### San Diego Gas & Electric Unit Cost Guide dated March 30, 2018

In accordance with Attachment A to Decision D16-06-052, the Unit Cost Guide represents facilities generally required for interconnection. Unit Cost Guide is not binding for actual facility costs and is provided only for additional cost transparency and developer reference. For reference, Ft = Per Foot

Category 1 - 12/16kV 480 volt transformer - Includes 100' Sec. cable leng	th

	San Diego Gas & Electric							
Item#	Equipment	Unit Cost	Equipment					
1	150kva & Sec. Cable(480/277V)	\$51,200						
2	300kva & Sec. Cable(120/208V)	\$51,800						
3	500kva & Sec. Cable(120/208V)	\$58,900						
4	750kva & Sec. Cable(480/277V)	\$63,300						
5	1000kva & Sec. Cable(480/277V)	\$111,800						
6	1500kva & Sec. Cable(480/277V)	\$113,900						
7	2500kva & Sec. Cable(480/277V) (Not Assumed with Fuse Cab)	\$141,100						

### Category 2 - Overhead to underground (UG) - Set Pole and make up cable

		San Diego Gas & Electric							
	ltem#	Equipment	Unit Cost	Equipment					
I	1	Pri 2/0 AL Cable from New Pole 200'	\$53,600	Up to 2.5 MW					
	2	Pri 350 AL Cable from New Pole 200'	\$55,900	2.5MW - 6 MW					
ľ	3	Pri 1000 AL Cable from New Pole 200'	\$59,100	6MW - 10 MW					

## Category 3 - Overhead (OH) Service

	San Diego Gas & Electric							
Item#	Equipment	Unit Cost	Equipment					
1	Pri 636 AL Conductor OH feed 200'	\$24,200	Up to 10 MW					
2	New conductor extension	\$121/ft						

### **Category 4 - Underground to Underground - Cable with Terminators**

	San Diego Gas & Electric							
Item#	Equipment	Unit Cost	Equipment					
1	Pri 2/0 AL Cable undg feed 200'	\$7,000	Up to 3 MW					
2	Pri 350 AL Cable undg feed 200'	\$9,300	3MW - 6 MW					

	Category 4 - Underground to Underground - Cable with Terminators Continued								
	San Diego Gas & Electric								
3	Pri 1000 AL Cable undg feed 200'	\$12,500	6 MW- 10 MW						
4	New primary trench and conduit (ft) if IOU installs	\$330/ft							
5									
6									
7	New 1000 KCMIL AL cable and connections(ft)	\$62/ft							
8	New 2/0 AL cable and connections	\$35/ft							
	Category 5 - Metering								
	San Diego Gas & Ele	ectric							
ltem#	Equipment	Unit Cost	Equipment						
1	Secondary Service Metering	\$4,000							
2	Primary Metering	\$11,000							
3									
	Category 6 - Telemetry								
	San Diego Gas & Electric								
	San Diego Gas & Ele	ectric							
Item#	San Diego Gas & Ele Equipment	Unit Cost	Equipment						
Item#			Equipment						
	Equipment	Unit Cost	Equipment						
1	Equipment Overhead SCADA switch	Unit Cost \$108,900	Equipment						
1 2	Equipment  Overhead SCADA switch  New Padmount SCADA Switch	Unit Cost \$108,900 \$191,800	Equipment						
1 2 3	Equipment  Overhead SCADA switch  New Padmount SCADA Switch	Unit Cost \$108,900 \$191,800	Equipment						
1 2 3 4	Equipment  Overhead SCADA switch  New Padmount SCADA Switch	Unit Cost \$108,900 \$191,800	Equipment						
1 2 3 4 5	Equipment  Overhead SCADA switch  New Padmount SCADA Switch	Unit Cost \$108,900 \$191,800	Equipment						
1 2 3 4 5 6	Equipment  Overhead SCADA switch  New Padmount SCADA Switch	Unit Cost \$108,900 \$191,800	Equipment						
1 2 3 4 5 6	Equipment  Overhead SCADA switch  New Padmount SCADA Switch  Padmount Metering and Telemetering	\$108,900 \$191,800 \$19,000	Equipment						
1 2 3 4 5 6	Equipment  Overhead SCADA switch  New Padmount SCADA Switch  Padmount Metering and Telemetering  Category 7 - System Equipment	\$108,900 \$191,800 \$19,000	Equipment						
1 2 3 4 5 6 7	Equipment  Overhead SCADA switch  New Padmount SCADA Switch  Padmount Metering and Telemetering  Category 7 - System Equipment  San Diego Gas & Elemetering	Unit Cost \$108,900 \$191,800 \$19,000							
1 2 3 4 5 6 7	Equipment  Overhead SCADA switch  New Padmount SCADA Switch  Padmount Metering and Telemetering  Category 7 - System Equipment  San Diego Gas & Elemetering  Equipment	Unit Cost \$108,900 \$191,800 \$19,000							
1 2 3 4 5 6 7	Equipment  Overhead SCADA switch  New Padmount SCADA Switch  Padmount Metering and Telemetering  Category 7 - System Equipment  San Diego Gas & Ele  Equipment  New Overhead Hook Stick	Unit Cost \$108,900 \$191,800 \$19,000 Cost Unit Cost \$39,300							

