

# Kino to DMP Transmission Line Project

## Virtual Open House #5 Questions and Responses August 19, 2021

#	Origin	Question	Response
1	W. Craig	How is it that your costs have gone up geometrically over the last two years? One million per mile to now two million. Under \$10 million per mile under grounding and now over \$13 million.	The initial estimate TEP used for overhead construction was \$1 million per mile that was for construction costs alone. We now have a preliminary design and have included land acquisition in addition to the raw construction estimate. The land acquisition costs resulted in the increase to the overhead construction estimate to \$2 million per mile for the preferred route. The underground costs changed with each revision as the consultant accounted for different variables. For instance the first revision accounted for just a 1.5 mile portion of underground and did not consider the electrical aspects of the design. The last revision accounted for a length that started at the Kino substation and continued to the planned Vine Substation. The greater average per mile cost was driven by deeper trenching in locations such as underneath the UPRR and aviation highway.
2	W. Craig	Running 85 to 110 for poles down 30 foot wide streets is acceptable to TEP?	85 foot poles can be accommodated safely along a 30 foot wide street. While TEP makes every attempt to utilize arterial streets for placement of poles, the location of the planned Vine Substation does not allow for the use of these arterial streets. The location of the planned Vine Substation was the only available piece of land within the area of need that had been determined by the TEP planning groups.
3	Cindy A	Please also explain what it would cost if and when there is an issue and you have to find the problem dig it up then fix it and dig it back and how much more it would cost	The cost would vary depending upon what and where the problem was if the transmission line were placed underground. Given that visual inspection of the buried facilities is not possible there would be added costs in locating where the problem is, the need to excavate, likely under pavement on a major street, repairs to underground facilities also are more involved and expensive than repairs to overhead and then backfilling and repairing of pavement add additional costs to the fix.
4	Karen G	And how many miles would need to be undergrounded if we were to go that route?	The length of undergrounding would be dependent on what an undergrounding district wanted. TEP will support any length that an undergrounding district requests. If an undergrounding district is not formed, TEP will minimize the undergrounding possibly required by avoiding routes that may require undergrounding.
5	J Lisa Jones	Will the 1B line from Chauncy Lane/Elm on Park to Grant Rd be placed underground? The line put on Park will pass right through residences both on the East and the West.	The line will be placed overhead if this is the approved route unless the neighborhoods wish to form an undergrounding district as allowed by state statutes, to pay for the incremental cost of undergrounding. In addition, this route will require the retirement and/or relocation of the existing lines along the route so this will not result in an increase of wires in the air nor will it result in an increase in the number of structures.
6	W. Craig	How much can you charge the U of A and Banner for under grousing to reduce the cost to neighbors?	TEP does not have the ability to directly charge the U of A or Banner for undergrounding costs. Participation by the University and Banner would be voluntary. If the University and Banner chose to participate in the undergrounding district, they would pay a share of the cost of undergrounding. Any reduction in cost cannot be determined without first determining all of the participants in the formation of such a district.
7	John Warnock	Is undergrounding all or nothing? Can portions be undergrounded? If a portion wants to pay the freight?	If an undergrounding district is formed the undergrounding district can decide what portions of the line to be placed underground so long as there is a route with an approved Certificate of Environmental Compatibility that would connect the underground portions to the substations.
8	Mari	Please provide the addresses for several sites where I go to see poles that are as tall as and look like the ones you are proposing to build?	TEP has poles similar to this all throughout its service territory. As an example, the poles located on the north side of 22nd street between Alvernon and Kolb road are similar to the poles that would be used for this Project.
9	Hannah Glasston	If everyone in areas mentioned in project area will benefit as you note, why do individual neighborhoods have to form districts for underground placement and bear that cost? Thank you.	The whole project area does benefit from the project but the benefits of an underground line are primarily to the neighborhoods adjacent to the alignment. Those neighborhoods that would like to see the line placed underground can form an undergrounding district to help offset the cost of undergrounding the line so that the additional cost is not passed on to all ratepayers within the TEP service territory.
10	W Craig	Are other above ground 138 kV lines going through Historic Neighborhoods? If so, which Historic Neighborhood's are currently being assaulted by such above ground lines?	Yes, MENLO PARK HISTORIC DISTRICT EL PRESIDIO HISTORIC DISTRICT JOHN SPRING NEIGHBORHOOD HISTORIC DISTRICT WINTERHAVEN HISTORIC DISTRICT FORT LOWELL MULTIPLE RESOURCE AREA ALDEA LINDA HISTORIC DISTRICT RILLITO RACE TRACK HISTORIC DISTRICT BARRIO ANITA HISTORIC DISTRICT MIRACLE MILE HISTORIC DISTRICT
11	W. Craig	How did Scottsdale use below ground lines for much less money than what you are quoting?	Without having been involved in the process it is difficult to answer. One thing to note that may have influenced the reduced cost for the Scottsdale project is the voltage of the Scottsdale project. A reduced voltage may require a smaller conductor. The conductor is one of the more costly items in underground transmission. The cost estimate developed for TEP is specific to this Project.
12	Jeanne Calhoun	If the city wants to avoid the impact of overhead lines on Gateway routes, which seems quite reasonable, don't you think the city would also want to avoid the impact of overhead lines through historical neighborhoods? Why is it necessary to present an overhead route to the ACC if there are no reasonable overhead routes through the heart of the city?	TEP is presenting an overhead route to the Transmission & Power Plant Line Siting Committee for recommendation of approval by the ACC in order to ensure that the Project costs will be minimized and everyone in the TEP service territory will not be held responsible for the undergrounding of lines that the entire service territory does not benefit from.
13	W. Craig	Are you saying that you couldn't use electronic surveillance devices to check likes underground? Perhaps it's time to put in small tunnels for your lines to give access.	If the lines were placed underground we would use the best available technology to identify the location of problems on the line.
14	Tyler Meier	Is it not true that a giant powerline fundamentally degrades a greenway? Could you explain again how a greenway and a powerline are compatible?	A powerline has been found to be compatible with greenways in many instances. In Tucson, TEP transmission lines share corridors with both the Santa Cruz and Rillito River multi-use paths and lines are adjacent to arterial sidewalks in many locations throughout town. From the American Trails Organization - While it easy to take a photo showing huge structures towering over trails, when you are actually hiking or riding along the corridor the poles or towers are not so obtrusive. In urban areas these utility corridors are often essential connectors because they are wide swaths through built-up area. Miami Dade County reported on examples of successful shared-use trails within utility corridors including the Pinellas Trail Extension in Pinellas County, the Natural Coast Trail in North-Central Florida and the Cross Seminole Trail Connector in Seminole County.
15	Jean Calhoun	Curious- how is this project providing the university with 100% clean energy when all power generated by all sources of energy is put into the grid- so we are all supporting the clean energy sources (solar energy from major projects, especially in NM), while those residences that pay for solar energy on their property are also footing the bill for that additional renewable energy.	This Project will eliminate the universities reliance on Scope 2 emissions which are emissions associated with the purchase of electricity. Residences with solar will have smaller electric bills than those without. At times when the residences are generating more power than used, TEP buys that power back from the residence.

