

Austin Energy Utility Oversight Committee Meeting

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>> Pool: Good afternoon everybody. I'm Leslie pool, chair of the oversight committee. We don't yet have a quorum, so I'm going to wait to start the meeting officially to give folks a little bit of time to join us, but in the meantime, what I would like to do is recognize all of the Austin energy staff who have come here today. I understand that you all participated in the narrowed yes, and I know there -- narrowed yes. Why don't we take care of that piece while we wait for the rest of the councilmembers to join us. There are a number of people who are out of town today who won't be here. We're going to wait and see who all makes it this afternoon. General manager Sargent. >> I'm Jackie Sargent, general manager of Austin energy and I'm excited to be here to share with you what I'm planning to do with our employee recognition. I want to acknowledge the Austin energy line workers, apprentices, judges and advisers who participated in the linemen's rodeo in Seguin on Saturday, July 21. The rodeo offers the linemen a chance to show their skill but in a fun, competitive way. You will hear they were quite successful this year. A number of of the rodeo participants are here in the audience today. They are listed on the slide that's on the screen. We often provide statistics with regard to our system resiliency and these are some of the folks that help us make that happen. I would like each individual to stand or wave their hand as their award is read. I'll start with the team of Matthew Elvis, Joe her on. N and jack Mcclean, first over y'all in the municipal category as well as second place in the overall

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journeyman category. Brock earned third place spots in the individual pole climb and the individual hurt man rescue events. In the hurt man rescue challenge, the Austin energy team of Brian barrons, Jesse Gonzalez Diaz and Jordan Linquist won first. In the apprentice, hurt man rescue event, Anthony transition trejillo won third place and a unique part of the competition is the cookoff. It helps feed all the participants and guests. Austin energy's texican team won the coveted cookoff grand champion award and third place for their pork spare ribs. [Applause] So I would ask that everyone that participated in the rodeo please stand and receive a warm round of applause. [Applause] >> Pool: So do you want us

to go out into the atrium to get pictures or you go with staff and take care of that and we'll join you? >> You should come out and join us. >> Pool: I think we should all come out and join you. Let's do that.

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>> Pool: All right. We're getting close. We now have four councilmembers. And as everybody comes back in, I would like to invite general manager Sargent to have staff tell us about those nifty contraptions in the back of the room. >> All right. Is our air force back in the room? All right. Thank you, councilmember. This is where we're going to do the aerial vehicle. It's slide 9. So next I plan to highlight one of the innovative technologies that we've been using since 2016 to improve safety and staff efficiency so that we can better serve all of our customers. Austin energy currently utilizes nine unmanned aerial vehicles or uavs, in its air operations fleet to perform a number of field activities including transmission and distribution, infrastructure inspections and damage assessments during storm restoration. Do we have -- are we keyed up for the video? The following video shows a few examples of how we've used uavs in the field. Some have infrared cameras that enable us to detect hot spots and premature failure of transmission and distribution components. Three of Austin energy's air operation team members are here today with us and some of our uavs as you can see on the table. If you have interest, we can have them show you them up close. Austin energy would like to recognize and thank koyt Kessler with the Austin fire department for helping us jump start the program three and a half years ago and he continues to support our program and advancements today. You can see in the video how we're able to capture the

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work that's being done, fly over our infrastructure, help us maintain that right-of-way, and it's been an improvement in addition to our safety efforts. So yes, for safety reasons we will not be doing a demonstration here in the room today, but would you please join me in giving our air force a round of applause. [Applause] >> Pool: That's great. Okay, I'm going to bring us all back and officially open this meeting. This is the Austin energy utility oversight committee. It is Wednesday, September 26, 2018, and it is 1:49 P.M. We are at Austin city hall, 301 west second street. I'm Leslie pool, the chair of the committee, and I'm calling us to order. We took a couple of items that we could do that was recognizing Austin energy staff, so we have taken care of that. And now we are called to order. The first item is approval of minutes. Do I have a motion to approve the minutes of the may 23, 2018, oversight committee meeting? Councilmember Casar makes a motion. Councilmember kitchen seconds. All in favor please say aye. Okay, that is unanimous on the dais. Now we move into item number 2, citizens communication. Welcome, everybody. Glad to have you here. I see that I have six people to speak today, and we have three minutes of time for each one of you to speak, and our helpful fellow at the monitors there will run the three minutes. And in order I'll go ahead and call off the first three names. Actually there's four spots

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there. Let's get four people coming up in this order. Mark capner. Richard Halpin, Becky Halpin. And the comments that you all have today are on items that are not on our agenda. Welcome. So I guess we can start with mark. >> Actually I'd like Richard to go first. >> Pool: That's fine. Richard, welcome. >> Thank you. >> Pool: You have three minutes. >> Thank you, madame chair. Good afternoon, chairman pool and vice chair Adler, committee members, city manager and city attorney. Good afternoon, chairwoman pool and vice chair Adler, committee members, city attorney, city manager and fellow austinites. I'm here today to talk to you about two things. The fayette coal power plant is an environmental and financial catastrophe that you all know about. These pictures, you can see on the screen there, remind you smart visionary leaders of what we already know. This ongoing explosion of toxic airborne poisons is an unmitigated health, safety and financial risk. Now that we know more about this, isn't it our responsibility to make sure that we do not leave coal ash pits and their toxic water runoff that will poison the drinking and farming water for our down-river neighbors. Please, ladies and gentlemen, do all you can to expedite the closing, cleanup, megawatt replacement, help for the

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surrounding farmers and residents and a future for the employees at this out-of-date power plant calamity. Keep your smart momentum going. The second topic, as some of you may remember, during the ratepayer discussions I was one of those speaking up. I asked then Austin energy president mark Dreyfuss if he would promise the house of worship representatives would be included in design and studies that would affect them. Mark unenthusiastically agreed. I think, mayor, you asked him during the full council meeting subsequently to memorialize that agreement. And send it to you. I don't think he ever did. Bottom line, after 60 or so hours of communications to Austin energy over the past couple of years, this customer promise was never fulfilled. Customer relations breakdown. Yesterday I spoke to general manager Jackie Sargent about this. A new day in transparency, customer service and more is coming soon to Austin energy. Could this begin with fulfilling the request of electric utility commission members to return to the full disclosure of ae reports they used to receive? Communicating better to community customers and including them in design of studies and other things that will affect them, and demonstrating more enthusiasm, creativity and expedited results in planning for and replacing the environmentally devastating fossil and nuclear fuels we have become dependent on. I believe that Austin energy general manager Sargent is capable of leading this promised change and I look forward to this new day for

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a cleaner and smarter, healthier, less expensive energy destiny for our beloved Austin. >> Pool: Thank you. Thank you. Mr. Capner. Three minutes. >> Am I on? Okay. Thank you very much. It's great to be here. I have two topics I'd like to address. One is as a representative of one of the houses of worship, temple Beth shalom, which at least one of you is a member of, I want to support Richard in his efforts to do or have the study done in a way that brings feedback from the houses of worship to the request for proposal and make sure that this is something that the useful to all of us. Number 2, I'm here as a member of the Sierra club and also as a former Austin energy employee having worked in strategic planning for a number of years. I would like to urge the city council to consider requesting Austin energy to direct -- or to contract with the university of Texas energy institute. Actually there's a contract in place already which enables funding for a variety of studies. Specifically, I believe it would be in our -- all of our interests, the city of Austin, the citizens, the electric customers, and Austin energy staff to have an independent evaluation of the relationship between increasing the percentage of renewable energy in the system, coupled with energy storage.

