

Sargent & Lundy Estimates Updated with \$2.9m/mile overhead cost

Sargent & Lundy													
Rev	Date	Length (miles)	Base Cost /Mile (\$m)	UG Total Cost (\$m)	OH Total Cost (\$2.9m)	UG - OH (\$m)	Diff	UG/Mile -30% (\$m)	UG Total -30% (\$m)	UG - OH 30% (\$m)	-	Diff	
0	2/11/20	1.5	\$ 9.09	\$ 13.64	\$ 4.35	\$ 9.29	2.14x	\$ 6.37	\$ 9.55	\$ 5.20		1.19x	
1	9/28/20	1.5	\$ 8.24	\$ 12.37	\$ 4.35	\$ 8.02	1.84x	\$ 5.77	\$ 8.66	\$ 4.31		0.99x	
8	6/19/24	2.28	\$ 17.85	\$ 40.69	\$ 6.61	\$ 34.08	5.15x	\$ 12.49	\$ 28.48	\$ 21.87		3.31x	
8-1	6/19/24	1.8	\$ 16.85	\$ 30.33	\$ 5.22	\$ 25.11	4.81x	\$ 11.80	\$ 21.23	\$ 16.01		3.07x	
8-3	6/19/24	0.48	\$ 21.58	\$ 10.36	\$ 1.39	\$ 8.97	6.44x	\$ 15.11	\$ 7.25	\$ 5.86		4.21x	
7-5	9/16/22	0.80	\$ 14.46	\$ 11.63	\$ 2.33	\$ 9.29	3.98x	\$ 10.12	\$ 8.14	\$ 5.81		2.49x	
7-6	9/16/22	0.83	\$ 15.33	\$ 12.80	\$ 2.42	\$ 10.38	4.29x	\$ 10.73	\$ 8.96	\$ 6.54		2.70x	

Sargent & Lundy Estimates Updated with \$500,000/mile RoW cost

Sargent & Lundy

Rev	Date	Length (miles)	Base Cost /Mile (\$m)	UG Total Cost (\$m)	OH Total Cost (\$2.9m)	UG - OH (\$m)	Diff	UG/Mile -30% (\$m)	UG Total -30% (\$m)	UG - OH 30% (\$m)	- Diff
0	2/11/20	1.5	\$ 9.09	\$ 13.64	\$ 4.35	\$ 9.29	2.14x	\$ 6.37	\$ 9.55	\$ 5.20	1.19x
1	9/28/20	1.5	\$ 8.24	\$ 12.37	\$ 4.35	\$ 8.02	1.84x	\$ 5.77	\$ 8.66	\$ 4.31	0.99x
8	6/19/24	2.28	\$ 18.35	\$ 41.83	\$ 6.61	\$ 35.22	5.33x	\$ 12.84	\$ 29.28	\$ 22.67	3.43x
8-1	6/19/24	1.8	\$ 16.85	\$ 30.33	\$ 5.22	\$ 25.11	4.81x	\$ 11.80	\$ 21.23	\$ 16.01	3.07x
8-3	6/19/24	0.48	\$ 21.58	\$ 10.36	\$ 1.39	\$ 8.97	6.44x	\$ 15.11	\$ 7.25	\$ 5.86	4.21x
7-5	9/16/22	0.80	\$ 14.46	\$ 11.63	\$ 2.33	\$ 9.29	3.98x	\$ 10.12	\$ 8.14	\$ 5.81	2.49x
7-6	9/16/22	0.83	\$ 15.33	\$ 12.80	\$ 2.42	\$ 10.38	4.29x	\$ 10.73	\$ 8.96	\$ 6.54	2.70x

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0	2/11/20	1.5	\$ 9.09	\$ 13.64	\$ 4.35	\$ 9.29	2.14x	\$ 6.37	\$ 9.55	\$ 5.20		1.19x	
1	9/28/20	1.5	\$ 8.24	\$ 12.37	\$ 4.35	\$ 8.02	1.84x	\$ 5.77	\$ 8.66	\$ 4.31		0.99x	
8	6/19/24	2.28	\$ 18.35	\$ 41.83	\$ 6.61	\$ 35.22	5.33x	\$ 12.84	\$ 29.28	\$ 22.67		3.43x	
8-1	6/19/24	1.8	\$ 16.85	\$ 30.33	\$ 5.22	\$ 25.11	4.81x	\$ 11.80	\$ 21.23	\$ 16.01		3.07x	
8-3	6/19/24	0.48	\$ 21.58	\$ 10.36	\$ 1.39	\$ 8.97	6.44x	\$ 15.11	\$ 7.25	\$ 5.86		4.21x	
7-5	9/16/22	0.80	\$ 14.46	\$ 11.63	\$ 2.33	\$ 9.29	3.98x	\$ 10.12	\$ 8.14	\$ 5.81		2.49x	
7-6	9/16/22	0.83	\$ 15.33	\$ 12.80	\$ 2.42	\$ 10.38	4.29x	\$ 10.73	\$ 8.96	\$ 6.54		2.70x	

Cost of \$12.8m/mile.

