heard over and over again was with the interface with the outage map and the text and you know, there

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and the text and you know, there are multiple parts of it. One is, you know, the outage map not reflecting outages. But then there was also this sense that, you know, we texted you, we told you we were out, out. We got confirmation. We were out. And then we don't hear from you for days. Is that something where we're going to be have a mechanism to get in touch with people, even if it's to say it's not going to be restored? Is that kind of messaging in the new system?

>> We trigger our events. We don't. For example, periodically we update and think the general manager you got you got to jump in there.

>> Yeah, sure.

>> Can you Greg, you know the numbers better than me.

>> You and I have had discussions about the increased capacity on the ability of the outage map to take in a much more information, to be responsive. Remember, you mentioned 600 something and what was increased to can you talk about that?

>> Sure. Yeah, that has to do with some of those parameters that we're talking about. An

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that we're talking about. An analogy I use sometimes is a restaurant, right? So we've increased the number of tables. So as people come in, we can sit down at a table. We've also increased the amount of time that an order can be filled. The round trip time out to our secondary systems like and, and to come back. So those two things will result in fewer error messages of the type that I think people found very frustrating during Mario in particular, councilmember yeah.

>> And sorry, just to your question, council member alter about what can be done in terms of texting, maybe that's not automatic and think that was what I was trying to convey with our broadcast text messages and that is a tool that we employed, you know, during the prior storms where we will send a text that that is sent to all the customers that are still without power to try to give them an update. And it's certainly

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update. And it's certainly something that we have done and we've recognized we need to do that sooner than we had done it during the prior storm. But but it's sort of a combination where I think what Mr. Flay is talking about are all of the automated text messages. And then we have to manually go in if we're going to try to communicate something additional to customers, then what is in the predefined set of automated text and that is where our teams will work together to send those text messages out.

>> Council member and mayor and council. What I'd ask is the utility staff to go back, evaluate what the set of questions really are about that. And that is our responsiveness to customers about when they're out and how long they can get information real time and tighten, tighten up that communication an approach and come back at the next oversight committee and provide a greater clarity around the things that you just outlined and talked about it not in technical terms,

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about it not in technical terms, but in but in lay terms. In terms of what people can expect and think that I think you're doing a lot of work already. It's just a matter of how we message that at this level. I would ask you guys to do that.

>> It's like being on hold time like we used to have when we were sitting on the telephone, and that automated voice would come in every periodic and Eid. So, you know, that's kind of what people expect. So is there, we'll come back. Something like that, yeah. Okay. Very good. Mayor, did you have something?

>> Just want. I was just going to emphasize what councilmember alter was saying. Allison alter was saying it's not just all. What's automated. I will say that back before Shaw, what was automated was what was supposed to be automated. It was a poor reaction. But now there's an expectation. Ann I think that when somebody sends something in that they will hear back and get a report. Even if it's bad news, right? We're still working. We

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right? We're still working. We haven't gotten to it so that they know that that we're paying attention to that. So I want to just that's all I want to do is highlight it mean it's when my lights go out, I call councilmember qadri and that that so he and he's I'm just glad you didn't call me then. I judge his responsiveness. But very good.

>> Any other question for miss cooper?

>> I just wanted to say it's a blessing to have the mayor as a constituent.

>> So yes, indeed.

>> Thank you. Thank you so our last agenda item is just if anybody has at the top of mind items for our next meeting and as you know, that will be January 30th. And Eid don't see any right now, but y'all can send them in if you have them. And mayor at 11:06 A.M, this meeting of the oversight committee of Austin energy is adjourned. Thank you all.

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adjourned. Thank you all.