

EXHIBIT A

Report on Derivation of FY 2020-2021 Pole Attachment Rates

Summary

This study updates the 2015 study used to determine SVP pole attachment rates for cable, equipment, riser and anchor attachment rates that initially became effective in 2016 (Resolution 16-8285), and also the pole attachment rate for small cell that was initially established in 2018 (Resolution 18-8594). The purpose of this report is to document the process and assumptions used in the 2015 study and update the cost of ownership to derive the pole attachment rates for third party communications attachment to utility poles owned by City to become effective upon the effective date of the City Council resolution adopting these rates. These rates, expressed in dollars per attachment per year, are shown below.

Pole Attachment	\$ 19.92
Equipment Attachment	\$ 56.58
Riser Attachment	\$ 41.87
Anchor Attachment	\$ 3.88
Small Cell Attachment	\$103.89

The proposed pole attachment rates reflect the requirements of AB1027, which was signed by the Governor on October 8, 2011. Among other things, AB1027 requires that pole attachment rates be based on SVP's annual cost of ownership, which is the sum of capital costs and annual operation costs of the pole or support structure used for pole attachments. Annual capital costs must be based on SVP's net investment in equipment (capital costs) necessary for use by a communication service provider. Further, "the basis for the computation of annual capital costs shall be historical capital less depreciation." And, "depreciation shall be based upon the average service life of the utility pole or support structure."

AB1027 requires the annual cost of ownership to be allocated to communications service providers based on the assumption (subject to factual rebuttal) that there are 13.5 feet of usable space on an average utility pole and that a third-party attachment occupies 1 foot of that 13.5 feet. As discussed below, the pole attachment rates summarized reflect the impact of wind loading in addition to the space devoted to pole attachments.

As in that prior study, because it would be burdensome and costly to perform a cost of ownership study each year, and because it is likely that pole replacements, and operating and maintenance expenses will increase in the near term, staff is proposing that the pole attachment rates determined for FY 20-21 be updated in future fiscal years by applying a 2.5% per year escalator (as a proxy for general inflation) and that the next cost of ownership study should be conducted in FY 24-25 for the pole attachment rates to be adopted in FY 25-26.

Cost of Ownership

The cost of ownership components considered in this study are the same as the components used in the 2015 study:

- SVP's net depreciated investment in poles and fixtures, expressed in dollars, divided by the number of poles in use
- SVP's cost of long-term debt
- SVP's operations and maintenance expenses that contribute to the availability and reliability of space used for communications attachments
- Expenses related to SVP's revenues from pole attachments

SVP's net investment in poles and fixtures necessary for use by a communication service provider has been determined as follows. In the 2015 study, the number and age of SVP's poles were taken from work by Osmose, a contractor whose primary task was to survey every SVP pole and to make recommendations for repair or replacement as appropriate. Because the accounting system does not contain data on the installed cost of each pole, it was necessary to estimate the installed cost of the poles identified by the Osmose work. At the time of the Osmose study, SVP's current poles were installed between 1900 and 2013. A proxy installed cost for each year was determined by using the estimated installed cost (reduced by estimated salvage) for a replacement pole in 2015, and discounting that 2015 cost each year by each year's change in the Consumer Price Index. Net investment in poles and fixtures since 2015 has been determined in a similar manner. A proxy installed cost for each year since 2015 has been determined based on the estimated installed cost (reduced by estimated salvage) for a replacement pole as of April 2020 and discounting that April 2020 cost each year back to 2016 by each year's change in the Consumer Price Index. Depreciation rates were based on a 40-year service life through 1995, 37 years for 1996 and 1997, and 25 years thereafter. The primary reason for the reduction in estimated service life is the change of wood preservative.

SVP's cost of capital is estimated at 2.5%. In the 2015 study SVP used 5% as a proxy for the opportunity cost of money, whether in the form of long-term debt or in the form of the long-term earning potential of cash reserves. However, the recent refinancing of SVP's long-term debt indicates the SVP's cost of borrowing is currently around 2.5%, and assumed, for purposes of this study, to remain at or near this level over the next five years.

