

**UCAN DATA REQUEST**  
**UCAN-SDG&E-DR-03**  
**SDG&E SB 350 TRANSPORTATION ELECTRIFICATION PROPOSALS (A.17-01-020)**  
**SDG&E RESPONSE**  
**DATE RECEIVED: September 29, 2017**  
**DATE RESPONDED: October 3, 2017**

**Modified Residential Charging Program**

**UCAN Data Request-03 Q1-6**

**Prepared by Michael Calabrese**

- 1. Please explain what SDG&E includes and how SDG&E defines the term “overhead rate” as used in SDG&E’s response to UCAN DR-02, Q9.**

**Response:** Direct costs are defined as costs that are easily traceable to a specific project. An example of direct costs would include materials costs, installation labor, etc. Indirect costs are costs that are not easily traceable to a project but still need to be included as part of a project’s total costs. An example of indirect costs would include accounts payable personnel salaries processing invoices for payment for multiple projects. The term “overhead rate” is defined as an illustrative percentage which when multiplied to direct labor and non-labor costs will assign indirect costs to projects. UCAN DR-02, Q9 specifically asks about overhead costs applied to Level 2 chargers.

The incremental overhead percentage (or rate) applied to the Level 2 charger non-labor costs is 48.9%, which consists of the following indirect costs: (1) purchasing contract costs of .73%, (2) Electric Distribution construction support functions of 43.83%, and (3) Administrative & General (A&G) costs of 4.30%. A&G costs include items such as accounts payable personnel salaries, accounting personnel salaries, etc.

The incremental overhead percentage (or rate) applied to the contract labor to install the Level 2 chargers is 5%, which consists of the following indirect costs: (1) purchasing contract costs of 0.73% and (2) A&G costs of 4.30%.

- 2. Please explain how SDG&E sets its overhead rate for different accounts.**

**Response:** SDG&E does not set its overhead rates for different accounts. Since SDG&E is a regulated utility, it is required to assign all costs into specific FERC accounts. However, SDG&E does not set overheads by FERC account but by business activities. SDG&E will assign an overhead percentage (or rate) to all applicable direct costs activities for labor and non-labor cost categories which are then assigned to the appropriate FERC account.

It is important to note that the overhead methodology SDG&E follows is consistent with the Federal Energy Regulatory Commission (FERC) guidelines, General Accepted Accounting Principles (GAAP), and is reviewed and approved by the CPUC during the GRC process. The overhead percentages used to develop the revenue requirement presented in this proceeding are incremental overheads (outside of 2016 GRC approved expenditures), and were using the most recently available SDG&E overhead planning rate letter, October 2016.

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- 3. Please explain the statement in DR-02, Q9 “The overheads applied to the capitalized Level 2 charger costs are 48.9%.” Does this mean that the overhead rate to obtain the Level 2 chargers is 48% of the total costs allocated for the Level 2 chargers?**

**Response:** No. To provide a full representation of the total possible costs of the Level 2 chargers, the direct costs of the Level 2 chargers (material cost, sales tax, and contingency)<sup>1</sup> are multiplied by the 48.9% to allocate indirect costs<sup>2</sup> to the estimated material costs of the Level 2 charger.<sup>3</sup> In other words, the 48.9% calculation generates an illustrative forecast of indirect costs, as explained in the Q1 response. However, the 48.9% is an estimate subject to change based on the level of actual activities used to support the project.

- 4. In SDG&E’s answer to UCAN DR-02, Q9 it also notes that the overheads applied to the capitalized labor of \$1,425 are 5.0%. Does this mean that SDG&E is charging a 5% overhead rate for labor to install the level 2 charger?**

**Response:** Yes. To provide a full representation of the total possible costs of the Level 2 chargers, the direct labor costs of the Level 2 chargers (contracted installation costs) are multiplied by the 5.0% to allocate indirect costs<sup>4</sup> to the estimated labor costs of the Level 2 chargers. The 5.0% calculation generates an illustrative forecast of indirect costs, as explained in the Q1 response. The 5.0% is an estimate subject to change based on the level of actual activities used to support the project.

- A. For how many years will SDG&E charge an overhead rate to the capitalized labor used to install level 2 chargers in people’s homes?**

**Response:** The 5.0% overhead rate is an estimate, and was applied to all contracted labor installation. This rate was used for labor to install chargers beginning in years 2020 and continuing through 2025 which is the estimated installation period for chargers.

- 5. In Mr. Calabrese’s rebuttal testimony at page MAC-1 he notes that:**

*SDG&E is requesting that the Commission approve in this proceeding: (1) direct capital and O&M costs of \$241.8 million (as shown in Table MAC-3 and loaded and escalated to \$341.6*

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<sup>1</sup> Shown in Mr. Calabrese’s Direct Testimony (MAC-2) and in his Rebuttal Testimony (MAC-1).

<sup>2</sup> Purchasing contract costs, electric distribution customer support functions, and A&G costs identified in Q1 above.