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16	Nancy DeFeo	Can you speak to the EMF effect of the new lines vs existing distribution?	TEP measured the EMFs of the existing distribution lines. The measurements ranged between 0.56 milligauss (mg) and 13.4mg. The EMFs emitted by the proposed transmission line are anticipated to be equal to or slightly greater than the EMFs generated from the existing lines. Calculations show that the EMFs for a 138kV transmission line similar to this are approximately 16.4 mg.
17	Edward Cruz	Except for on Helen. You moved the alignment from Speedway there at the request of the University, correct?	The University did indicate a preference for Helen.
18	John Warnock	Brown poles vs. gray poles? Who chooses?	TEP's preferred is the "weathering steel" pole however, for this project, a visual impact assessment and historic district analysis both determined that the galvanized option was a better option south of Grant Road.
19	Nancy DeFeo	You can't get that clean, no-cost-to-them energy to the university without these poles. You already have a deal for property and energy with them before you even came to the public.	The University is not getting clean energy at no cost, they are paying a higher rate to cover their portion of the cost of the higher cost clean energy.
20	Jeanne Calhoun	If this supports all new city development, then undergrounding the line should be charged to the new developments or the entire city, not one minor neighborhood.	The neighborhoods are requesting that the line be placed underground. The cost to underground should not be passed on to all ratepayers within the TEP service territory.
21	W. Craig	So we pay for undergrounding and you continue to take large profits from these same people by selling them electricity. Seems to be heavily weighted in favor of the business with the citizens getting hit on both sides of the issue. Fair?	Neighborhoods that want underground facilities would only be paying the incremental cost of underground versus overhead construction. TEP is a regulated business supplying energy at regulated rates.
22	Nancy DeFeo	It does not have to be an "undergrounding district". Other cities protect their viewscape by spreading cost over all citizens and many years so it costs individuals very little.	The undergrounding district is managed by the City and the City can always develop its own mechanism to fund the incremental costs of undergrounding.
23	Cindy A.	Then take 5A back out! Pueblo gardens is older than Sam Hughes and any other "Historic" neighborhood. I guess if you say you are historic it makes it so, but destroying MY Median in Pueblo Gardens makes me wanna fight about it. This is stupid because if it does go underground, Pueblo Gardens Neighborhood is one of those poor neighborhoods that was spoken of earlier	We heard your comment regarding the median and have potential adjustments that would not result in the line in the median that will be brought up to the Siting Committee.
24	Jeanne Calhoun	If the city wants to avoid the impact of overhead lines on Gateway routes, which seems quite reasonable, don't you think the city would also want to avoid the impact of overhead lines through historical neighborhoods? Why is it necessary to present an overhead route to the ACC if there are no reasonable overhead routes through the heart of the city?	The routes that have been identified are reasonable especially when the removal of existing distribution facilities are taken into account. The net result will be less visible facilities in the area.
25	W. Craig	Are you saying that you couldn't use electronic surveillance devices to check lines underground? Perhaps it's time to put in small tunnels for your lines to give access.	The cost of the undergrounding for this project is already large and adding tunnels would result in even more cost for the project.
27	Nancy DeFeo	I went through Pueblo Gardens with an architect friend this past week. We went to find better areas to put poles, because we were appalled that TEP had them going down the median. We found many alternatives and we had first reported them over a year ago to TEP.	Just a reminder that we have not done a final design for our alignment and will be asking the ACC for approval of a corridor. TEP has already identified the value in requesting a wider corridor in the Pueblo Gardens area to allow for the potential to place poles in a location other than the median.
28	Nancy DeFeo	The fact that none of you are actually aware of the areas where these poles go is appalling. You have to defend something where you haven't had boots on the ground.	Not sure what gave you that impression but TEP has been in the field along the routes.