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City of San José

City Council Study Session - Google Downtown West Mixed-Use Development District Utilities

March 25, 2021

>> now for the city council study says district systems specifically referring to downtown west and google project

>>. And before we begin. Toni, could you please call

>> jimenez peralez cohen carrasco

>> toni one we could take a moment. It sounds like folks told me to join in and when we gave it an inch or two it was like you're striking out right now

>>.

>> I mean, reese and invites to just in case. Okay, great. I would just give a minute to give everybody on so I'm just gonna. Council member esparza it says council cohen is with her so I

>> know what

>> do you want him to say? He's here. He's here. Goes here.

>> I just promise just came in as an attendee so I'm moving him over

>>. I think I can try again. Okay, great. A man is peralez. I'm here now. Thank you. Cohen is here. Carrasco

>> here

>> is here. Esparza here. Arena's foley here. Man here. Jones berryessa liccardo. You haven't come running. All right.

>> thanks, toni. Ok, dave and nancy, did you take it away

>>? Yeah. Thanks, mayor. Just appreciate the opportunity today. this is an information session and looking forward to presenting the material. I'm going to turn it over to nancy. Thank you very much, dave. Terrell will jump. We'll put up the presentation for us in just a second while she's doing that. Mayor

>> and council nancy kline, office of economic development. I want to thank you for setting aside this time to review the district systems proposal that's key component of the district downtown west project . And I'm joined today by several people bill ecker from office of economic development whose project manager from oed kari romano was the director of environment services. Matt keno, who's director of public works. Lori mitchell, who's the director of the center's a clean energy energy and available to answer questions is alexa reyna who's the director of development for google and some paul dunn. As you see who works with her? I do want to just mention that the study session is designed to provide an overview of the district's systems generally where they are in the proposed development and how they support environmental objective not only of the project but in the city as well. The city of San José, as you know, has taken a strong leadership position on climate action and sustainability. We have ambitious policies and guidance and they are. these policies are set out in the general plan climate smart San José plan and San José a reach code just to name a few. Tara, please go on. We regularly share the code of conduct for public meetings and at the end should anyone want to speak? Please raise your hand. You can also submit electronic comments to lori severino at the email below. Next

>> this

>> is a zoo meeting link and a phone number for the for the conversation as well. Next one tear.

>> wait. Can we go? This is tiny city clerk. Can we go back to that slide? The meeting link at the top. The 9 5 1 8 9 0 8 4 2 8 is the correct meeting. The webinar at the bottom is incorrect. So anybody who's calling in please use 9 5 1 1 8 9 0 8 4 7 2 8. Thank

>> you, toni. Thank you so much

>>, tara. Next slide please. So for today we'll get you some additional introductory comments and we'll spend a bulk of time going over the systems approach and its integration into the downtown west development project and then staff is eager to hear questions and feedback from counsel before going to public comments.

>> next slide here. So what we'll be working through is more specifically is what is a district system and why are we and google pursuing district systems

>>? a district system is at this point in merging approach that is going on throughout the world to assure that projects can meet the expectations of tenants, owners and cities to be environmentally sound district systems are a more efficient way to support buildings onsite and the systems themselves are connected to citywide systems. District systems can be described as taking the back of the house system's like heating and cooling and electric and wastewater and more systems that every building normally has and instead centralizing them and consolidating them into a central utility plant that serves the district. This again can save space for example leaving room if you go back to the last one please. Leaving room on roofs for solar etc that otherwise would have mechanical systems on the top of their buildings. The district systems

>> approach works in tandem with existing networks limiting the stress on city or other agency systems by operating more efficiently. The systems add more redundancy and capacity and are more resilient. District systems have the ability to island from the broader grid in the event of a power outage. If the broader grid shuts down the backup power will be provided from the downtown west power systems now. Next slide.

>> and then what systems

>> are proposed and you see here we're going to talk a little bit about utility corridors until the doors and electrical systems wastewater building, heating and cooling etc.. Google's plans include the ability to construct an integrative program of systems that are installed in a private conduit called a utility door which is also not solely on public property but on private property.

The system is planned for construction within the utility or electric distribute in wastewater, recycled water and infrastructure and for heating and cooling of

>> buildings. Next slide. And how how can a district system be implemented? The city will develop or is in the process of developing conditions of approval that will set out specific ways that the systems can be operated and implemented. And you will hear more about conditions of approval as we move forward in the presentation. Next slide the ammo you that google and the city executed in December of 2018

>>. Memorialize the aspiration for the project to achieve a very high level of environmental sustainability above. You see excerpts from the ammo you that speak to environmental sustainability and the development of district systems goals. The downtown west project was satisfied and maybe 900 project consistent with the state A.B. 900 program eighty nine hundred requires outstanding environmental principles and practices to be built into the project. The downtown west program as proposed achieves and goes beyond what is identified through the hb 900 program. And with that I'll turn the presentation over to bill eckard.

>> thank you, nancy. Terry, go ahead and click ahead. Mr. Mayor, city council pleasure to be here. And talk to you about the district systems approach the downtown west is proposing.

>> as

>> nancy alluded to the program that google is proposing aligns with several of the programs and policies that the city has in place got beginning at the top of the hierarchy with the general plan. That

>> goal is to continue to be a major contributor to the city's ultimate goals of meeting these environmental platforms and ideals. Same thing as you move down through the climate smart and various master plans. Programs and construction that google is proposing are intended to help the city meet these and stay consistent with its master plans and very much consistent with the city's new reach program with all electric buildings google proposes an entirely electric build an office buildings and other facilities ok.

>> again, as nancy alluded that I think one of the keys that has people excited about the district's systems approach is that it allows you to consolidate what goes in individual buildings into a central plant making the offered opportunities and operations of the individual buildings more efficient. You're able to balance electrical use and water use and other things that power buildings and go through the different buildings in a manner that is control so you can pick off the highs and lows and be just much more efficient in the way you operate the buildings and they operate over all systems and consequently affect the environmental and the environment much more positively. Ok.

>> this is just a graphic showing the way buildings and interrelate with a central utility plant. I think it's important because I don't have a graphic that I haven't installed one about what a central utility plant would look like. But one of the conversations that we've had with google and other interest is to make everything that is environmental beneficial in their project educational at the same time. And so our aspirations that a central plant becomes an educational center as well that the public and others can use to understand and see the systems operationally and get a better sense for how they integrate with the buildings and also integrate with the city's programs and the city's infrastructure. Again to nancy's earlier point. One of the things that being pulling the infrastructure off of the roofs of the buildings, the heating and cooling systems and others allows you to put solar panels and other other things even green roofs on the buildings and not be competing with the operational needs of an individual building. They've identified and we've identified in this slide as well some of the ideals that google was looking to accomplish with their utilities which is a heating and cooling systems the microgravity electrical system and the reuse of the water system. At this point, although it shows the slide, we're not looking to deal with the solid waste program under their current proposals. Ok, again

>> to nancy's point was a key issue and a key point to take away is that google's 80 acres although they have the ability to stand alone are intimately connected into the city and other municipal systems. They connect to the sandoz a water company supply in order to provide water to their to their site. That water is processed through and some portion of that then is discharged after they treat what they need for onsite recycled water. They just charge the remaining wastewater and solids back into the city's system for processing at the city's regional plant. And then finally the micro is powered through the transmission lines from pg&e so that they are connected into the into the overall grid but with the opportunity as a system

and we'll talk about it further to isolate itself should the exterior grid break down that they can maintain operations within their buildings and provide power for the offices and residents? Ok.