Operations and maintenance (O&M) expenses related to poles and pole attachments are estimated in the same manner as in the 2015 study. SVP uses a combination of city accounts and the FERC Uniform System of Accounts for both capital and operating expenses. This means that overhead operating and maintenance expenses are available from FERC accounts 583 and 593. Amounts in these accounts were augmented by allocating a prorated portion of total distribution supervision and A&G expenses (FERC account 580 and accounts 921-927). These expenses, as augmented, were then allocated

to reflect the estimated proportion of pole-related expenses (10%) as a percentage of total distribution expenses. This allocation was based on the judgment of distribution management personnel.

In addition, certain expenses are directly allocated. As in the 2015 study, these include Osmose pole inspection and repair expenses and tree trimming expenses. Osmose work is 100% pole related. Tree trimming is critical to maintain clearance for both overhead electrical wires and the communications cables and other equipment attached to SVP's poles.

Allocation of Pole-Related Cost of Ownership to Cable and Other Pole Attachments

AB1027 requires, subject to factual rebuttal, that the cost of ownership be allocated to pole attachments as the ratio of 1 foot of space occupied by a pole attachment to 13.5 feet of "usable space" on a distribution pole, or 7.4% of the cost of ownership. The assumptions made in this study remain the same as they were in the 2015 study.

Based on experience with pole attachments, SVP's distribution engineers have determined that a simple space allocation does not capture the full cost impact of a typical pole attachment. Essentially, the wind resistance related to the profile of the attached cables creates additional stress and increases the effective amount of space occupied by each attachment. On this basis, SVP has determined that the appropriate cost of ownership allocation to cable attachments should be 9.5% rather than 7.4%

In addition to cable attachments, SVP provides space on its poles for communications equipment, risers and communications-related anchor attachments. Communications equipment and riser attachments typically occupy a part of the pole that is not usable for cable attachments. Thus, communications equipment and riser attachments actually increase the amount of usable space on a pole. At the same time, these types of attachment occupy more than 1 foot of pole space. A communications equipment box typically occupies 5 feet of space and a riser contact occupies the entire length of the space considered unusable for cable attachments. Anchor attachments are needed at angle points to offset the additional lateral stress created by each cable attachment. Anchor attachments are the responsibility of the cable attacher, and are typically attached in the same 1 foot space occupied by a cable attachment.

SVP has developed an allocation for each of these non-cable attachments. Equipment attachments are allocated as the ratio of 5 feet (the typical size of this type of attachment) to 18.5 feet (13.5 feet of usable space + 5 feet of use outside the 13.5 feet of usable space), or 27.0% of the cost of ownership. Riser attachments are allocated as occupying 1/5 of the circumference of the sum of the usable space (13.5 feet) and the unusable space (18 feet nominally needed for clearance), or 1/5 of 31.5 feet, or 6.3 equivalent linear feet of 31.5 feet, or 20% of the cost of ownership. Anchor attachments are incremental to the basic pole attachment, and are deemed to occupy only the space actually used, or about 1/4 of 1 foot, or 1.9% of the 13.5 feet of usable space.

In the 2018 Council approved small cell attachment rate, it was assumed that small cell attachments were essentially a pole-top antenna with a riser running the length of the pole to a ground mounted box. Since the required clearance requirement for a small cell attachment is 4 feet of space on an electric wooden utility pole, instead of 1 foot for cable attachments, it was determined that the appropriate share of available space was 4 feet of 13.5 feet of usable space, or 29.6% for a small cell attachment. In addition, riser attachment space is also required for the power supply to the small cell attachment, and the share of available space for a riser attachment was 20%, as set forth above. Therefore, the share of ownership for a small cell attachment was 49.6%.

The share of ownership for all the different attachments stated above remains the same in this study to derive the new cost of ownership.

Results

The attached Exhibit A incorporates the approach and calculations described above. Page 1 shows the derivation of the various rates for pole attachments summarized above. Page 2 shows the derivation of the cost of ownership allocations used on Page 1. Page 2a illustrates the space allocations reflected on Page 2. Page 3 shows the derivation of the maintenance and operating costs used in calculations on Page 1. Page 4 shows the derivation of the net investment in poles used in the cost of ownership calculation on Page 1.