Table of Recent Arizona Underground Projects

Recent Arizona Undergrounding Projects*									
#	Project Name	Location	Year	Co.	kV	Miles	Circuits	Cost	Cost/Mile/Circuit
1	County Line-Buyan	Gila Bend	2020	APS	69	4.5	1	\$13,689,972	\$3,042,216
2	Ocotillo-Tempe	Tempe	2020	APS	69	0.8	1	\$8,096,061	\$10,120,076
3	Indianola-Midtown	Central Phoenix	2019	APS	69	0.6	1	\$2,954,869	\$4,924,782
4	Country Club-Midtown	Central Phoenix	2019	APS	69	0.2	1	\$984,956	\$4,924,780
5	Commerce-Turf	North Phoenix	2019	APS	69	0.5	1	\$1,037,550	\$2,075,100
6	Commerce-Deer Valley	North Phoenix	2019	APS	69	0.5	1	\$1,037,550	\$2,075,100
7	Dale-Via Dona	Scottsdale	2018	APS	69	5.2	2	\$5,182,540	\$498,321
8	Business District	Scottsdale	2018	APS	69	0.78	1	\$2,962,721	\$3,798,360
9	TEP	Tucson	2024	TEP	138	1.0	1	\$25,000,000	\$25,000,000
X	HPFF Mitigation Phase 1	Central Phoenix	2023	APS	230	3.5	1	\$29,345,192	\$8,384,341
10	Intel*	Chandler	2021	SRP	230	2.65	1	\$27,560,000	\$10,400,000
11	Price Road*	Chandler	2018	SRP	230	0.6	2	\$15,800,000	\$13,166,667

Copper Spot Price



Statutory Factor Score: 3-0 Against Project

Factor	Description	Favors Project
1	Existing City plans	No
2	Wildlife & Plants	--
3	Noise and interference	--
4	Recreation	--
5	Existing scenic and historic	No
6	Total environment	No
7	Technical practicability	--
8	Cost	--
9	Federal & State Laws	--

Cost is feasible according to comparable analysis and precedent.

LSC Case 195: What did Chandler “pay”?

- i. City will fund the cost difference between overhead and underground construction of the transmission lines (without consideration of the cost for moving utilities as discussed in subparagraph 2(b)(ii) below) through City’s SRP Municipal Aesthetics Program allocated funds. SRP and City agree that such cost difference (net of the fair market value of the permanent easements) is Twelve Million Five Hundred Thousand Dollars (\$12,500,000).

Easements”). City and SRP agree City’s grant of the Permanent Easements constitutes additional consideration for the Project and SRP’s undergrounding of a portion of the Project and agree that the fair market value of the Permanent Easements is Four Million Five Hundred Thousand Dollars (\$4,500,000). The

$$\begin{aligned} \$12.5 \text{ million} + \$4.5 \text{ million} &= \$17 \text{ million} \\ \$17 \text{ million} / 2.65 \text{ miles} &= \end{aligned}$$

**Chandler “paid” a \$6.4 million/mile differential
for underground 230kV**

LSC Case 195: What did SRP pay?

HIP Cost Breakdown

Transmission Lines and System Upgrades (Funded by SRP)

- HIP 230kV Lines - \$56M⁽¹⁾
- System Upgrades - \$9M
- **SRP Total: \$65M**

Additional Undergrounding Costs (Funded by Others)

- Intel Campus and UPRR Corridor – \$36M by Intel
- Chandler Roadways – \$31M by Chandler⁽²⁾

Substation

- RS-28 – Funded by Intel

(1) Excludes additional underground funding provided by others

(2) Combination of municipal aesthetics funds, ROW contributions, and in-kind services

R64

\$56 million / 7 miles / 2 circuits

=

\$4 million/mile for above ground 230kV

LSC Case 195: What does underground 230kV cost?

SRP paid \$4 million/mile for above ground 230kV

Chandler “paid” a \$6.4 million/mile differential
for underground 230kV

Thus, the total cost is \$10.4 million/mile to underground 230kV.

$\$10.4 \text{ million} / \$4 \text{ million} - 1$

$=$

1.6X Cost Differential

Nowhere close to 10-15X, as Mr. Heim testified.