# **Category 7 - System Equipment Continued**

	San Diego Gas & Electric		
5	New Voltage Regulator 200A	\$83,100	
6			
7	New Voltage Regulator 600A Padmount with two switches	\$610,900	
8			
9			
10	Overhead Reconductor (per foot)- Urban	\$236/ft	
11	Overhead Reconductor (Per Foot)- Rural	\$236/ft	
12	Overhead Reconductor (per foot) - Underground	\$107/ft	
13	New Steel Pole Line (per ft)	\$150/ft	
14	New Wood Pole Line	\$121/ft	
15	OH fuse Cutout 12kV 3 phase	\$8,700	
16	Fuse Cabinet UG 3 phase	\$15,400	
17			
18			
19			
20			
21			
22			
23			
24	Substation LTC control setting change is more common than change-outout	\$26,000	
25			
26			
27	New Substation Circuit Breaker	\$97,500	
28	New 28MVA 69/12kV Transformer	\$1,200,000	
29	New 28MVA 138/12kV Transformer	\$1,200,000	
30	Quarter Section Switchgear	\$400,000	
31	Protection Review	\$1,300	

Note: For overall IOU line consistency, facilities not commonly used for SDG&E interconnection have been placed in gray

# SDG&E Esculation Factor Unit Cost Guide Dated March 30, 2018

#### **OVERVIEW:**

Current PTO Unit Cost Guide as posted on the CAISO website is in 2018 Constant Dollars. PTO's cost estimating is done in constant dollars and then escalated over the years during which the project will be constructed, arriving at project costs in nominal dollars.

#### **DEFINITIONS USED:**

Project Cost in Constant Dollars represents the cost of the Project if all costs were paid for at a single point in time.

Project Cost in Nominal Dollars represents the cost of the Project taking into account when actual dollars will be spent.

Mathematical formula: Cost in Nominal Dollars = Cost in Constant Dollars + Escalation

= Cost in Constant Dollars x Escalation Factor

### **CURRENT PTO ESCALATION RATES \*: Revised 1/16/2018**

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
Escalatio		2.88%	2.70%	2.14%	2.56%	2.35%	2.29%	2.33%	2.25%	2.33%	2.29%	2.01%
n												
Rates												
2018	0.9465	0.9737	1.0000	1.0214	1.0475	1.0721	1.0966	1.1222	1.1475	1.1742	1.2012	1.2253
Escalatio												
n												
Factors												

<sup>\*</sup> Escalation Rates are from IHS Global Insight's 3rd Quarter 2017 Power Planner (released November 2017) electric utility