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The relationship between that percentage and the cost of energy, the cost of the overall system. To be very brief, I don't have a picture of it, but you all know what a hockey stick looks like and you've heard of the term the hockey stick curve. Generally almost every utility system has a hockey stick curve of cost versus renewable energy penetration. The penetration increases from a certain point, and we're now in the neighborhood of 20 to 30%, I believe. I don't remember the exact number. But that cost will be relatively flat as percentage of renewables increase up to a certain point. And then it suddenly begins increasing very rapidly. We want to know what that point is. A study is needed to determine that point. Austin energy has the funding in plays with the university of Texas energy institute to do such a study, and it should be done by an independent organization with a lot of authority and reputation. And I believe the university of Texas energy institute right here which last done work is the right one to do it. Thank you very much. >> Pool: Thank you. Ms. Halpin. >> Thank you all very much. It's good to see you this afternoon. I think a lot of us would like to close the coal plant, but it is very complicated. And I would like to talk about one of the complications and how to think about that, and that one is the financial roadblock to closing coal plant because we have debt that we've incurred. We've incurred -- is it going?

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Upside down. Beef we've incurred about 160 in debt for scrubbers. Austin has 480,000 accounts, accounts, not individual customers. If each electric account paid an additional \$7 for four years, fayette debt would be paid off. Now, \$7 a month, that would be \$7 a month, sorry. \$7 a month might be a lot for some people to pay, but what does climate change cost? In 2017, the U.S. Climate disasters cost \$300 billion. For the almost 329 million Americans, the 2017 cost of global warming disasters was around \$911 per person or \$76 a month. So the cost to pay off fayette debt over four years is \$7 a

month per account. The cost of global warming is \$76 a month in 2017, the cost of global warming was \$76 a month for every person in every household, and the cost of global warming is escalating. The cost to pay off fayette in order to fight global warming looks like a pretty good deal. The cost of climate change far outweigh the cost of closing fayette. Fayette is Austin energy's biggest carbon emitter. Austin energy serve -- if someone tells you we need to run fayette in order to make money for our ratepayers, please remember that in 2017 the cost of global warming was \$300 billion. Austin energy serves 900 -- over 900,000 people. If each of these people's share of the global warming costs was \$911, then all of

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our Austin energy customers cumulative share in 2017 would have been \$344 million. The financial cost of global warming are so large it's hard to get our heads around them. But they are as real as our utility bill costs. They just come to us in other ways. Please remember the financial costs of climate change. When you consider the financial tradeoffs of closing fayette or simply choosing to run it less. Thank you very much. >> Pool: Thank you. >> Good afternoon, councilmembers. Juan orivedes, here as a private citizen. A little over a year ago council approved an Austin energy tree trimming contract for power lines that was \$10 million higher than the winning bid which could have saved millions of dollars for ratepayers and the city budget. It was awarded to asplundi and Wright tree service. During that exchange when we went before council, I sensed the support from most of you on council when it first came up on may 18 and then again on all 17 when it was finally approved -- August 17. There was a lot of useful discussion back and forth, but it was modified to renew on a shorter two-year cycle, if you recall, which means it will come up again early next spring. And so I want to say that this is the right time and the right place to engage in a discussion about the barriers in that solicitation for local and qualified companies. We have the time now until next spring to rework the elements of that contract that are barriers for participation. I've handed out a list of

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four basic points that we've talked about before that we think would be a step in the right direction. And you have those in front of you. We propose that -- I propose that the Austin energy contract be broken into four district areas instead of two. That the contractor must have five years of experience as a qualified line clearance company, and not be required to have five consecutive, quote unquote, years. That's a barrier. Bond insurance should be reduced from one million to perhaps 250,000. Due to the city being separated into four different areas. And then, of course, all employees' legal status must be verified through homeland security to verify eligibility to work in the United States. I read an article last week about the passage of economic incentive programs by council. Referring to a paradigm shift in out the city awards economic incentives. It may have been a quote by mayor Adler, I'm not sure, but it says the framework holds the promise of our city actually supporting the local businesses that built this city and continue to make it thrive. It would change the city of Austin's focus from large corporations like Asplund and Wright services to small local business. Councilmembers, I believe this is in the same spirit

and it would spin off community benefits and create middle skill jobs. >> Pool: Thank you. You can go ahead and finish. >> I just wanted to say can we have an agenda item for next month to begin this process and this discussion. >> Pool: Thank you, sir. >> Thank you. >> Pool: And we have two

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more people to speak. Tim Arndt and Gilbert sparky. While they are coming up, I want to make a note that we are kind of a small group here today because five of our colleagues are out of town or otherwise not able to attend and that is councilmembers Renteria, Garza, alter, troxclair and Houston, and I also wanted to welcome and thank the chair of our electric utility commission for joining us today. Happy you are here. Mr. Arndt, you are up and you have three minutes. >> Hello. Good afternoon, chairman pool, vice chair Adler, city manager and councilmembers. My name is Tim Arndt. I had the pleasure of serving on the low-income advisory task force in 2015. I've come to speak to you before about the same or similar subject. I come to you today because I was listening to NPR the other day and a new study came out by the energy information administration, maybe you all have heard the NPR report, that showed that nearly a third of the households in the United States struggle to pay their energy bills. In 2016, ACEEE reported that -- that -- or found that African-American and Latino households pay more for utilities per square foot than the average household. And at the beginning of the year the Trump administration called, citing lack of need, called for the end of low-income energy assistance program. You approved a budget that

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Austin energy reduced the low-income weatherization that will help these needy families. I would like to ask you again to encourage Austin energy to increase the funding for low-income and make those dollars available for energy efficiency. For every dollar that we invest in energy efficiency, the payback is about three years. Austin energy is saying that -- that those measures are good for 15, so that means that half a million dollars that they cut would put -- if I'm doing my math, five million -- over five million dollars in the pockets of citizens that need it most in low income. One of the things that I also hear is that low income is too expensive. The home performance with energy star, Austin energy invests almost \$1,500 -- \$1,544 per kw. The low-income weatherization program, they invest \$1,700 per kw. So the difference is really not that much. Thank you for your time. >> Pool: Thanks, Mr. Mr. Mr. Starky, three minutes. >> First of all, good to see you. I'm sure your break did not seem as long to you as maybe it did to us. So welcome back. I'm Gill Starky with 350 Austin. I want to be three things briefly. One is do a quick level set, and secondly to bring your attention to a deep and growing concern of mine about which each of you have power to do something. And the level set is just to bring everybody up to speed on 350 and 350.org. I think you are aware 350

