

Report to the Legislature on Investor Owned Utility Schools Rate Discounts in Compliance with PU Code Section 749.5

Executive Summary

I. Legislative Background

California Assembly Bill (AB) 2068 (Chu, 2018) requires the California Public Utilities Commission (CPUC) to direct all electrical and gas corporations to “evaluate, and report findings to the commission on, the feasibility and economic impacts of establishing a public school electric and gas rate that would reflect a discount from the current rate structure.”¹

Pursuant to Public Utilities (PU) Code Section 749.5(b), electric and gas utilities must submit data and analysis responsive to the following four specific requirements:

1. Commercial rate increases in the past five years that affected public schools within the service territory of each electrical and gas corporation.
2. Economic impact to all ratepayers if all public schools within the service territory received a discount from the current rate structure.
3. The impact of planned modifications to the time intervals reflected in time-of-use rates and to rate design elements, as adopted by the commission and in the planning stages or proposed by electric and gas corporations.
4. The cost shifts that would occur, if any, and to which consumers the costs would shift, as a result of a discounted rate for public schools.

In compliance with PU Code Section 749.5, the CPUC Energy Division hereby submits the utilities’ compiled reports to the Legislature.²

II. Summary of Investor Owned Utilities Data

The Investor Owned Utilities (IOUs) developed a broad analytical and presentation framework for their evaluations of the feasibility and economic impact for all ratepayers if eligible schools were provided with discounted gas and electric rates. Below is a general summary and analysis based on key data provided by the IOUs in their reports, which are attached to this summary for more detail. This summary is organized by each of the legislative requirements of PU Code Section 749.5(b) enumerated above for all three IOUs combined.

¹ The Legislative Digest for AB 2068 is available at:

http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB2068

² The CPUC Energy Division only received reports pursuant to PU Code Section 749.5 from the four large investor-owned utilities (IOUs). Energy Division is following up on the small multijurisdictional utilities (SMJUs), including Liberty Utilities, PacifiCorp, Bear Valley, and Southwest Gas.

1. Commercial Rate Increases Over the Past Five Years

In enacting AB 2068, the Legislature acknowledged that many schools have experienced electric rate increases that have resulted in financial constraints and less funding for direct student services. The Legislature required each electric and gas corporation in the State to report the rate changes and trends for schools over the last five years, which are captured in Tables 1 through 5 below for each IOU's Commercial and Industrial customer class for electricity and gas.

➤ **Electricity:**

Table 1: Small C & I Customer Class Average Rate (cents/kWh)

	2014	2015	2016	2017	2018	2019
SDG&E	21.98	24.30	22.40	24.43	25.30	25.15
SCE	18.1	19	16.6	17.6	17.8	17.3
PG&E	19.4	21	21.95	22.51	22.95	23.7

Table 2: Medium C & I Customer Class Average Rate (cents/kWh)

	2014	2015	2016	2017	2018	2019
SDG&E	17.55	19.70	18.65	20.25	20.37	22.60
SCE	15.9	17.15	15.15	16.3	16.9	16.35
PG&E	17.42	18.5	19.1	20.05	20.42	21.2

- PG&E shows 2 percent to 4 percent increase in electricity per year based on their bundled services.
- SCE rate levels do not exhibit a pattern or trend. The small C&I rate decreased while other average rates increased. SCE Gas rates have an average increase of 2.28 percent, but SCE has only 4 public school customers receiving gas service.
- SDG&E rates had a drop in 2016 but have been increasing annually.

➤ **Gas:**

Table 3: PG&E Small Commercial Rate in \$/therm

	2014	2015	2016	2017	2018	2019	2020*
Bundled	\$0.952	\$1.051	\$0.961	\$1.134	\$1.058	\$1.120	\$1.141
Unbundled	\$0.449	\$0.569	\$0.596	\$0.724	\$0.756	\$0.821	\$0.864

*= Estimated January 1, 2020 rate

- PG&E serves most schools as small commercial customers. The rates for the bundled small commercial class increased approximately 3 percent per year and the unbundled rates increased approximately 11.5 percent.