>> one of the systems they're looking to be able to take advantage of in a district program is the thermal heating and cooling for the different buildings. And this is essentially a very maturing industry at this point in time that's common throughout the world. These are several examples of projects around the world in which the onsite heating and cooling and central distribution they to the programs and the offices residents within these areas are taking care of. I think it's critical coming close to home that a couple of projects that google also is working on are their debut project in. In mountain view and another office project in sunnyvale. And again it's important that there are these systems are beginning to be more familiar in california. Many university campuses throughout the state and the country have these sorts of systems. Stanford being a notable example of that. The key again here is that this is a relatively mature system that still progressing technologically so we should see ongoing advancements even in downtown west project as it comes online. Opportunity to deal with water on a district level is also very important. Again, this is something that is being done throughout the world. Technology is coming online and again as I said earlier, it's an evolving technology that's even more so than that. Heating and cooling I would expect to see pretty rapid growth in implementation as well as opportunities for technological advances for the use of various types of water in these in these districts. Ok, you till the doors or the utility corridors are a major component for the distribution of these to these utilities throughout the system as you can see by it's very difficult to see at this scale perhaps but the black line that extends from north to south throughout the 80 acres is gives you a sense of scale for that and ambition for distributing these systems throughout all of the properties within the 80 acres that not only moves across a number of streets but it also is anticipated that it will cross the creeks and other things in order to distribute it to all of that offices and with the potential for connection to the affordable housing projects and other residential projects depending on when they come online visa the scale of that overall infrastructure system. Next the next slide this is just an example of the scale and then types of utilities how they might be arranged within one of these utility cars and just to be clear this these are not small structures. These are roughly 20 foot by 20 foot concrete structures placed well under the existing infrastructure in the streets so that they are out of the way of the other norm normative normal city infrastructure and other public infrastructure throughout this area. Ok,

>> that's

>> probably the most unique piece of the discussions and opportunities within this downtown west project as the distribution of electricity through a micro grid. These are not very common yet really in california. They're beginning to gain a lot of traction throughout the world. People are beginning to try a whole range of novel approaches to providing electricity and assuring the ability of their programs and tenants to stay operable when there are failures in the broader system. The three options that google in the city are exploring at the moment one is to have the city of San José become a municipal electrical provider and not be the owner and operator of that of the micro grid itself. Pg&e has that at this point in time the ability to do this. And google has begun discussions with with pg&e for that to develop a micro grid that pg&e could be the owner and operator. And I would jump up backup sandoz apis just to note that google as work is working with the city as we move forward with the exploration of the potential for a city operating system and laurie mitchell and her crew will be back to you at sometime in the future to talk about the status of their studies and what it takes for us to keep moving forward as a city. And then finally the last option and it's not the preferred option by any of us. But it does would allow for google to be the owner and operator of this system and go forward from that perspective. There's some we're continuing to work with google and on that on the various steps that might take in order to become the core scope going forward the most critical piece of all of these is the understanding that google has any developer building infrastructure for its use for public use would build out these systems or any one of these three scenarios. The question are they at the end of the day it's a question of who owns it and is responsible for the operation of that of the facilities rather than who spends the capital dollars to build it out. Ok. And this

>> is the hudson yards program in manhattan. New york is an example of an existing micro grid. It's not psp's completely analogous to what we're looking at in california, but it's a good example of how these systems can work and the efficacy of having a micro grid system supporting offices and retail. Shortly after this micro grid put online power outages in new york city and they were able to opt for the operators the owners were able to maintain operations by being by relying on their micro grid system as a way to power up the offices and residents while that the greater cost consolidated edison system was down and recovering through four storms. And I guess the other key piece in this that's worth noting is that microcredit itself is not owned or operated by the owners of the properties in the development persay. But that it's

operated by a separate company that which was formed in order to to own and manage this facility. The next couple of slides on the hudson are just talk a little bit more detail about the capacities for what they have in the types of systems that they have in place in order to deliver that to to deliver services to their tenants. Next slide and again they've they've done a rainwater capture system as well that allows them to to operate. And also that this highlights again that there is a third party operator and manager of the electrical system. Ok,

>> the process for ensuring that the citizens and the residents of San José are protected with the district systems. We anticipate taking through the

>> entitlement process at the same time and in the same manner that we're proposing to take vertical development in other development within the downtown west project forward which is that once the overall guidelines and approaches are approved by the city council this bring that then the individual projects and the individual actions would come back through a process of conformance review that is handled at the staff level with the department's making their review and making sure that conditions and that work is done in a satisfactory manner. So this would be a very analogous situation to the overall planning and development program that we're looking as an innovative way to ensure that these projects move forward across the board in downtown west. Okay. The key to the city in this is I think an important part for the operations of the infrastructure itself is that we work with google to make sure that we s s we're satisfied that there were ways to protect residents and tenants in the case that some form or other failure of the systems occurred. And so google has worked with us to propose a series of backstops where the obligations move stay with the land they don't run with the development agreement. They continue to stay on the properties. If there was a failure of the micro grid system, if it was privately operated that the the obligations for assuring that the project that excuse me the necessary capital projects are developed that the rates are maintained appropriately for that for the residents falls to the owners of the office buildings in the future should google sell the office buildings to someone otherwise the obligations for making sure that the rates are where they appropriately need to be and that the systems are adequately maintained and funded would stay with google. Okay. Next slide. Pick up some further discussion about each of systems will you? Pardon me but the first the first discussion is about waste water and so I will turn this over to kerry.

>> thanks, bill. So and just for context, I just wanted to remind the council and the community that while we're very supportive of this district system from our wastewater and recycled water perspective, we do have capacity to accept the waste generated from from this development. And then

>> we also would be able to extend our recycled water system into that development which would then also enable the system purple pipe to continue to be extended beyond the system. So we're generally good either way. There's no existing system constraints. You could go to the next slide from a permitting standpoint and we would you know, because they want to do onsite wastewater. And really that's not something we've taken on before. But there are other municipalities who have already gone down that path. so there are folks we can tap into and there is an existing framework. So in other words we know we can do it. There are state wastewater permitting and recycle water standard will just ensure public health meets health standpoint that those would apply to this particular operation and one of the ways that we've managed that is we've reached agreement with google that they will all to our industrial discharge permit. That's something that we require all

>> large discharges to to comply with and that lets our cities treatment program ensure that the waste is adequately treated before it enters the wastewater system and and also has a process to provide updates as nutrient levels in the bay change and if we get more stringent requirements from the state and federal government. So it's a process very similar to semiconductor fabs that used to be true for the. The other distributors and manufacturers in the city as well. So it's the standard framework for us. We're very comfortable with that and we also have as you might imagine the new development will use our existing rate framework will probably have to come up with a unique model to cover the recycled water component. But we'll continue to to partner with with the developer on that and the sanitary sewer and use charges apply to this facility in the same way they apply to every other resident or business throughout the city and that as you May remember a requirement up to 18 that those everyone pays for the services that they're getting and that there's no subsidy we had as the project has evolved over time and because we're not familiar with onsite wastewater ,we do just want to make sure that there's no odor with wastewater treatment. There's no odor generated from the facility. So we'll ensure that the project mitigates that and that there's some checks and balances along the way. Although compliance over time would be regulated by the bay area quality management district, we we would we're also obviously interested in ensuring that the

new development does not generate odors and that we're confident that before starting that next line. So