2020 Silicon Valley Power Pole Attachment Cost Analysis							Page 1	
Line No.	Cost of Ownership	2020	Cable Attachment	Equipment Attachment	Riser Attachment	Anchor Attachment	Small Cell Attachment	
	Estimated Historical Net Cost of Poles							
1	Cost (net of salvage value) (from investment tab)	\$ 460.00						
2	Depreciation Exp - % (Recovery of Capital)	4.0%						
3	Cost of Money	2.5%						
4	A&G + M&O Expense - % (from M&O Cost tab)	36.8%						
5	Cost of Ownership - % (Total 2 through 4)	43.34%						
6	Cost of Ownership - \$ (1.5 * 1.1)	\$ 199.36						
7	Adjust for Contribution in Lieu of Tax	5%	9.97					
8	Adjusted total (1.6 + 1.7)	209.33	209.33	209.33	209.33	209.33	209.33	
9	Cost of Ownership % (from Allocations tab)	9.52%	27.0%	20.0%	1.9%	49.6%		
10	Allocated Cost of Ownership - \$/Year (1.8 * 1.9)	\$ 19.92	\$ 56.58	\$ 41.87	\$ 3.88	\$ 103.89		

								Page 2
Derivation of Usable Space Allocation								
		Cable-Type Attachments				Small Cell Attachments		
		Cable	Box	Riser	Anchor Guy	Safety	Riser	Total
		Attachment	Attachment	Attachment	Attachment	Space (3)	Space	Allocation
AB1027 "Available space"	feet	13.5	13.5	13.5	13.5	13.5	13.5	
Additional space occupied by box or riser	feet	0	5.0	18.0	0	0	18.0	
Total Available Space (TAP)	feet	13.5	18.5	31.5	0	13.5	31.5	
Attachment Space (1)	feet	1.0	5.0	6.3	0.25	4.0	6.3	
Attachment space as % of total available space		7.4%	27.0%	20.0%	1.9%	29.6%	20.0%	49.6%
		not used	used	used	used			used
		see below						
Adjustment to AB1027 Available Space approach for wind loading								
Based on typical configuration of three communication attachments per pole								
		% of weight	Allocated		Load/			
		capability (2)	wind load	Total	Attachment			
Static loading								
Electric attachments		25%	7.4%	32.4%				
3 Communications attachments		22%	6.6%	28.6%	9.52%	used		
Total		47%	14.0%	61.0%				
Wind loading with three attachments								
		14%						
Wind as % of static								
		29.8%						
(1) Riser Attachment Space shown in Line 10 is based on 20% assumption in Line 12								
(2) Per Electr Engr. Dept Loading Calculation Analysis								
(3) Small Cell Attachment Space is determined by 4' of safety requirement								

								Page 3
Line No.	Derivation of Pole Attachment Related Maintenance and Operating Costs							
1	Pole-related Overhead O&M expense - other than contract services (from l. 1				346,749.64			
	Contract Services:							
2	Direct allocation - Tree Trimming - Acct 8787				1,440,653.04			
3	Direct allocation - Osmose pole inspection and repair cost				\$ 158,878.25	10 Yr. Average		
4	Total O&M				\$ 1,946,280.93			
5	Pole-related depreciated investment (from Investment tab)				5,283,059.85			
6	O&M as % of pole-related depreciated investment - % (L5 / L6)				36.8%			
Derivation of Allocated O&M + A&G Expenses								
7	FY18-19 Recorded							
8	Overhead Operating Expense (incl Supv and A&G)				611,192.67			
9	Overhead Maintenance Expense (Incl Supv and A&G)				4,296,956.80			
10	Less: Osmose included in FERC Acct 593				-			
11	Less: Tree Trimming included in FERC Acct 593				1,440,653.04			
12	Total Overhead O&M				3,467,496.42			
13	Allocation as Pole-related - %				10%			
14	Allocation as Pole-related - \$				\$ 346,749.64			