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Austin is the local affiliate of 350.org, the global grass roots citizens movement to stop and reverse climate change. And we're basically the boots on the ground here working locally toward those goals. The number 350 also, since the carbon dioxide consent is at least 407 parts per million is well above the threshold of 350 parts which is considered safe. We're seeing some of these disasters that we can -- that Becky talked about. We have to roll back CO2 concentration, get back below 350 once again. So that's sort of my level setting. The concern that I have, and it's growing because I'm beginning to see more lines of scientific evidence to indicate that we are quite likely to blow through the safe, safer global warming barrier of one and a half percent -- excuse me, 1.5 centigrade above pre-industrial levels, that it looks like the lines of evidence are beginning to show that's going to happen around 2030, give or take a year or two either way. And then blow past two degrees sent great not long after that. But the one and a half is a great concern after the Paris agreement and the significance of holding warming beneath that. My concern, and one of our primary focuses as 350 Austin, is to get to fossil free or carbon free electricity generation sooner. The current goal which you have set as city council is 2030, but again, that's looking to be late in the game. That's coming up to the plate with two out in the bottom of the ninth and you are down by three runs.

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We need to accelerate our transition to fossil free, carbon free electricity generation infrastructure, because as you know we have other problems we need to attack in the global warming arena as well. So that I think is something that's going to get more and more air time in the coming weeks and months, and I thank you very much for this opportunity to talk about it. >> Pool: Thank you, Mr. Starky. Would you like to just recognize the members of your organization that are with you here today? >> Sure. David Bradley. Of course you know Becky and Richard. Senility is setting in from time to time. Back in the second row, before you get to the other one in the first, is Martha Carlton, and back on the first row is Dana Wynn. And my lovely wife Bobbi, I think on the end. I believe those -- those are the only members I believe of what we're know known as the shirts. >> Pool: Thanks to you all for coming and everyone today and thank you for your efforts in the community. I would like to ask general manager Sargent, since the house of worship has come up a number of times, let's make sure the houses of worship are represented in our stakeholders when we get the -- because I'm looking for Jackie. There you are. I know you are going to be hiring a consultant and bringing people to the table to have the conversations. We had talked about last year when the rate case was in front of us making sure that houses of worship were represented, so we would like to make good on that promise. >> [Inaudible] >> Pool: Yes. And I think that will go a distance to helping address the concerns that have been raised here today.

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Does anybody else have anything for the good of the cause? Yes, mayor pro tem. >> Tovo: Yeah, I'd like to follow up briefly on the low-income weatherization piece that Mr. Arndt raised. We had opportunity to talk about that during work sessions and during budget process we adopted an amendment to provide -- can you remind us exactly what it did? I don't want to characterize it incorrectly. >> Casar: Sure. And I'm sure I'll be corrected if I characterize it incorrectly as well, but we -- noting that while we had budgeted more dollars, the dollars were not being spent at that budget level. There was direction to make sure that we actually hit the budget spent this year to see if we can actually increase that -- the funding in that program to bring back reports regularly to us in written format and one in-person presentation midyear to see how that's being spent. I think Austin energy had committed to putting an rfp out that would actually get us to weatherizing more -- significantly more of these low-income homes than we have in the past. So -- and I think part of the direction was that as that rfp is crafted, that it have a community engagement component because I think a big part of the need is to -- talking to these low-income households about what they need. >> Tovo: It was the regular piece of it that I'm not -- I'm not sure how -- I'd like to suggest -- we can see if you are on track to spend those funds this year. And also if you could just keep us in the loop on that rfp. It was my understanding it was ready -- pretty much ready to be released. >> [Inaudible] >> Tovo: Okay. We can follow off line, but

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I know we heard from the community concern about lowering that budget and I share that concern and I want to be sure that we're on track to spend the money that we did allocate, and so getting regular reports, and this committee I think would help with that. And then if we have -- if we're ahead of the game, then we can consider a budget adjustment midyear or at the appropriate time to make sure that we have additional funds put into that program. I mentioned at our last council meeting I was bringing forward a measure looking at weatherization and our housing repair program, and that hopefully will help to get those programs working more and I think several of you are working with me on that. >> Pool: Mayor Adler. >> Mayor Adler: Questions arose, this came up at electric utility commission meeting about the demand for the program, and there was some question, I think the staff came in and said we were meeting the demand and the numbers were going down because demand was being met. There weren't the same opportunities and we heard people in the community suggest that the opportunities were in fact greater. When that came up in council we asked that question open ended and we're asking that be doubled back to us and help us understand what's real there and what information we have so that we can understand that issue better. >> Pool: And then I would just like to make a note for Mr. Orivedes if these still here into the Austin energy vegetation management, if we can follow up with staff and see what that looks like. All right. Anything else? Okay, thank you all for being here. We'll move into the rest of the agenda. We've got briefings. General manager's report, we've done a couple items on the awards and recognition of Austin energy employees, but we'll start off with

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general manager Sargent talking about upcoming items to be brought to council. >> Thank you chair pool, vice chair Adler and councilmembers. I'm Jackie Sargent, Austin energy general manager. In addition to my report today, you'll receive presentations regarding third quarter reports from our finance and our operations areas, as well as a briefing that's been requested on energy storage. I'm really pleased to share that the operations report today is going to be presented by our new deputy general manager and chief operating officer, Charles Dickerson. And if you would please join me in giving him a warm welcome to the city. Charles. [Applause] So today my report will include, as usual, a number of items that are coming forward for council approval. Quick updates on some of the projects and the work and programs we've been doing. I'm also going to -- I've also already provided you with some of the information regarding innovation and the unmanned aerial vehicles, and I need to continue with discussion about some of the awards that we've recently received and thank you for recognizing our line workers. They really are the ones that keep the lights on for us day in and day out. I'll begin with highlighting some of the items that are going to be coming forward for your approval. The first item I want to bring you on is city code amendment scheduled for October 18 meeting to allow for remetering and resale of electric service for the purposes of electric vehicles or ev charging. A third party electric charging services is considered a resale of electricity which our current code prohibits. This action will amend the code to allow third parties to deploy and operate stations. This model for

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infrastructure investment minimizes costs and risks to Austin energy while still providing utility the opportunity to sell the energy at an established rate. And help promote the adoption of electric vehicles. And we think this is really important. The next items that I have are with regard to procurement contracts, and they will provide us with the authorization that we need to acquire parts and equipment that we use on a daily basis. At your October 4th meeting you will have an rca to provide underground electrical supplies for up to five years for total amount of \$3.7 million divided among the following contractors. West co distribution, Texas electric cooperatives, Priester, Mel and Nicholson, tech line, start Urby and electrical distributors. These contracts include 51 items used to connect and splice underground electric distribution cable. The second item is a contract with Priester, Mel Nicholson to provide circuit switchers for total contract amount. Circuit switchers are required to connect and disconnect transmission lines and other components so the equipment can be worked on safely. The third is a contract with tech line to provide underground power cable for a total amount not to exceed \$970,000. This cable is required for planned projects including the new downtown substation which is scheduled to go on line in 2020 for which you received previous presentations. Next is a contract to provide soil remediation and equipment deacon domination for divide green environmental, Progressive environmental is steri cycle. Many are these are regulated by tceq and these ongoing