>> as as part of our oversight we'll review the permanent details application of chargers odor controls prior to issuing the building permit and under the conditions of approval and then we'll just continue to work with that odor mitigation plan and and ensure that that's met. And with that I'll turn it over to

>> larry. Thank you, kerry. Mary matalin, director of community energy as I mentioned, there's three different options that we are considering on the electric distributor system. The first option is sandoz a and and important to note that in all of these options the developer would put in the infrastructure it's just a question of who would be the long term owner and operator. So we have been studying the industry all of these ability of the city owning and operating and we will come back to council to further brief what we found there. But in general we found that that is feasible, that there May be benefits both in design flexibility to enables them and the components of the micro grid as well as potentially some economic benefits. The second option is is really the status quo although there is a new micro grid enablement program that is working with pg&e where they would be of a long term owner and operator of the distribution system. And then the third option is privately operated. And so that is a scenario where google would own and operate some next slide

>>. So

>> in terms of future considerations important to know that we will come back to council in the city provided service there's a number of actions council would need to take in order to enable option formation of the utility and as important to note we are looking at just this development not the rest of the city but that would require future action approval future action to interconnect to pg&e transmissions system but also would be required in all cases. And then of course a business relationship with google for the micro grid implementation and operation in terms of google provided service there additional future considerations including google's currently exploring alternatives to cpac current regulations the franchise or another appropriate mechanism would have to be considered and then required permitting details and compliance with the conditions of approval. The next slide I think I'm going to turn it over to matt cain here.

>> thank you very much. Gardner, director of public works and bill already talked about the utility door and in order to allow the attila door we need to go through the cities encroachment permit process. The water applications where you tell it would be or would be crossing would be within the public right of way. And that is held public trust. There is a section in the municipal code thirteen point seven that we use to evaluate and issue major and minor encroachment permits for projects like this next slide. So what does that revoke all encouragement permit? So encroachment permits because they are within the public right of way need to be revoked bail and that means the city and if the city ever had a different use for that site that revoked ability clause would kick in that it also does allow for work to complete be completed to standards by issuing a permit that are safe for the public and maintain our assets. and it protects the public from responsibility and liability. Because of what is being done in our or the operation within our public right of way. Next slide. We have a process whether it's bart or a or a small pg&e trench or a major utility or a structure like this which is obviously extremely unique. And it will be very exciting and interesting to work on. We have a process where we review and inspect and administer these permits and have traffic control procedures and inspections in place to make sure it minimizes the disruption to the public when it's under construction and under use. Next slide please. Goes back to bill I think here

>> let me thank you. I know in a short amount of time we have packed in a lot of information. So I just want to highlight a couple of things. As you think about what comments or questions you might have one that through the entitlement process there is a checklist and staff delegation to review the conformance much as we've talked about for the downtown west design guidelines and that the district systems are integrated into each element including the zoning and infrastructure plan. And in fact the design guidelines part of this

>> will also cover the ownership issue once it's resolved for the micro grid the checks and balances we've discussed set out a series of priorities on how the systems would be set up and that we'd create criteria for the project so that it perform arms as we want it to checklist items are checks and balances include things like service level rate equity safety, capital improvements, operation and ownership. For example

>> next slide oh x actually go one back terry sorry. What I what I wanted to conclude with and then also mention our next steps there is that we are very excited as a city. The intention of the outcomes of the implementation of the project is to deliver a truly innovative complement of

systems working to achieve a much higher level system or manner of an environmental sustainable than San José has before much work has already been done on the proposed systems and much work remains to be done to achieve the ambitious plans before you truly once this becomes a reality. The downtown west project will pioneer the next level of urban environmental responsibility not only for San José and the state but really in terms of the country. The next couple of steps to keep driving toward the reality of the systems are one as Laurie and Bill mentioned you'll see review and ask for council direction on the city electrical service option and then the staff will be coming forward with the approvals on the downtown west proposal as a whole. And the systems approvals will be included in those actions at that time with that staff is happy to understand what you might be thinking and also to provide you with any additional information. Thank you.

>> thank you, Matthew. Thanks for the very private setting.

>> I'm sizer. Carla connection. Yes, we're

>> losing you a little bit. Mayor.

>> you're there me? Okay. I'll try this with

>> the

>> broad me.

>> yes. Go rollin rollin ze Henry is he able to speak

>>? Can you hear me now? We can hear you. Go ahead. Okay. I've been getting you. So first of all and I'm not seeing a clock. The first thing I want to make very clear is that I'm personally absolutely oppose with either the city of PG&E having anything to do with this. This should be design operated and owned by Google and nobody else. End of discussion. The one thing about we'd really like you to consider is to introduce a transportation element into the into this trick and I'll gladly explain to you what this why and then how the issue that we have right now is that downtown west is directly adjacent to the disc and the disc footprint austerity proposed is encroaching on downtown west. We need to resolve this. This is how the solution is derailed.

Some of the basic elements by integrating these elements into the downtown underground infrastructure and there are two elements for your consideration. The first one is the light rail tunnel. The reconnection. How are we going to be connecting the new likeliest station to the existing tracks on that mass? That's one thing that needs to be part of the of the district. The other element is the underground station for the airport actor that has to go under there somewhere. We do have an entrance on santa clara where we need another insurance at the corner oldham and san fernando and these are my comments. Thank you

>>.

>> thank you. Paul

>> yeah. Paul's total from the horseshoe. Um. I'm opposed to it for the same reasons that roland is. But also we. There was a there was a discussion regarding this last but we were not the February just past the year before that and what google is going to try to do is because they're going to be the they're basically the leaders in quantum computing. And so the digit the the amount of power that's gonna be necessary in order for them to continue in that quantum computing debt that's going to be the heart of google is right there. They want to have their own conduit into pg&e. They just want to like plug right in. We had a lengthy discussion about that and it was opposed at that time. So I don't know why. Now that somehow or another it's becoming a better idea. Google has not proven themselves a good neighbor yet. You know, I mean honestly the legacy that I have is that you can't this community is worth far more than the billions dollars that google is throwing around and and acting as if they're renaming that space downtown west they've renamed seattle's a silicon valley and all of this kinds of like naming thinking that you can throw down your billions of dollars when google just twenty two years ago didn't even exist. It did not even exist. It was an idea in the minds of those two men from stanford university. That's it. Now all of a sudden one generation later they exercising this kind of economic power and disruption to the infrastructure when this city itself has not continued with its historical injustices and genocide of the chicano and the native american communities. So I would like it if the people on the council would consider that when making the decisions here because we need some protections. Thank

>> you. Blair

>>, go. hi. Hi. Thank you

>>. Well, big man here. Thank for the words today on this item. Yeah. You know, I mean I think we grew up, you know, in the 70s and 80s with you know, with what could have been a unifying vision that's been offered here today. And we made mincemeat of it back then and we just tore everything apart and spliced it all into individual groups vying for how to lay down electric wire and telephone wire and all this stuff and you know, I guess we developed the system at work but now we're we're considering how again how to unify the whole process which on its whole I think is awesome. I think it's a great idea. I think. I think what it can do to efficiency and how governments can have an important part in the process is it

>> just creates a good organizational process. But

>> at you know, there are some really lingering looming questions about doing this. And so I ask for caution. I asked to remind ourselves of community energy and its purpose and. Could it work towards towards all of this? And the question as community energy you know, community can ask and it can be a more open process of community itself engaging in the future of this stuff. For instance, I don't want nuclear energy traveling through those electric lines in the future. I think we really need to work towards a future doesn't have to include nuclear. And how do we begin to take those steps