<sup>3</sup> Shown in Mr. Calabrese’s Direct Testimony (MAC-8) and in his Rebuttal Testimony (MAC-4).

<sup>4</sup> Purchasing contract costs, and A&G costs identified in Q1 above.

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*million as shown in Table MAC-6 and (2) the associated revenue requirement currently estimated to be \$211.7 million (as shown in Appendix A).*

- A. Does SDG&E estimate that the direct costs of \$241.8 million will increase to \$341.6 million when including escalation and loaders represent the costs SDG&E estimated for overheads? If not, please explain what the extra \$100.2 million represents.**

**Response:** No. The increase is \$99.8 million when going from \$241.8 million of direct costs to \$341.6 million of loaded and escalated costs. The difference of \$99.8 million represents the overhead costs applied based on the illustrative overhead percentages identified in Q1 above, and an increase related to escalation for the associated time value of money over the period 2019-2025.

- B. Regarding the associated increase in the revenue requirement of \$211.7 mentioned by Mr. Calabrese in his testimony (and as shown in Appendix A to his testimony) does this \$211.7 represent only 6 years for the life of this program, i.e., the years 2019 to 2025 and for the projected life of this program, (projected in Appendix A to be to 2050), an increase of \$750,266,000.**

**Response:** The \$211.731 M represents 6 years of the revenue requirement covering the period of 2019-2025. SDG&E is seeking approval to collect up to this amount (note that the amount is based on the scenario where SDG&E owns 100% of 90,000 Level 2 chargers). What SDG&E would actually collect from ratepayers will depend on the actual number of Level 2 chargers installed and how many participants choose to own the chargers themselves or to opt for the utility ownership option.

In answering the second part of the question, the actual increase in the revenue requirement for the remaining years from years 2026-2050 is \$538.535 M. However, it is important to note that SDG&E is not asking for Commission approval of the \$538.535 M in this proceeding. What SDG&E is asking for in this proceeding is that the undepreciated plant balances for chargers and other capital related costs be rolled into and included as part of SDG&E's total infrastructure assets used in calculating future revenue requirements for the GRC.

It is also important to keep in mind that this calculation (i.e., the projection of possible revenue requirement over the years 2026-2050) was originally generated for the cost-benefit analysis performed by E3 and presented in the Direct Testimony of SDG&E witness J.C. Martin (for purposes of the original program). The calculation was necessary because the cost-benefit analysis was attempting to look at costs over longer period through 2050.<sup>5</sup> That said, the projected revenue requirement for the

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<sup>5</sup> The same modeling methodology and time period was also adopted for the Modified Residential Charging Program, although no cost benefit analysis was specifically conducted using this revenue requirement.

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years beyond 2025 also serves to illustrate a full representation of total possible costs over the long term. Once the program is completed in 2025, all future capital and O&M costs and their recovery will be evaluated by the Commission during SDG&E's GRC process.

Please refer to the following chart as a summary of the revenue requirement figures referenced above and in the Rebuttal Testimony of M. Calabrese, including his Appendix A:

Years	Revenue Requirement	Explanation
2019-2025	\$ 211.7	\$211.731 M—SDG&E is seeking approval of this rev. req. in this proceeding
2026-2050	(a) \$ 539.8	(a) + (b) = \$538.535 M—SDG&E is not seeking approval of this rev. req. in this proceeding; this amount was calculated for the E3 cost-benefit analysis in order to sufficiently quantify project costs and benefits over a longer time period; it should be noted that this figure includes rev. req. amounts that extend beyond 2050 (i.e., to 2067) because the rev. req. model that SDG&E uses goes out to 2067; however the amounts from 2051-2067 reflect relatively minor costs and credits related to the impact of assets book and tax lives on rate base
2051-2067	(b) \$ (1.2)	
2019-2067	\$ 750.3	Total Rev Req.

6. Please explain the meaning of the following statement as used in SDG&E's response to UCAN DR-02, Q9: "Escalation percentages also are applied and compounded monthly". SDG&E's response then provides a forecast of escalation rates to 2025. Does SDG&E forecast mean that in addition to the overhead rate collected by SDG&E that the utility is anticipating a 3% escalation, compounded monthly, until 2025 to their overhead rates?

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**Response:** Yes, the escalation rates are applied to the fully loaded costs through year 2025. The fully loaded costs include the direct capital and O&M costs multiplied by overhead percentages like those discussed in Q1 above.

7. **Why does SDG&E forecast, as shown in SDG&E's answer to UCAN DR-02, Q9, an approximately 3% escalation for labor and capital for this program from 2020-2025.**

**Response:** It is a standard practice for SDG&E to apply escalation to the labor and capital cost components, since both are used to develop a forecast of the revenue requirement. For example, SDG&E applies escalation to the labor costs and capital components used to develop the revenue requirement in the GRC. Since the revenue requirement for these projects extends beyond 1 year, applying escalation addresses the time value of money in future years. The escalation factors are identified by using IHS/Market Global Insight's 3rd Quarter 2016 utility cost forecast (published late October 2016), which was the most recently available publication at the time of filing.