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services are used to ensure compliance with environmental laws and rules. The next item is a contract with Johnson controls to provide chiller maintenance repairs and upgrades for a five-year term for total contract amount not to exceed \$3.4 million. This is a sole source contract with Johnson controls because they are the manufacturer of the York chiller system and their service branch is the only authorized to provide maintenance. An existing contract with Icg for continued use of the software. You had a similar item last week ratifying amendment for current use of the software through the end of October. This amendment increases contract amount by \$865,000 and extends the term for five years for total revised contract amount not to exceed \$1.8 million. This is the plan we use to develop and analyze scenarios that form the basis of the Austin energy resource plan and studies we do to consider the addition of more renewable energy. Next I'll provide some project updates. The power plus newsletter is a monthly publication which accompanies the city of Austin bills that are sent out to customers. And they receive bills from various of our utility services. The name can sometimes be misleading because not all recipients receive electricity in Austin energy. And because the content covers all utility services, Austin water and others, it clouds fees, events and safety tips. Austin energy conducted a survey of customers via online panel and we gave alternatives some options for a new name. And Austin energy utilities now is the name selected by most of our customers. The name change will go into effect with the November newsletter so we wanted to make sure you were aware of

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that. I wanted to notify you about a meet and greet for small and minority own biz. This provided businesses a venue to meet Austin energy staff, review upcoming opportunities, retain tips on how to respond to solicitations, and to learn more about the resources available through partnering departments. Austin energy is committed to assisting small and minority owned business growth within the city and we will focus future efforts based on feedback that we receive from the community. We had 71 vendors in attendance and the event was supported by other city departments. This was really a great example of collaboration. We plan to provide more information regarding the ERCOT at next month's meeting, but today I wanted to hit some of the highlights. With the hot weather we saw energy and ERCOT hitting peak loads and price spikes compared to previous Summers. Even though the high temperatures pushed low costs higher than we typically see, revenue from our generation balanced that to keep the overall cost to customers comparable to last July. The ERCOT market went into the summer with severe weather forecasts, concerns about tight reserve margins and very high prices in the forward markets. Given all this, ERCOT market performed well. The hot days came, generation showed up, and the Austin energy generation performed very well. Related to this topic, we have some items coming soon as the result of the renewable request for proposals that we issued earlier this year. The solicitation resulted in approximately 50 respondents offering more than 430 proposals from 80 separate projects. We expect to bring two separate contracts before the end of the year. But today I want to provide council a little more detail on a local solar contract that's scheduled to come to council for approval on October 18th.

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We will be coming back with a 15-year power purchase agreement with east blackland solar project one for full output of electricity from a utility scale generation facility with a capacity of 144 megawatts. The total estimated cost is 10 to 11 million dollars per year for total amount of 150 to 165 million dollars over the term. We are defining local solar as a solar asset located within the Austin metropolitan statistical area or msa. The close proximity reduces transition losses, reduces the price of electricity locally, and benefits the local economy through local jobs and local investment. The solar purchase recommended in this action will help us get closer to achieving our renewable energy goals as outlined in our resource plan. And this agreement will not require Austin energy to invest any funds in the construction, the operation or maintenance of the project, but does provide us with the opportunity to purchase it potentially at a future date. The agreement is expected to be beneficial and have a positive impact on both the power supply adjustment or psa, and that's given current market conditions and the projected future prices of electricity. And I've already done this, the unmanned aerial vehicles. So I want to highlight a couple of awards we received. The first is the Austin energy community solar program recently being certified by green E. Green E is a trusted global leader in clean energy certification, and by becoming green E certified, Austin energy's community solar program is providing additional assurance to customers and stakeholders that is meeting rigorous environmental and consumer protection standards. With your support, ours is the first green E certified operational community solar program in the country. So thank you. Austin energy also received the hid global innovation

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award from the greater Austin chamber of commerce on August 30th. The award specifically recognizes the Austin shines project and as you remember shines stands for sustainable and holistic energy storage and pv. The chamber recognition is the latest in the series of awards for shine's and community solar projects including the smart electric power lines utility of the year and mayor's climate protection award. And we have already recognized our line workers. So with that, I'm happy to answer any questions that you may have. >> Pool: Any questions? Looks like you wowed us. >> I'm going to turn it over to mark Dombroski. >> Pool: This is item 4. Thank you. Welcome back. How are you today? >> Doing well, thank you. Mark Dombroski, chief financial officer. Always disclosure these numbers are unaudit and you can find our audit reports at this link attached to this presentation. So this is third quarter report. It's delayed being brought to you because of budget discussions. During the month I would normally present the third quarter report, and covers April through June of 2018. Our agenda should be getting familiar to you and it's unchanged. And I would note this report was given to the electric utility commission on September 17.

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Much like last quarter, Austin energy is stable and financially healthy. We're substantially compliant with our financial policies and metrics, and our revenues and expenses are slightly higher than budget. And our balance sheet is solid. I'm going to go over a little bit the psa that was approved by city council on September 11th contained a change from a seasonal to a nonseasonal rate. I'm going to present a little bit of a background on why we made this change and and this also detailed in a memo we presented to your offices on August 29th. So Austin energy is meeting its financial policies with the exception of the power supply in capital reserves. Despite those funds being underfunded, Austin energy has 212 days of cash on hand and above 150 million-dollar day minimum. In our fy-19 budget we anticipate meeting the requirements of the power supply budget. And getting closer to meeting that financial policy for our capital reserves. Austin energy is exceeding its financial metrics, with the exception of operating margins. It's at 9.7 versus a target of 10%. But we expect this to improve, as the summer months are incurred, which typically yields higher revenues for us. Finally, Austin energy affordability goal is comprised of two metrics, no more than 2% compound growth since October 2012. The second one is Austin energy have a system average rate no lower than 50% of all Texas utilities. It's about 3% above the state average and does not reflect the

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2017 base rate reduction of 42 million. The metric will be updated once we get the latest information, administration data, and that should be released in October next month. And we'll cover that once we get that data and have a chance to analyze it. I hope we'll be pushed into compliance with that metric at that time. So on to our budget analysis. So our operating revenues are about \$35 million above budget or 4%. And the increase is made up of \$8 million in base revenues and \$25 million in power supply. The increased revenue are due to increased sales. Our budget of 935 versus an actual of \$970 million. On the expense side, our operating expenses through the third quarter are \$745 million or about \$24 million over budget, and that's due to higher power supply costs. That increase in power supply is contradicted to both higher energy sales and increased power costs. So you can see that the yellow bar, which represents actual there on that power supply piece is \$24 million. About 20 million of that is due to higher prices that we saw on ERCOT over the summer, and about 4.5 million is due to higher megawatt hours, higher sales. Our fund summary, you can see that our higher energy sales translated into about 1 \$1 million increase for us. That increase, coupled with the higher revenue results came to 11% increase in our income before transfers. The deficiency is less than