>> and yeah. So that's my two cents. And good luck with this issue. Thank you. Jeffrey marin, counsel, good afternoon. Jeffrey buchanan on behalf of working partnerships usa and silicon valley rising appreciate all the tremendous amount of work done by the staff and google team and coming up with this set of systems analysis. Certainly it's you know, it's

>> very clear the environmental benefits of pulling these pieces together would encourage the staff to continue to also bring a lens of thinking about how do we how do we address the community's concerns around this project delivering quality jobs. Certainly we know that power generation and delivery here in . In our area involves workers union workers but through pg&e who who have a very good standard of pay and benefits and protections and so how is we look at designing new systems? I would hope that the city and google continue to keep an eye on thinking about how do we maintain quality family supporting jobs as a part of both the construction and operations of these systems and certainly appreciate the engagement to date

from the google team on these issues and the conversations with the city but want to make sure that that continues to be a part of these work plans as we think about improving these systems and doing some of these model type of projects around environmental sustainability that we make sure we're thinking about our working families. Thank thank

>> you. You begin by mayor. Are you able to hear me out loud and clear? Okay. Thank you. I keep trying a different connectivity here. Let's go first to a customer.

>> they had these weird things to city staff and google for all your great work on this idea and in giving us this the background today I think it's really, really an interesting and innovative idea and seems like it has a lot of potential benefits. So you know, I admire google for continuing to push the envelope on innovation in all ways. And I thought nancy had a nice list considerations and values at the end of the presentation . There are things we need to be mindful of and one that I just want to make sure we're coming back to and continually examining is just really thinking through the potential impact on our city run utility systems and any potential long term impacts on on ratepayers. I guess that's kind of what's at the forefront for me at the moment super supportive of the sustainability and climate benefits area which is what makes me so excited about this but I don't know to what extent city staff can build on what was presented but I am curious if we were to go forward with this district system, what do we know at this point about the financial impacts on the utilities that the city currently operates and obviously we operate on a portion of the energy system and then water management. Do we have any understanding at this point of what the financial implications would be for our city owned

>> systems? Harry or lori would be best to start off there. Thank you, council member ed. I the. I'll start with the water and wastewater from our water wastewater and recycled water sampling. The project doesn't have any bearing on it will charge them more for what they use and on the recycled water front it does. It does take away and cost effective opportunity to extend the existing purple pipe. So if we wanted to extend purple pipe to the other side of the development that would be something that recycled our customers would need to bear. And that's not something on our radar today. It's sort of more of a long term aspiration. So it's not taking away in process project by any means. But the rate payers in the developed meant and we do want to ensure that they're not overly burdened by higher rates because they're sort of this extra system in place. And so that's something that as nancy's articulated we would work with the developer

>> on ok. So we think with this approach there's enough of a long term cost savings that both the users of the system. So so google and any other current future tenant subtitles et cetera and as a rate payers more broadly are all gonna be better off financially in net.

>> so council member there aren't cost savings to this. So and if anything the system would be more expensive to operate because it sort is additional. And google believes that there's environmental benefit to be had and they believe that they'll get some efficiency out of it. One of the efficiencies they May be seeing is the cost to install and control the recycled water system. But but it doesn't burden existing rate payers and it doesn't save existing ratepayers. Nancy, anything. That's right.

>> I think the intention is and there are google folks on the phone that

>> it will provide the efficiencies and redundancy fees and additional hope over time better performance that we're all looking for especially in light of climate change and for example, google will be paying it as as carrie mentioned, our hookup fees for the recycled water and in effect be a backup

>> system for the wastewater wastewater for the wastewater. Thank you. As mentioned. So that capacity will not be damaged or diminished in any way. So there May well be cost savings to the participants within the system. And we just don't know the answer to that at this point. And I don't know if there's any additional comments that cindy or alexa or paul would like to make. I'm

>> happy to jump in. I guess the two principal points have been

>> covid. One is that it's always environmental superior to treat the waste closer to where the waste is happening in the sense of how that adds to the overall system. So it's not an either or. But the two systems together as a psp just also analyzed is really

>> creates a speed superior system in totality. So this is a great way forward and a great model for the future of how recycled water and treatment of water can work in aggregate. So I

think it's not you know I hate for it to be thought of as neither or it's really about the the aggregate of these systems is what creates more efficiency, better environmental outcomes

>> etc. And in terms of the rates we will always it the rates will be higher for the users. So we're pretty expensive and the document's that we can't charge higher rates than what

>> somebody could get elsewhere outside the project. So I think from a ratepayer perspective well within the project boundaries there's only upside not downside to it. Okay

>>. I mean I thank you. It's helpful. I mean just to be clear, I'm extremely excited about the potential sustainability benefits for environmental benefits here. I think that's wonderful. I think diep only question this is a little clarifying for me so I didn't. I figured there were also cost savings kind of financially for google but in fact it sounds like google is willing to pay a premium for an innovative system that has significant sustainability benefits environmental benefits. And I guess my only you thought process there was just wanted to ensure that there wasn't anything about that investment that would be shifting those premium on to the broader system essentially. And it doesn't sound like other saturday rate payers or any way subsidizing that infrastructure that that build out. But I just want to be clear. Is that is that correct? Am I hearing that correctly? That's

>> correct. And that's why we addressed rates very specifically to assure that across all the systems rate payers internal to the project wouldn't be bearing a higher rate than they would be paying elsewhere. And obviously there's no subsidy from the city in the harbor system so there's no effect on external rate payers either.

>> okay. Great. And then on the on the energy front war is this I mean so many any development in theory could could do its own incorporate some generation into its plans. I just is this a very revenue impact that we should think about from an energy perspective.

>> and in terms of the existing community energy program now I would say it's neutral. So that and certainly supportive of maximizing the amount onsite declaration within the development

>>. Great. And then just out of curiosity, what is the expected lifespan of this kind of system? How many? I'm sure it needs to be maintained and upgraded over time. But do we know much about how long this kind of investment is operational

>>? The system is expected like a building to go through the lifespan of the project and so it won't get, you know, obviously iterated and innovative innovated over time which is part of the benefit of having a smaller grid system because as backup generation and other components mature, so too can the system fairly adapt

>> group. So

>> it's iterative. It improves over time. There's no end point to it from that perspective.

>> right. Okay. Okay. thank you

>>. If you can't remember because member davis thank you and council no man I'm excited about the environmental benefits of this district system that I've learned a little bit about and I appreciate by the way having a briefing about this in advance so I can think more longer about these and have more questions that have come up. And I also have had that you're done area neighborhood group has also written in and so I want to make sure to ask their question as well. But first I want to hear more

>> kerry about the odor control mitigation plan. I understand that we are requiring it at the front end. But one of the things that you said and it kind of went by quickly but I want to make sure we're really clear on this is that we don't have the ability to regulate that odor control over time. Is that what you said the bay area air quality management district would be regulating that over time. So that's something in the middle of the city. I want you to see more about this.

>> thank you. The bay area air quality management district has jurisdiction over owners and the city also has control in terms of public nuisance, accept or not. I'll ask roseland to talk more about the code enforcement and ppc approach to add to public nuisances and how that would be enforced. and

>> so the city but but will have a hand is the bay area air quality management district. However you know the projects evolved over time. So at the start of the project and google was the developer was content contemplating more on site. So total onsite waste water treatment and they're not talking about that anymore. What they're talking about is more scalping plant where they're just taking off a little bit of water to to produce a smaller amount of recycled water. So as the project has scaled down our concerns about odors have lessened as well because in a version where they were going to do complete onsite wastewater treatment where they were actually collecting the solids for disposition somewhere else, we obviously had to work concerned. And that's that's changed over time and maybe, nancy, you can you can talk to that as well and then rosen if you could talk to how we would enforce odor odor nuisances.