**The below Table supports the data response to UCAN DR-03 Q# 5B**

Years	Revenue Requirement	Explanation
2019-2025	\$ 211.7	\$211.731 M—SDG&E is seeking approval of this rev. req. in this proceeding
2026-2050	(a) \$ 539.8	(a) + (b) = \$538.535 M—SDG&E is not seeking approval of this rev. req. in this proceeding; this amount was calculated for the E3 cost-benefit analysis in order to sufficiently quantify project costs and benefits over a longer time period; it should be noted that this figure includes rev. req. amounts that extend beyond 2050 (i.e., to 2067) because the rev. req. model that SDG&E uses goes out to 2067; however the amounts from 2051-2067 reflect relatively minor costs and credits related to the impact of assets book and tax lives on rate base
2051-2067	(b) \$ (1.2)	
2019-2067	\$ 750.3	Total Rev Req.

<b>Workpaper Title</b> <b>SB350 Modified Residential Home Charging Program -SDG&amp;E 100% Owership</b>	<b>Revenue Requirement</b>
<b>Witness</b> Michael A. Calabrese	

(\$ Millions)

	Total	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
<b>Revenue Requirement</b>	750.3	(11.9)	19.1	25.4	33.9	42.2	50.0	53.0	52.8	50.8	48.8	46.6	44.5	42.4	40.4	38.3	36.2	34.2	30.6	25.3	20.4	15.6	10.9	6.5	0.1
FF&U:	26.9	(0.4)	0.7	0.9	1.2	1.5	1.8	1.9	1.9	1.8	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.2	1.1	0.9	0.7	0.6	0.4	0.2	0.0
O&M:	99.4	-	6.8	7.0	7.2	7.4	7.6	7.8	3.1	3.1	3.2	3.2	3.3	3.3	3.4	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.8	3.9	-
Working Capital:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation:	302.3	-	4.1	6.9	9.8	12.8	15.8	15.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	16.9	14.1	11.2	8.2	5.2	2.0	0.0
Return on Common:	131.9	-	1.6	3.7	5.7	7.7	9.5	11.4	12.2	11.2	10.3	9.4	8.5	7.7	6.8	5.9	5.1	4.2	3.3	2.6	1.9	1.3	0.8	0.5	0.3
Return on Preferred:	4.2	-	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Return On Debt:	55.7	-	0.7	1.6	2.4	3.2	4.0	4.8	5.1	4.7	4.4	4.0	3.6	3.2	2.9	2.5	2.1	1.8	1.4	1.1	0.8	0.5	0.4	0.2	0.1
Federal Taxes:	73.3	(9.2)	4.3	3.8	5.0	6.1	6.9	6.4	7.0	6.3	5.8	5.3	4.8	4.3	3.8	3.3	2.9	2.4	1.6	1.1	0.7	0.3	0.1	(0.2)	0.1
State Taxes:	20.3	(2.3)	0.9	1.1	1.4	1.7	2.0	1.9	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.3	1.0	0.6	0.2	(0.1)	(0.5)	(0.6)
Property Taxes:	36.2	-	-	0.3	1.0	1.5	2.1	2.6	3.1	3.3	3.1	2.9	2.6	2.4	2.1	1.9	1.7	1.4	1.2	0.9	0.7	0.5	0.4	0.2	0.1

ROR	7.79%	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042

Rev Req 750.3 (11.9) 19.1 25.4 33.9 42.2 50.0 53.0 52.8 50.8 48.8 46.6 44.5 42.4 40.4 38.3 36.2 34.2 30.6 25.3 20.4 15.6 10.9 6.5 0.1

Discounted 346.9 (11.1) 16.4 20.3 25.1 29.0 31.9 31.4 29.0 25.9 23.0 20.4 18.1 16.0 14.1 12.4 10.9 9.5 7.9 6.1 4.5 3.2 2.1 1.2 0.0

**Cost per Charger Before Discounting \$ 8,336**

**Cost per Charger After Discounting \$ 3,854**

2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067
(0.2)	(0.5)	(0.6)	(0.7)	(0.7)	(0.7)	(0.7)	(0.6)	(0.5)	(0.4)	(0.3)	(0.1)	(0.0)	0.0	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	0.0	0.0
(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	0.0	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	0.0	0.0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.1	0.0	0.0	0.0	(0.0)	0.0	(0.0)	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0
(0.6)	(0.6)	(0.6)	(0.7)	(0.7)	(0.7)	(0.7)	(0.6)	(0.5)	(0.4)	(0.3)	(0.2)	(0.1)	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	0.0	0.0
0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067
(0.2)	(0.5)	(0.6)	(0.7)	(0.7)	(0.7)	(0.7)	(0.6)	(0.5)	(0.4)	(0.3)	(0.1)	(0.0)	0.0	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	0.0	0.0
(0.0)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	0.0	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	0.0	0.0