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forecasted, and we anticipate ending the year with a slight excess, due to higher income and cost controls. Year to date, our energy sales are about 139 gigawatt hours above budget or 1.5% due almost exclusively to a slightly cooler February and a warmer June. You can see our June energy sales were about 14% above budget. As you can see, our forecast, our sales are heavily weighted in the last half of the year. Our fixed expenses is much more evenly spread. Our nonpower supply revenue mirrors our

electric sales and exceeds budget by \$10 million for the first six months, a budget of 551 versus 561 or about a 1.9% increase. And this graph compares our power supply cost and power supply revenues. The bars compare our actual power supply cost to budget. Overall we're about 9% above budget, about \$25 million, with most of the increase occurring in the third quarter, due to higher prices in energy sales. The blue line represents our power supply revenue that pays for the power supply costs. Austin energy sets the rate below that cost so they can refund the prior period recovery. Aea has recovered about 7 million of that cost. That number should be larger through the year. That's contributed to an overcollection, one reason, and I'll cover that later on why that's occurring. The capital improvement plan,

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through June, we spent \$107 million or about 50% of our budget. Distribution power production or just under budget with remainder off pace. Based on our past performance, we expect to spend another \$140 million throughout the end of the year. The pie chart shows how we fund those capital improvements. With about \$50 million of that coming from commercial paper. About \$25 million in contributions to native construction. And the remaining \$44 million using cash. And the bar chart shows you a quick comparison of in the utility where those projects are occurring. I note on the general side, there were significant capital projects for our facilities that we elected not to pursue. As we brought forward our proposal to build a new Austin energy headquarters facility. So we're deferring anything that doesn't directly impact safety or health. Austin energy's balance sheet is strong, which helps us maintain our aa credit rating. Since we don't have a budget for the balance sheet, we compare ourselves to our prior year. As you can see on the right side, the donut chart there, we have about \$615 million in cash and reserves. The psa reserve is held within what's called current assets. As is our working capital. It's held in cash. And the capital reserves is held in our long-term assets, so that's where that money resides on that balance sheet. Currently \$109 million of commercial paper outstanding against a target of 275, at which time we'll be bringing to you a request to sell bonds to

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roll that commercial paper over. This is a gap summary of our income statement and balance sheet. Just note that compared to last year in which we had -- we were about \$20 million negative net income through the end of third quarter. This year we're showing \$1 million of positive income. I expect to end the year somewhere around 30 to \$35 million of net income. So on the market analysis, the data in this chart, which we had been including on the financial report, we're going to move this over to the future operating points because it's really operational in nature. And we're going to be eliminating the pie chart due to its misleading depiction that -- it shows fuel costs, but it also shows renewable energy in there, which that's an all-in cost. That's the power production -- excuse me, the power purchase agreement cost. So it's want a fair comparison. So we'll be taking that out but providing the data to stakeholders. And I would note on this where you can see where we're starting to have more generation than we do consumption, and that's a result of our increased portfolio with our renewables. And

through the end of third quarter, our renewables were 41% of our load. This chart depicts all of the costs and revenues that are included in our power supply adjustment, which are very important to our customers. For some customers, this makes up 40% or more of their bill. The trailing 12 months gives a good indication of how future supply adjustment rates might move. If you look at the difference between the load zone cost to power supply cost, it's a good

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indicator because we just set the psa at 2.4% reduction. This chart excludes the over and under collections and sets from a prior period. We don't know what that over collection is until the end of the fiscal year. A little bit more about why we went to a flat psa rather than a seasonable and nonseasonable psa. This chart depicts all the major elements found in our power supply adjustment. The drivers of these elements can be constant, like the location of a generation plant or a contract price, which we know in advance. Other drivers are much more variable, like what the market price is, transmission congestion or what the weather might be. So forecasting the power supply adjustment is challenging, given these variable costs. And our portfolio of contract assets. So as we see a growth within the renewable energy in our portfolio, we're going to see some shifting of those costs compared to our load zone, and that's what we're actually experiencing now. So this chart will tell -- a lot going on. It kind of shows what I've described, so this shows the impact of that portfolio on our cost. The Orange lines, Orange and yellow bars represent our energy sales to our retail customers. So the Orange ones are traditionally with a we call the nonsummer months and the yellow bars are the summer months. And this is what our power supply adjustment is collected on, the megawatt hours we sell. The solid blue line show the load zone months are higher in summer months than nonsummer. So that's what we're paying ercot to buy and service the customers. However, the dash green line shows the net power supply costs. So this is what Austin energy is paying of all those components.

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Which I described to you. So now those are lower in the summer months than the nonsummer months, which is just the opposite of our load zone cost. So by having a higher summer power supply adjustment rate and having more energy sales in the summer, prevented us from being able to return that overcollection to our customers. So we moved to having a flat power supply adjustment, which I think will benefit our customers because you imagine during the summer months when bills get higher because they've got their air conditioning on, they'll be paying less in their monthly bill. The opposite is true, as well, during the winter months. The power supply will be slightly higher. But overall, the power supply for 2019 was reduced by 2.4% for the benefit of our customers. I'll take any questions if you have any. >> Thank you, Mr. Dombroski. Does anybody have any questions? Very good. Thank you. So we'll move on to item number five, which is the third quarter fiscal year 2018 operations report. And I think we have our new employee to provide this update. Welcome, sir. >> Thank you. Good afternoon chair pool and members of the council. I'm Charles Dickerson. And I'm glad to be here. Before moving on, I

want to thank general manager sergeant and her team for electing to bring me on board. Anecdotedly, when I put on my profile I was coming to Austin, I got about 300 congratulatory notes. About 298 talked about how great of a city Austin was and how great Austin energy is. >> Where did you come to Austin from? >> From Maryland by way of Massachusetts.

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I worked at the utility in Massachusetts, served about 7 million customers. In Delaware, serving about 2 million customers. >> You realize, of course, that you have traded snow for incredibly hot Summers. >> And loving every minute of it, madam chair. Lost about 18 pounds riding my bike in the heat. >> Welcome. >> Thank you. By way of an agenda, I'm going to give an overview of Austin energy principally so we can all level set, talk about the performance, and what's always important is to look ahead and what we plan in the future and what's important to the Austin energy management team and the greater Austin energy team. So what we do. So we basically balance the need of our customers to have electrons to them so they can live their lives safely with the amount of energy available in the ERCOT market. As I'm sure you know, we have an obligation to put our products in the ERCOT market and have a similar obligation to go to the ERCOT market to fill our customers' needs. The middle piece of this chart is how that's balanced. I'll go into more detail in the next page. However, if you look at the lower left-hand corner, this is the basic amount or makeup of our general fleet and the associated contracts. The pictures that we have are by design. We have generation across all three of the portfolios. We have wind solar and traditional thermal generation. How do we do it? To me, this is one of the most important slides, and I'll get to the most important piece toward the end. In the beginning, again, we're balancing the needs of our customers, what's available in the ERCOT market, and we do that over a vast array of