>> rosen wanted you go ahead. Thank you. Thanks. So certainly we would treat this issue similarly to any nuisance or violation on private property. So if there are concerns from neighbors, from residents, they can file a complaint with our code enforcement division and our inspectors would open up a case and do an investigation and and obviously we would work closely with back matt as required as well.

>> and then alexa or team rachel respond and give the examples of of some other systems which are very neighborhood based. Yeah. Certainly the central utility plant which is the area where the wastewater as well as other elements or are treated or feeding from

>> is almost in many of the projects worldwide that lend lease our partner is done and that we've seen elsewhere are are effectively almost like dining centers. So you typically have a face to them outwards that community they are a point of engagement ,their point of starting to understand the systems to learn about how climate action can work in real life. There's obviously incredible proximity to our office buildings. So we're very confident that you know the way it's going to function is actually going to be a really positive thing to be next to that being said, I think where people might be concerned about odor is usually when there's a longer transit run in between we are the source of the odor is coming from if you will and where it's treated. So those shorter runs don't create that same issue. You might have around the regional system. And so we're very confident then have seen drive in action that there isn't any negative smells that are coming off of that central utility plant. And again, it is an area that is sort of iconic in the architecture of which is is screened. It doesn't look like a power plant. Certainly it's the opposite. It looks very much like a place maker. So

>> happy to be in a agreed that it always should be regulated around

>>. And so embrace that that aren't aren't concerned about that for that reason.

>> I appreciate that. I do. I do want to caution staffer I guess just put this I would rather not have the

>> only thing that we can do be the plan at the beginning and then enforcement at the end as opposed to making sure that there is some compliance along the way we at least in my district when we've we've had an odor issue that is completely unrelated to wastewater that has come up in the last year with a business and it has been

>> it had been a nuisance for nearly a year now with this much smaller, much smaller business. And the code enforcement process just putting that out there that I'm and I'm not saying that google would need this process but I do want to be very cognizant of the neighbors needs and quality of life at the front end. While we're thinking about this now that the code enforcement process can be very long and neighbors can be inconvenienced to say the least for for a long period of time. So I don't want that to

>> be the only answer that we have in place which is we we will have a plan and then the backstop to the plan is code enforcement if there's a problem. I'd rather have some way that we can ensure compliance so we don't get to that need for code enforceme which is

>> a very long process that is very, very inconvenience to neighbors. And I've seen that in multiple. I've seen that in multiple ways in different parts of my district. So I feel really strongly about that. And I want to make sure that that staff is aware that I don't I don't think that's sufficient. The answer of code enforcement is not a sufficient answer for me for that. So I will be watching that

>> as this unfolds for for a more satisfactory way to handle that. And then secondly the the dirt on area neighbor group had asked a question or I guess me to make an assertion in their letter about the ability for other developments that are in d s area to participate in the district the district system. So I'm wondering if there's if there is an answer either from staff or from alexa

about if as developments come online that are not google owned but that are in the d sac. What's for bringing them bringing them into the district system? Will they be offered that? How does that how does that work? Nancy, I don't know if you

>> can start alexa if you want to go ahead. there is the possible liberty of being added. There isn't a specific process at this time but the notion of other developers funding links to the systems is something that has been or is being contemplated.

>> is there a timeline for when that will be worked out?

>> I mean I get that this is still a system in process though. But I'm just wondering if that if it's being if the process for adding

>> sort of non google owned projects into this system is being developed at the same time as the system itself is being developed because of capacity issues or I guess I just want to know what what the possibility is are there.

>> some of this depends on what type of system we go forward with. I mean obviously the thermal system I assume you're thinking of microcredit in particular. Is that is that fair? Council member because the thermal systems and so forth are somewhat

>> more internal to the building and the project level

>>. So I think that well I'll tell you that you know you know alexis, this utility corridor that utility or concept is very new to me so I don't have a specific part of the utilities that I was thinking of. And really this is a question I'm passing through from the girard area neighborhood group so I don't

>> have one. Second it which utility? Yeah. So

>> on micro grid in particular obviously one of those strong advantages of a municipal system or pg&e system is its ability to

>> to to work from it and move beyond it. I think if it's a private system there would be a variety of things we would have to consider around whether that made us sort of a regulated utility versus providing the system within the project itself

>> which would include all the an availability for all the different types of projects within us like affordable housing parcels and so forth. But it's somewhat depends on what route is taken which of course as you know is related a little bit to the timing of the project and why we move forward with the project relative to the timing of the city's decision around the municipal system or pg&e decision around a pg&e. So it's somewhat dependent on some of those routes and a little hard to answer more directly. But certainly as google we would be more than open.

>> obviously you can see a big determination of ours is to create climate resilience and so to the extent that infrastructure can be extended in a way that's feasible, we would be more than open to collaborating on how best

>> to do that. Thank you. And then carry this kind of in terms of the response you gave to council member me. You talked about something about it and maybe I'm mischaracteriz this but the note I wrote is it this takes away the possibility for for extending purple pipe past this system. Maybe I misunderstood that and I want to be I want to talk a little bit more about that because I think it relates to this issue. Thank

>> you. If I misspoke, it doesn't take away any any future option to kind of go around the site and into other locations. It just takes away the opportunity to do it now with someone else funding it. And so ideally

>> we we would like

>> to have recycled water at more parks, more schools etc. More of the big user throughout the city. And so if the development instead of making its own recycled water it just tap into our system that would enable us to more quickly and more cost effectively extend the purple pipe to other regions. But that's not a project that we have on our radar to do anytime soon. So it's not like we're pushing aside an opportunity that we're ready to do. Ok, so do I understand correctly from what you're saying that we that the google recycled water will be self-contained and won't be connected to our purple pipe at all? Yes, it will not be connected to our purple

pipe and we have responsibility under state department, health and our wastewater permit and that we cannot connect other systems to ours and the system that will be constructed for this development will only service that.

>> okay. And so other I guess alexia and not

>> begs the question for me about whether other developments in the diep area would or the recycled water would connect to your system or would need to be connected to the city purple pipe system

>> and yeah.

>> yeah. So I think the reason we're not connected to the purple pipe system is because we're creating a system that allows for more efficient treatment of the water close to the site which obviously has tremendous environmental benefits. We

>> I'm not sure you know I don't know cindy, if you want to pipe in here but it's as we start to extend our system. I'm not sure that that is the way we had envisioned it. It's not that we wouldn't be open to exploring it. We just had to envision it that way. But to the extent of the city at some point said, you know, this is much better to connect into your system versus to try to extend it. As I said

>>, we'd be more than open to discuss that. It just hasn't been explored at this time

>>. So what individual developments and kerry have that obviously

>> you know no council member there and the other other facilities will be served by shelf bay water recycling most likely through tenders a water but. But we would not allow others to to sort takeover our service area and the system we have is very efficient and and still we capacity if it's the development we'd just like to use the existing system that is available. But but yeah, we wouldn't allow others to tap into it.

>> what's the closest purple pipe to the diep now I will get back to you on that. No problem. I don't have a map with me but I know I had that question before I ask it so

>> incredibly far. But you know purple pipe is expensive. Well Cahill is you know Cahill Park is nearby and Del Monte Park is nearby and I don't know if either of them have it so that those were that was why I was asking if they did or not.

>> and then one of the utilities we didn't hear about and I'm sure this is just a quick answer but the garbage

>> in recycling. Will that be from like

>> normal commercial callers if there's any other business and residences?

>> yes. So and Bill, you want to add context. You know, there's been a lot of different environmental and sustainability considerations in the project. And where was the idea to do a standalone system where we are now is the the development will tap and use the commercial and residential system which is a leading performer in that in the country. And so you know, we'd like to believe that their intent to be a sustainability leader led them to say hey, you guys already have a great system that's very efficient and that performing at high levels diversion. Why not just take advantage of that

>> and that would be the same for street sweeping too. I assume. I know nothing about street sweeping though. How do you feel about that falls to somebody else? I'm sorry. Jerry most of a lot of the streets are private streets within the development so they would likely be handled by the by the property owners rather than the city. And then the last point to carry on that. Councilor on the the the rid

>> of garbage and recycling is that it's one of the topics I was evaluated in in the downtown western environmental documents so they studied how it would work and what the impacts would be. But at this point in time where does they decided not to necessarily pursue that? There's a

>> whole host of complicatio with dealing with the existing operators and the issues surrounding that. That makes it easier to move forward with that as a future option rather than

something that you try to take on immediately today. So that's why they've dropped out from this initial proposal for utilities

>>. Well, I just want to emphasize there are opportunities perhaps to consider in the future. And but those are the recognition is that that consideration would come back to council

>>, ok? So it's not going to come in on the google day. There'll be some time later

>> that some of the state. Right. Yeah. You got to

>> remember that process for staple water is at the northern boundary of the project and that by that target on forman ok, that's pretty quick. Ok, got it. Thank you. Thank you for answering all my questions. It's a it's a big project and there's a lotta a lot of pieces and even just within even just within the district system I'm still trying to get all all my my arms get my arms around all of it. So I really appreciate you all taking the time to do this study session for us today and to answer all my questions on us. As I said before, I'm excited about the environmental benefits and just really want to make sure that we we enhance the quality of life for our residents as we as we are designing these new systems. Thank you.

>> would you consider rose? Thank you, mayor. Thank you for the presentation. And I will say thank you to my colleagues for the briefing ahead of time. This is a complicated topic and certainly it's new to most people here. And so certainly to me that was it was a benefit to have a deeper dove one on one ahead of time. And I want to say thank you to council member davis for bringing up the dude on area neighborhood group letter and was going to mention the same question or at least what they insinuated in there. A question guys to wanting to see if there's a partnership. They also expressed interest just kind noting that I think that is positive to see that our local neighborhoods representative at least for these neighborhoods through dang have shown support for this effort. I think that's important to be able to to know what our local community is thinking albeit still new to them as well. So a couple of questions I wanted to see. This is leading our forward customer davis was seen around tapping in

>>. Is it possible for instance, if it was privately owned and I understand that the challenges there where maybe not so easy sound like it could be a possibility, maybe not so easy for a local neighborhood that's preexisting to tap in. Would

>> it be possible though that in emergency situations as this

>> power source could then be obviously self-sustaining? Could it also then help to be an emergency backup source for the greater community in the area as well? And what would the capacity be for for for something like that and

>> affordability tells me. Ross, I'll start spectral in the rep blocks and her group can weigh in as well. But this thus far we're being we understand is that the site the projects within the site would generate up to about 20 percent of the electrical demand that it takes to run the overall district. And so there's not like a surplus of power being generated that would then be available to distribute outside . There's enough power to operate the emergency needs that they would have within their development projects. I would say also just to add to that they'll get it depends on which roads take in. So if the council determines that a municipal system is appropriate and you adopt that then there's a way to think through that. It's harder to do obviously if you know it's more if it's different option. So it really depends on the option that we go down. It's a little bit hard again to kind of get control of the isolation. But I think there's lots of opportunity to also think of either ground far whether it's libraries or community uses that can serve as you know, a resilient part of the overall social infrastructure of the area. But I would just be our additions the conversation

>>. The only other thing I wanted to add for a second is that it's very positive to have this level of infrastructure and systems thinking going forward. There are others who are seeing what this project is considering doing like west bank and some of you May know west bank owns and operates a power grid itself in Canada and so it's encouraging to see what other extensions of investment in infrastructure and resiliency they can build off Google's model meaning none of the necessary project but what can they extend? So it's it's having a knock on effect in a very positive way

>>. Okay. Thank you again and appreciate that. On the thought process around, could there be critical infrastructure that could be included? For instance, there was a public building there many center or some sort right. That fire station or something like that traditionally right now right where we're running all of our our backup with generators on these sites and so it but understand what Bill said that the sort of power capacity that the 20 percent there certainly not

not enough to just go around to be able to spread out. It's really based on on some some base level services to keep a building going.

>> could somebody describe in the presentation and in the powerpoint slides that it was very informational in regards to the options in front of bias and the three potential

>>? Did you guys lose me for a second? Yes. You froze for just a second. Okay. Because my screen went away and it came back where did I just

>> get really good wi-fi in the substrate? That would be helpful

>>. Where did where did I jump off right at the beginning. Okay.

>> okay. Sorry. So what I was saying was that in the presentation you described sort of the opportunities in front of us the micro get options for instance center on pg&e own google owned. What what what wasn't part that presentation was status. Well so kind of what if none of these options right. You alluded to it in the responses each individual and I think Carrie maybe the most in regards to just pay we can this can be done without any of these options really just kind of plug into the system that currently exists. So if someone could kind of describe that

>> to me of what is that status quo look like if this wasn't being considered by google and we understand here from customer mahan questions that maybe it's not even necessarily at least upfro not a cost savings to them rather there's other implications which are a benefit to us in regard to the environmental implications and to them and sort of just being good stewards in regards to this kind of development. But I guess what I would like to see would be one description now but two is there a comparative kind of hey well here's the options but here's also status quo and that way we get a clear understanding of of why maybe this is better than status quo. That's that's the understanding I have based on the conversations. Right. And the more in-depth dialog I've have. But I think that's important to have that clear to our community that that know what a status quo look like and that somehow there shouldn't be a belief that status quo is just fine. Right. Let's just let's just keep going

>> down that route. So it comes. No I I can start and I'm sorry. Like say you might want to jump in and nancy said the status quo would be pg&e retail service. So that's why most development take. I would say some of the constraints that would come along with that is less flexibility in terms maximizing the amount of onsite resources. So certainly some of the central plant the onsite solar battery storage, other types of distributed energy resources that google's proposing would be limited and constrained under that scenario just due to sort of current design standards and cpc regulations. So that's really I think one of the main benefits of looking at alternative is you know, collaborating with google to find ways to really maximize that onsite generation to provide those resiliency benefits and so that really was the genesis of why the city started to work with google and why we've started to look at the initial feasibility of a city option. And just for this development is really to enable some of that

>> secondary I would say the status quo would also be pgd rates. So there May also be some economic benefits from the other options in terms of rate savings. It's important to note on the city option that perhaps you 18 would apply there so if there were rate savings those would be passed on and cost of service rates to the development and we would be legally required to do that just as we are for other utilities. So yeah I'm sure others May want to jump in here but those are that would be the status quo option. Pg&e electric service alexa do you want to add to that?