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infrastructure. And this should not go unmentioned. About 620 some odd miles of transmission lines, 75 substations, close to 5,000 miles of overhead distribution lines, close to 6,700 miles of underground lines, 80,000 transformers. The reason this is significant is when we think back to the top of the discussion, this is the type of infrastructure they and other members of the Austin energy family maintain to make sure we provide safe and reliable energy. In addition, providing our infrastructure to energy storage projects and 30 megawatts of local solar. So what does all that mean? It means that we're serving about 480,000 premises, which is close to slightly under a million people, 380,000 homes, 596 schools, hospitals, 23 police stations and fire stations and close to 57,000 businesses. If I would go back 30 years in my career when it first started in Washington, D.C., one of the great joys I had was when my family and I would come back from vacation and flying to Washington, D.C. At night and see the lights on, I knew I was part of the team that kept the lights on. I tell my team that we should be very, very proud of the work we do, keeping the lights on here in Austin and the surrounding communities we serve just outside. So our generation fleet, the next slide. I apologize I'm controlling the slides here. It's

just a graphic overview of where we have generation, either physical or contracted, and it's color coded. Into the upper right-hand corner, we talk about the megawatts associated with it. And for a more detailed view, this is the actual amount of megawatts in each one of those either physical assets or contracted assets. So again, this generation is not

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necessarily electrons that go to our customers, but we have to go into the market and extract it. And as deputy general manager Dombroski said, to the extent that we're able to realize the revenue from what we bid into the market, it helps offset the costs from our customers to what we extract from the market. So finally, well, not finally, our performance. I'm going to test my eyesight because apparently I didn't bring my paperwork, but I'm very familiar with these charts. The powerpoints I just mentioned, one of the ways I mentioned, one of the ways we evaluate is how available the power plants are. We see the units were available almost 97% of the time, versus the target of 95%. Fayette in 98 versus a target of 97. South Texas project, 100% of the time. In the sanhill one, we didn't meet the target because it had an issue of repair that we had to do. We're pretty certain that that number is going to come up for the remainder of the year. If those units are not available, they cannot extract the revenue stream to help keep energy affordable for our customers here in Austin. From a reliability standpoint, if you take yourself back to the chart at the beginning where I showed the balance between ERCOT and our customers through our infrastructure, if those wires and that equipment fails, then we can't move the electrons from the market to our customers. The team here, led by Dan Smith, the vice president of our service delivery team has done an excellent job making sure we're still available. Utility speak for the average time that a customer has been

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out is below target, which means we're reducing the amount of time that customers have outages. We'll see that in the chart just before it. SAIFI, means the frequency that the average customer has gone out has dropped. And if you look up in the upper right-hand corner, you'll see SAIDI, which is a system average. This is important, particularly so SAIFI, because to me, the best outage is the one that never occurs. To the extent that we can make significant improvement in reducing the number of outages, we also impact the duration. We've made significant improvements, none of which I can take credit for. The credit goes to the team. We've made significant improvement by identifying our worst performance circuits, coming up with engineering solutions on why those have badly performed and fixing them, by increasing and making targeted maintenance on vegetation management and improving our fault location. If you're not familiar with the term, generally, if there's an issue, there's a fault. The sooner we can identify where the fault is and what the fault is, the more quickly we can get power restored. There are other tools that we have in our engineering tool belt that we'll use to continue to reduce the duration and frequency of this outage than the ones that we've used. And having come from three other utilities, I can tell you that these are best practices that utilities use around the country in order to

maintain reliability. So future state. This chart is missing one thing. And it's a -- what I would like to call a watermark on safety. My most important charge is making certain that the men and women who are providing safe, reliable service, go home every day in the same condition or better than when they came to work. I lived through a period back in the early 2000s where we had

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five utility fatalities in less than 14 months. So we take those things very seriously. We just had a very, very successful safety summit last week attended by a little more than 500 men and women. A number of people spoke, including general manager sergeant and myself along with Dan, and we had a number of outside speakers who talked a lot about the value of safety. And I fully believe our teams get it and understand it. I also know for a fact that organizations that have a very, very strong safety culture also perform better. So I would ask that you all help us in this mindset of continuing to push the safety issue. So outside the safety or in the umbrella of safety, our focus are our customers. We're doing a number of things to continue with our customers by improving our visibility to their service and their visibility to their own service by doing upgrades. We are partnering with other city agencies and departments to help streamline and make it easier for small cell deployment to take place. We're doing reliability assessments, which means we're looking at various customers and seeing where are the pockets that there are challenges, and what can we do to improve it? The next one is our community. We want Austin to be a community where when people are there, their electricity is reliable, so we're repowering downtown and doing convergence where we're changing voltage levels from lower to higher to make it better. We're also very, very mindful of the environment and how we can reduce our carbon footprint, so we continue to reduce our fossil fuel exposure while at the same time expanding our renewable portfolio. And general manager sergeant talked about two projects coming forward during the next meeting, and those are in support of that. And finally, modernizing the grid, we're participating in the

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shines, and automatically switching circuits so when people are out, we can identify the faults and get people back on. As any good management utility would do, we're going to continue to monitor the health of the assets and see how we can target our resources to them so we can continue to be affordable. With that, I'll take questions if there are any. >> Great. Thank you, Mr. Dickerson. Does anybody have questions? All right. Very good. No? Okay. Great. Thank you, sir. >> Thank you. >> Thanks for being here. Item number 6 looks like our last item. Energy storage and dispatchable renewables update. Hello, Khalil. How are you? Good to see you. >> Good afternoon chairman pool and councilmembers. My name is Khalil, vice president of strategy technology and market operations, and I'm here to give you an update on storage and dispatchable renewables. This is part of our resource planning commitment and also a request by stakeholders that are particularly interested in this technology. So this presentation will talk a little bit about resource planning. One thing we haven't done is actually talk about storage, what the value is storage is and what it is as far as it pertains to our

system. And then talk about Austin energy's efforts vis-a-vis this technology. So resource planning, you guys are very familiar with resource planning. We go through this every two years, and now it'll be alongside our cost of service studies and possibly rate making and providing input into that process. So the next time we'll do this will be the fall of 2019, of next year. But essentially, it's the

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characteristics of our resource planning is based on quantitative analysis of risks, costs and opportunities. It's flexible and dynamic to respond to changing conditions, and it's both on the foundation of previous actions. So there are actually certain commitments that we had in the last resource plan that we did in 2016 with commitments all the way out to 2027. There were three particular commitments that we had to do for storage and dispatchable renewables, and those are connect achieving megawatts of local thermal storage by 2027. A minimum of 10 megawatts of electric storage, and that all would be developed based on a road map on the lessons learned from the shines project, a program you've heard a lot about already. We're also to study the cost, benefits, riskless by achieving a more aggressive electric storage goal. 50 and 100 megawatts by 2027. And study the economic feasibility. Compressed air storage, and aggregated demand response and vehicle to grid. So just a little bit on storage. Storage is an old and a new technology. It's old in that most of the storage that actually exists was installed many, many decades ago in the form of one primary technology, and that's called pump storage. That technology, what it does is basically take advantage of water falling down into a reservoir, and you pump it back up, and that's how you store the energy. That is the lion's share of storage that exists in the market today. However, through technological