>> I think that was perfectly described frankly. Obviously the micro grid's intention is to not draw from existing infrastructure that's already very constrained and this is obviously

>> as as electricity needs expand it becomes more challenging for that piece of infrastructure. And so this is intended to in a more clean and therefore, you know, I think the equivalent is about thirty thirty four hundred cars coming off the road in terms of volume. So it's producing but we're able to then lower the burden on the overall infrastructure which ultimately obviously lowers costs of what is already a system that is struggling. So that seems like a very

>> fair way to articulate that each of the different systems have obviously different upsides. But

>> the philosophy always holds where when you're able to treat it off the system and have the aggregate offer system and on the system you're reducing your your draw and your load for the overall system. So it's only creating more efficiency and more ability for that system to

adapt and expand to other projects outside of us . So it's really reducing the burden and treating all the different systems in a way that is cleaner and that is more forward thinking on how to reduce greenhouse gas emissions and other important elements of how climate change is revolving around us

>>. If

>> you and Kerry you did a good reading kind of describing that this could just plug into our current system the infrastructure that's there. So I'll ask you a couple more maybe specific questions in regards to that. So for instance, for a wastewater treatment, would this be wastewater that would run into sort of the piping it's into downtown and then kind of going north towards Alviso so

>> that it would share that collection system any and that can add into this anytime there's a significant development the public works team looks at the capacity of the collection system to see if they want to run new pipes, expand the existing ones or existing capacity is adequate. So yeah, I would it would it's some way whether whether the existing pipes or a new set of pipes feed its way into the wastewater.

>> and if they're going to have to happen anyways like you said Google is gonna be skimming some of the water off the top. Right. So there'll be there'll be recycling some but there's still going to have to dump into our wastewater system.

>> yeah they'll still be connecting to us and most operations even if they do all onsite wastewater treatment they connect in to the existing infrastructure just in case something goes wrong with their system and they need that waste to leave their facility. They need the capacity to at our wastewater facility or any any facility that does onsite wastewater similar to how a high user recycled water, a data center or something

>> a hundred percent of time they're going to use recycled water. But on the off chance that system goes down they connect to potable just as the

>>.

>> sorry. I just want to clarify something so that you were clear. Council member we are paying wastewater hookup fees like we don't have a system. So in other words we are paying for that

>> capacity in a backup situation as a normal user would. So I don't want you to feel that we're you know, asking for the backup system benign not generating that payment. So that should creek some capacity. Hopefully we'll never have to use

>> what? Well, we do have to reserve the capacity for it. So so it does and it does take capacity in the system because when you send it to us we have to be able to treat it. But. And but we have more than enough capacity for the buildout for the future of the city. So it's not constrained. So we're not worried about

>> the and I'm trying to get an understanding that this is on the long lines and the order as well because I know we've we've just had this challenge throughout the downtown core where there are particular points where

>> the water circulates and then emits a pretty pretty nasty odor. And obviously the increase in sewage water as it goes through these pipes this has been actually a recurring question that a lot of constituents in district 3 have asked me as a hey when you know like this dear don west gets or downtown west gets built out. What is that going to do with some of the increase of the odors that we're that we're experiencing in the downtown core? So my question

>> to ask would this help with google

>> having their own sort skimming off some of the water. Right and being allowed to manage and recycle some of the water there on site as they were saying? would that help then? Because again it's reducing some of the flow in the capacity and overall could that you lessen maybe the impact of the water throughout the downtown

>>? No, I don't think this project is to. If we have existing challenges in the collection system, I don't think this project's going to improve that but I don't think it's going to make it any worse. And you know, the less liquid in the system means that there's more solids which means that at some point there can't be not enough liquid or the solids don't move. And but I know and I'll

hand it over to matt. I know matt and public works are looking at the collection system and that's part of scoping out the project, getting the details for how much are we talking about when and working collaboratively

>> with the developer before matt jumps in. I'll be a little more specific. I didn't expect it to prove it but I guess what what I wanted to compare would be if if they did not have their own water treatment on site at all in 100 percent said their water down our our pipes versus what they're proposing to have on site those two comparisons would would one of them know because it increases flow is it right to be you know, to relate that to the fact that that could worsen the odors? So now it's just that's a kind of a collection system thing. I'll let you take that. thanks for having. No, I don't have a perfect answer to that right now. I think. Well, I need to follow up but we are as you know, working on the working our way south on the fourth the major interceptor to finish that and we still have the final phase of that to fund and build in the future to. And so to get it all the way down to the the center of downtown where we need it. So

>> all follow up on that. I can't offer that my head can't think of any reason why it would make it better or worse I think. And so we haven't that hasn't come up. And so we'll follow up with more detail on that as we move forward.

>> okay. Yeah. That's part of the reason I we it as part of what I'd like to see is the comparison right there just sort of says hey here. You know the status quo would be plugging into all the preexisting systems from pg&e electricity to our water treatment. Right. And completely just plugging in their versus what they're proposing with some water treatment on say write their own program 30 and so in be able to see what what are those you know, what are the impacts? What are the benefits? Why would we why would we consider one of these the other carrier your dog just totally made me lose my my tracker site . Such a cute. I just moved in the background sites took me took me off their so

>> this is the fun part about zooming from from home here so ok in this. Also this next question plays into the comparison chart as well and this I wasn't aware of until today's conversation of the purple pipe issue and I saw councilmember davis. You know eyes perk up to when. When I think when she heard that especially considering you know, I think that concern could be that hey, is there a bigger challenge for

>> the residents just on the other side of diep which her constituency and so it sounds though, you know, we're gonna be in there's a lot of constructio going on. And it sounds as though we're not going to be able to do that while the roads are torn to be installing new purple pipe which maybe if they were just plug it into our system. That would be an opportunity if that

>> it is because we don't have extending the purple pipe on our roadmap to do today. But but the way I might suggest we think about it is and we weren't looking to add purple pipe to this particular development and they've stepped up and said hey, we

>> absolutely want it in the system. And so rather than just tapping into our our potable water which we know is becoming more scarce, they're sort of saying hey, we want to you know, from day one we want to use the right water for the right application and then would have to look like for right we are we consume this recycle water on site can be utilized like we would have wanted to in the parks the open space. Right. The bay area obviously that are being proposed to be built out here. I'm assuming that's the process and I'll kick that over to alexa

>>.

>> yeah. The intention of the amount of recycled water that we're using we're treating and that we're using throughout the district is that we designed in fact and treated and then utilize it for elements like the open space et cetera. And so so that is very much the intention.

>> ok. Yeah. That's actually the end of my questions. Well, I would like to hear back maybe just from the city manager's office. Maybe. Nancy, over to you. Just what does it look like to be able to get us something like a comparison of sort of the status quo versus what is being proposed in total here? Well, we'll

>> have to do a little bit of research on it. Thank you very much for the count. The question council member I I think one of the opportunities here is that the system that is being proposed by google in downtown west offers an opportunity. That as alexa mentioned the pro the the cost will not be allowed to be more than what is in the marketplace. And it May be less. It will also allow ways for us to look very close. Are there ways we could proceed bringing costs down? For example, right now purple pipe is not inexpensive. So is there is there any other

district systems that in the future can also find a different way as we evolve legislation as we evolve. Process

>> because anytime you cut into the street as you know in lay lay pipe there there's a lot of hassle on a lot of cost . So. So aside from the environmental benefits but looking at. Are there different ways to do things that can help us evolve back to looking at the costs and comparison?