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advancements, new types of storage based on lithium ion, this comes really from the automotive industry and the technological leaps that have happened with battery storage. Now we're starting to see a lot more different types of storage. So 6% of existing storage in the market is not pumped storage. And half of that is thermal. And the other half is the battery storage. Looking at what Austin energy has right now, we have about 18 megawatts of thermal storage in our district cooling system. And we also have about 3.2 megawatts of battery storage. And that's mostly attributed to the shines project. So why do we need storage? You know, current storage capacity in the market is very low. We can store less than 10% of total U.S. Electric production right now and less than 1% of total renewable energy production. And because of that, this is really the only major commodity where supply has to meet demand down to the fraction of a second. And when that's the case, you essentially have to build the system to peak plus margin. As a matter of fact, if you look within the ERCOT system, only half of the system is used for the total amount of hours in the year. The rest of the system becomes underutilized. And then as you go to total amount of capacity in the market, that's used maybe one hour out of the year at that one hour where you really need that last unit to come on. So you really have to overbuild the system. And if you

had storage, you could have a much more efficient system where you would store the energy when you don't need it and it's being produced and you would discharge it when you do

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need it. So recent advancements -- and we talked about lithium ion technology driven by electrical vehicle industry. Really they offer new possibilities in storage that go way beyond what we have with our pumped hydro. The high storage density of lithium ion really provides storage a much smaller footprint. That's why it fits in a car right now. It's modular, so I can build something in somebody's home behind the meter. Or now we're seeing storage that will go, for example, in one of our big renewable projects like the wind and solar projects we saw in west Texas or south Texas. It's the same exact technology. It's kind of like putting batteries in a toy. You might put three aaa batteries. Or if it's a bigger toy, you put six aa batteries. You modularize it and build it up >> It's also got a very instantaneous response. That's advantageous because it lends itself to digital controls, and our industry is essentially being digitized very quickly, and -- I'm reading off the screen and the scroll was hiding it now. I don't know why the scroll went lower. Just give me a second. Okay. Thanks. The other thing that we're seeing with storage and specifically with lithium ion type storage is that it's declining in cost very quickly. Storage is similar to what we saw with solar technology only fast-forward about ten years. You're seeing these costs come down very, very quickly. We expect storage to be half of where it is right now in about five years.

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So what are the applications for storage? It can be behind the meter, which means it's a customer application, so you as a customer can put storage right now behind the meter, so several companies make battery storage that you can put in your home, Tesla has a product, Samsung has a product. And this can help customers manage costs and plus offer resiliency, for example during outage, during a storm. It can probably provide power for the home if you do incur an outage. You can put it at a distribution substation, like we're doing with the shines project right now, and that can help a utility increase its reliability, it's power quality, and managed costs and it can also be what we call a wholesale or it can be coupled with solar and wind for really big projects and what that does there really is it provides to dispatch [inaudible] We can shift when these renewables are provided to the market, and for example, with wind, especially, a lot of times the wind is produced when either pricing is low or the load is not there, so if you can shift that wind production using storage, you'll have a lot more value for that wind product. So what are we doing at Austin energy? So there are four distinct activities we're involved in. We hired a consultant that really specializes in storage, really knows the market, talks to a lot of developers and we're doing multiple studies and use cases studying how can we use storage here at Austin energy. We have the shines project that you've heard about. So we're actually studying it on the ground, in our system. We also issue an annual request for proposals, and we did something

different this time, in the last request for proposal, and we asked for storage projects and storage coupled with solar and with wind, and we

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actually got a lot of those bids back in the rfp, and we're studying them at the moment. We're also continuing with our thermal storage build-out, and we're looking at ways to really use that thermal storage for the benefit of our customers. As far as the consultant study, we've analyzed storage, solar plus storage, wind plus storage, gas turbines plus storage, compressed air and concentrated solar. Some of our stakeholders are very interested in the technology when it comes to compressed air and concentrated solar, so we've done these studies. We've actually sat down with our stakeholders and showed them a lot of the results that have come out from the studies so far. But we're continuing with that study and looking at further numbers. On the right-hand side of the panel -- I'm not going to go through it, but that's just an example of a use case. This one is what we call a behind the meter use case that the consultant study is looking at. At the end of the day we're looking really at one number, it's what's the return on investment that would come back either to the customer or to the utility. These are the applications when it comes to shines. Again, there's -- we're looking at multiple use cases when it comes to shines and looking at what storage does in our distribution system, and I'll talk a little bit more in the next few slides as to how we're really going to provide value to our customers when it comes to that kind of technology. When it comes to the storage that was bid into our rfp, we got some very strong response, to these are just the storage responses. We got many other responses when it comes to just solar and wind, but when it comes to storage-type responses, we have 26 companies bid in, 45 unique projects. Over 275 different type of proposal variations with

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multiple structures. So as you can see, the market is starting to get robust. My first chart showed that there isn't a lot there, but this chart is showing that it's sort of, you know, moving in the right direction and it's -- you know, the market is really starting to grow. As far as thermal storage, this is a map of where all our thermal storage when it comes to our district cooling, so our big tanks that store, you know, the thermal energy in our district cooling system, these are all the locations and the amounts of storage that are located in those locations for your use. >> Just a quick question. Paul Robbins, four megawatts, is that a special occasion for him or is that his house? [Laughter] >> I think he would like it to be his house. No, that's one of our district cooling system plants that's named after -- >> Oh. >> -- Paul Robbins. >> You know what? I didn't know that. He has a plant named after him. I'll have to mention that next time I see Paul. >> That's correct, right? Yeah. Okay. >> Great. [Laughter] >> So -- so when it comes to this technology, what we're really trying to do and really a lot of this comes down to what Dan's team is doing, is we're trying to build a different kind of system, right? And the best part of storage on our grid is it provides increased control for how we would control the system. You know, the traditional system has big, big power plants and Mr. Dickerson described how we transfer those

electrons to our customers. Now we're imagining a system that's a little bit different. Customers can actually generate electricity. They can store the electricity. We can generate electricity right on the grid, we can store the electricity on the grid, and from that

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perspective you're having a much more kind of dynamic system. It's not a one-way system. It's much more of a network where things are generated and flowed and consumed in many different directions, and that picture comes from a [inaudible] Electric power research institute, but they have many papers where they show how we're re-imagining the grid of the future. So this new type of grid is going to need more electrification. So there's -- you know, there's other applications that use different kinds of energies that can be electrified. One of the most novel for example is indoor agriculture, and that's big buildings that are essentially farms, and they use very, very little warm and they use electricity, essentially, inside the farms and so you're taking a big huge land mass and using electrification to make that more vertical and efficient. Heat pumps inside buildings. So we can electrify the system, we can diversify the type of load, then we can have more control. We need more flexible loads. Examples of those are data centers or treatment plants. We need storage and we need -- this is key, we need more control and more visibility. So if you look at what danstein has been doing, we are really on the leading edge of providing visible and control on our grid system. And for -- for folks that are not really well-versed in our industry, you may think that we actually know what's going on at a customer's house, like most utilities, and that's not the case. Most of the time we don't know if they're out unless they call us and tell us that they're out. Essentially the system becomes blind after the substation. Well, at Austin energy we've changed that. We've changed that with a system called the advanced distribution management system. We've changed that with a gis system. So this is a picture, of for example, what the operator sees, and the operator

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really sees a lot of fidelity all the way down to the home of the customer. And also what we're working on -- this is visibility, we're working on control. For example, we talked about faster fault location for reduced outages. This ads system can itself calculate where the fault is based on where the Ami signals are coming in. It's a really fast computer with a big computer engine. It can calculate where the fault is, and eventually, really in the future, it can do the protection for the crews and dispatch the crews. Right now we can actually see where our crews are on the system on this gis map. That's what those red dots are, and this may be obvious, but very, very few utilities actually have this kind of capability. With this capability coupled with storage, it will allow many other use cases for us and much more control into this sort of dynamic system that we're building for our customer in the future. As far as dispatchable renewables, we've done a couple of things, so with concentrated solar, we're studying the costs and operations of several projects that were built in the United States. Most of the projects were built about five years ago. Not many -- none have really been built since five years ago. We're studying the cause

and operations of recent builds, one in Australia and one in Spain. We're collaborating with the national renewable energy lab. They have actually a specific model that we can simulate what it would cost to build here in Texas, for example, and we're maintaining open communications with interested stakeholders when it comes to the technology. For compressed air energy storage, we have received and analyze builds within multiple rfps. We meet with interested developers on where they see the technology going. We've analyzed a scenario in the previous resource plan and we'll analyze a scenario with case in the next

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resource plan. That's one of our scenarios that we look at. As far as next steps, we'll develop that roadmap I talked about based on shines to see where we're going to locate that 10 megawatts, so we're up to 2.8 right now so we need to figure out where the rest of the storage is going to be to meet our local storage goal. We'll perform the studies that are detailed by the 2016 resource plan. Those are due in the fall of 2019, and we'll continue with the thermal storage build. That's going very well and we're confident we're going to meet our storage goals by the years that are listed in the resource plan. And with that I'll answer any questions. >> Pool: Great. Thanks so much. Any questions? >> I just want to say this is really great information. It's sometimes hard to -- to know all of the really good work that the utility is doing, and it's really fascinating to see all of the future work that our utility does that it sounds like very few utilities do, something for us to be proud of as a city. I'm certainly proud of it as a council member, and even when folks from the community say, well, what about this thing that you've never heard of? And I say, I don't know, I've never heard of that, and I go to my utility and they go, oh, we've got rfps, number one this, number one that, it's very exciting and I want to thank you -- exciting and I want to thank you all for your hard work. >> Thank you. >> Pool: Anyone else? >> Yeah, I just want to say that what they're doing here is really pretty fascinating and it calls for an enormous amount of thoughtful input. It's one-third mad scientist, one-third financial genius, and one-third operational manager, and all of that has to coordinate to make any of these things work. So it's -- it's a super-duper hard job to get this stuff done and done right, and they're doing a great job of it. >> Pool: That's great to know. I remember getting a presentation when I was -- when I first came to

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council, in a private meeting on the compressed air storage, and the concept was it was in a cave or some subterranean chamber in east Texas. Has -- is that still the approach or has that technology improved or changed? >> Well, that is the approach. There's only, I think, two case projects in the United States, and I think they're both funded by the federal government as sort of development-type projects, but that's the approach. You store the energy, store the air in the cavern, and what you do is you use traditional gas turbines, so you run the air and you burn some gas and you run it through a gas turbine. So the end result is you get a much more efficient gas turbine than you would have otherwise. That's how the energy storage works. But you still need to burn gas to have cases run. >> Pool: Great. Anything

else? Okay. Good. Thank you so much, Mr. Shalabi. I guess the last item we have would be entertaining any items potentially for our next agenda. There were two things I wanted to -- one thing for sure. The mayor pro tem asked general manager Sargent that we have reports on weatherization status at each of our meetings, so let's put that on the agenda. And then I do -- maybe this is off-line, maybe it's in the meeting, but I want to follow up on the houses of worship discussion and make sure that those folks have an opportunity to have kind of a free-flowing discussion with you that may be able to inform the work of the consultant before that consultant is brought in. So you could have a thought on that. >> On the weatherization report, from what I remember from the budget discussion

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was that in the item that council member Casar brought forward is that we were going to be doing quarterly reporting, so I'd like to go back and take a look at that and see, and then talk with my team on the feasibility of the reporting. >> Pool: Okay. >> It might make more sense to do it on a quarterly basis so -- >> Pool: Let's look at that. The mayor pro tem specifically said today she was interested in the monthly. It may be that we can have that conversation and see which -- how much data you're able to pull together and see which way would be best to go. >> Yes. >> Pool: Okay. Great. >> With regard to the study that we are going to be doing on rates, we are not doing a house of worship study. We are going to be looking at what are the best practices in addressing customers that have usage profiles that are similar. We had a rate settlement agreement, and that rate settlement agreement, there was an appendix and it defined specific study work that we were required to do with regard to peak usage. And so we're framing the rfp for getting a consultant on board in terms of that. But where our plan is to get the consultant on board and then to have a stakeholder process that is a public participation process so that all stakeholders with those usage patterns or concerns can participate in that, because the last thing we want to do is have a biased study or a study that's deemed to be biased because then it can be thrown out. We also don't want to practice discriminatory rate making, and so it's very important to us that we have the information available, that we follow what was set forth in the guidelines of the settlement agreement and ordinance and that we also follow good, sound rate-making principles that practice cause causation. >> Pool: Do we have input from just generally nonprofits, not just segmenting out houses of worship? >> There are groups of customers, commercial customers, and we'll invite all of those to participate

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in that public participation. >> Pool: Okay. So nonresidential stakeholders with non-coincidental peak usage. >> That's correct. >> Pool: That's the group -- we don't have to call the houses of worship but that would be the category description. >> That's correct. >> Pool: Okay. All right. Well, let's -- let's pursue -- I'm getting the input from those folks since they clearly are looking to have that access and to provide the information that they'd like to provide. >> And we will certainly do that in conjunction with -- we'll get the consultant on board. We'll open up, we'll have those stakeholder meetings. We'll get that -- or

that information so that the consultant hears that prior to doing any of the study work. >> Pool: And just to be clear, the piece that Mr. Halpin was asking about today specifically was whether he could have that conversation with you before the consultant was brought on, on the off chance that there might be something that folks with non-residential stakeholders with coincident peak usage might have something to offer that hadn't already been considered by Austin energy staff in the crafting of the rfp. So just think about that. And if there's an opportunity to bring them in to have that conversation, I think that would be helpful from their perspective. >> Yes, ma'am. >> Pool: Thank you. Anything else? I think we're done. So we can call this a wrap, and it is just about 3:20. And thank you, everybody, so much. [End of meeting]