>> I guess, nancy just kinda. So I think we understand that what's being request though in terms of establishing a matrix that kind of compares kind of what's what we're contemplate here any options that are kind of built into it and kind of as the council member said what kind of it's standard operating procedure standard kind of approach to development? I think we understand what's being requested and I think we can put some work into that to kind of help help the council and the public understand kind of where the tradeoffs are and the differences are and where the opportunities are.

>> and look, I think the information is all there because I've been asking, you know, whether we're doing one on one meetings or here in the tradeoffs and benefits around environmental impacts like reducing and reducing greenhouse gas emissions. The water we're talking about here, the water treatment, the potential cost savings, the dollar amount. Right. Nancy's talking right here words not if it's not in sort of a clear fashion of where where I can go out and really be able to explain it to the community

>> here is here's kind of status quo and here's some of the benefits of of this alternative option that we haven't explored before in the city because it's, you know, operating for a lot of people. That's the biggest concern. Right. Or challenge is simply the fact that we just haven't done this. And so,

>> you know, I think to be able to describe what we what's what is standard operating procedure versus this could be helpful. Fortunately, as you've seen again that third area neighborhood groups of community members around there are supportive. I don't think there's you know, this this growing opposition to it but certainly it will help as we move forward. We're trying to get people to understand it including ourselves right again. Councilmember, first because it's this is this is a

>> complicated worth if my comments in question thing. Thank you. appreciate all the work that's gone into this. No, the information provided today I just had a few questions I want to follow up with my apologies for not providing video but I'm in a place with very limited wi-fi and I'm hoping that maybe you guys will put wi-fi at the top of the list of what gets built out this infrastructure. I had a question about water because I know that the project itself is probably going to result in the pumping of a lot of water. I'm assuming because we're going to be doing a lot of stuff underground. I. And I guess the question is is all of that water that would be pumping just for the development, is that all gonna get sorted, treated, addressed on site somehow or is that all getting shipped off to a water treatment plant

>> telling you want to you want that? I'm here to step in to building this project for alexa right out of the blocks so which

>> I absolutely can respond to it

>> and I think it's probably unclear how the construction is going to

>> go yet. Hi. Yes. So for for the water because of the because we're doing the onsite treatment, it's probably an in-between answer. Yeah it's because we'll be doing the onsite treatments we'll actually be reducing our demand from the potable water system because what happens is we will be treating a fair amount of our our well who will be treating all of our own wastes and extracting the recycled water to offset potable water needs. And we'll do that by using that extract as that recycled water for things like toilet flushing to make up water in the cooling water system basically using as much of it as we can smartly in the project before discharging it so that by its nature reduces the overall load.

>> okay. Thank you. And I assume no need to be covid

>> at once in place whatever gets built. Is that right? That there will. As much as possible. We we try to rely. We try to design smartly so that

>> we can reduce pumping needs

>> because that also is an efficiency in the system. But where needed there will be equipment that will like pumps that will move the water around. Yes.

>> okay. Thanks. Then I just had a couple of questions about that general idea on site for electrical demand build pointed out I think earlier maybe it was built totally. Another time it was stated that about 20 percent their needs would be satisfied on site. And do you have any sense at this point? I know you don't have a lot of room on this site for big solar if the older age like that. What what is it going to sellers there mode for generation or you think fuel cells or at this at this at this point in time the project is primarily focused on solar heavy with a combination of battery storage to help with the the peaks and valleys and in a day of using electricity. But the the great aspect in putting this microgrid solution is that we'll have an opportunity to innovate and adapt and adjust as we have technologies come available. That makes sense for the for the for the footprint of our project and I appreciate that at least the current estimate is only 20 percent as we're working through this. It possible for us to try to transparently understand what it would cost to get that percentage higher. And I guess the reason why I'm asking is you know, we've been grappling with this for two years I think as a city trying to figure out how we can build micro grids that provide some resilience and you know, through distributed generation and storage in our city and we you know, we've struggled I think like a lot of space. We know it's costly. It's really hard and it seems to me if we've got a significant investment happening here and maybe easier than making it happen elsewhere. And so I'm just wondering is that is that something where we could have an iterative conversation about well, we can only do 20. But if the city is half way we could do 60 or whatever

>>, I think it's a good idea. We actually can continue to have conversations about as we learn I mean we we learn about projects in our other locations as well of testing different ideas for power generation which mostly solar but other ideas as well and absolutely would be interested continuing to improve the generation that we can do onsite. That is definitely our goal to generate our electricity as close as possible to where we're we're using it and also the other side of this equation of course is in working with the demand of electricity. And so anything we can do through incremental thinking about our approach to managing the demand we can work on that together as well that would help reduce the need for electricity

>>. They said I really look forward to that because I know that you guys I'm sure is worried resilience as we are. I don't have a lot of confidence that pg&e is going to fix the grid problems

anytime in the next couple years. And I think a lot of cities are figuring out they need to find a way to go it alone. So I'd really like to dig in on this problem. But a great team over google. And I know we're also filing and other projects and other places. You know, we're looking at all kinds of ideas around clean hydrogen fuel cells, things like that. And it would just be great to see if there are other options that we could incorporate here to boost the resilience of this micro grid as well as perhaps improve the situation for the surrounding community. Now anyway, thank you cindy for your answers. I know that ongoing challenge has been with pg&e and trying to get through the permits and approvals for these systems. I recall apple just having a brutal time on their site and I think it delayed the project quite a bit. And just wondering is there any way that we can sort of start that process in parallel with everything else we're doing so we can get in line and

>> that's. It's definitely good technology that there are processes we need to follow to get these connections in place. Absolutely. We've actually already engaged pg&e quite there. We're quite actively talking with them. About all the pieces of that that they would need to contribute to this project and definitely we're in the queue in terms of the application being in the system so that we can we can be ready when we need to be for this project.

>> that's great. I would call there's a relocation substation down there. I think just to the south and the train station does that get integrated in some way with the district utility or zakat move somewhere?

>> no. Actually it's a bit of a there's a whole few different parts around the electrical substation pieces that would be needed for this project that the substation that exists today is not part we would not be moving it part of our project. We in fact will be doing additional substation equipment for our own needs for the project. Ok, so so that gets relocated some other site

>> I'm not aware of the plans for the substation.

>> Mr. It probably gets more affected when that as the rail project moves forward. It's so since you're sending notes this project taps off of that it moves into a their own central plan for their substation. Yeah. Appreciate. That's a lot a lot of big construction is the major one. So. So thanks, bill. And also great to see the letter in fact working with the city partnership back from retirement as well as kevin o'connor welcome back, joe. Two gentlemen I know you've been

working with us for a while but with covid we never actually see anybody. So we are really grateful for this team working together to make this happen I think is going to be really important for the future of our city and hopefully a great model platform for us to be able to demonstrate what we can do elsewhere in the city and elsewhere in the country. So thanks for all the great work there. Any other questions or comments

>>? Okay

>>. I guess then we'll plug ahead. We'll be discussing this again in a few weeks as we discuss the entire project. Dave, you have any closing comments we adjourn or go to a public comment. Thank you, mayor. Now I just want to thank the entire team. I know a tremendous amount of work has gone into this so far and it's complicated work. But very interesting work. So thank you to the team for everything you've done kind of getting us up to this point in a.. Nancy, you have any final comments

>>? No. Dave, thank you very much. And thank you to everybody on the team. Thank you. I don't believe there's public comment after a study session which we've already had a comment on the study session. Is that right? Or just try to make sure don't break any rules. Yes. Okay. So you have got it. Okay. Well, thanks.