Table 4: SoCal Gas Commercial and Industrial Rate Changes (\$/therm)

Dates	1/1/15; 8/1/15	1/1/16	8/1/16	9/1/16	1/1/17; 8/1/17	1/1/18	7/1/18	11/1/18	1/1/19	4/1/19; 5/1/19
Tier 1	\$0.11	\$0.20	\$0.20	\$0.21	\$0.11	\$0.13	\$0.13	\$0.13	\$0.21	\$0.24
Tier 2	\$0.28	\$0.36	\$0.37	\$0.38	\$0.27	\$0.30	\$0.30	\$0.30	\$0.38	\$0.41
Tier 3	\$0.54	\$0.60	\$0.63	\$0.64	\$0.51	\$0.54	\$0.55	\$0.56	\$0.64	\$0.67

Table 5: SDG&E Commercial and Industrial Rate Changes (\$/therm)

Dates	1/1/15; 8/1/15	1/1/16; 8/1/16	9/1/16	9/1/16	1/1/17; 8/1/17	1/1/18; 7/1/18; 11/1/18	1/1/19	4/1/19; 5/1/19
Tier 1	\$0.21	\$0.30	\$0.30	\$0.21	\$0.26	\$0.16	\$0.28	\$0.33
Tier 2	\$0.26	\$0.34	\$0.35	\$0.38	\$0.30	\$0.20	\$0.32	\$0.37
Tier 3	\$0.42	\$0.49	\$0.50	\$0.64	\$0.42	\$0.33	\$0.46	\$0.50

- SoCalGas and SDG&E serve public schools under core commercial and industrial (C&I) rates. Their rate structure reflects three-tiered declining block rates.

2. Economic Impact of School Rate Discount on Other Ratepayers

In this section, the IOUs report on the economic impact of a separate electric and gas school rate discount on other ratepayers. To keep the IOUs revenue-neutral, the revenue shortfall from the school rate discount shifts to other classes of ratepayers. For illustrative purposes, the IOUs present the estimated impact of a 10 percent public school rate discount for electric and gas service in Tables 6 through 10 below.

➤ **Electricity:**

- PG&E presented 3 different discount scenarios (10 percent, 20 percent and 30 percent electric discount) in its report. The resulting cost shift and the impact of each scenario on other customers are presented as follows:

Table 6: PG&E Discount Scenarios	10%	20%	30%
Impact on Other Customers	0.13%	0.25%	0.38%
Total Cost Shift to Other Customers	\$22.8M	\$45.69M	\$68.54M

- PG&E’s table below shows the impact of a potential **10 percent** discount for public schools on other electric ratepayers, broken out by customer class:

Table 7: Bill Impact of PG&E 10% Discount on Other Customer Classes

Residential	Small Commercial	Medium and Large C&I	Large C&I (E-19)	Large C&I (E-20)	Street Lights	Agricultural	System
0.15%	0.16%	0.11%	0.1%	0.06%	0.21%	0.15%	0.13%

- SCE presented a proxy public school discount of 10 percent for its electrical rates which results in \$15M reduction in their revenues. The impact of the 10 percent public school discount revenue deficiency on each customer class would result in the annual bill increase that is shown below:

Table 8: Bill Impact of 10% SCE Discount on Other Customer Classes

Class	Rate Schedule	Annual Bill Increase (\$ and %)	
Residential	Residential	\$1.46	0.12%
Small Power	TOU-GS-1	\$2.88	0.14%
	TOU-GS-2	\$32.22	0.15%
	TOU-GS-3	\$225.25	0.16%
Large Power	TOU-8-SEC	\$773.50	0.18%
	TOU-8-PRI	\$1,720	0.2%
	TOU-8-SUB	\$9,759	0.26%
Agriculture	TOU-PA-2	\$18.46	0.17%
	TOU-PA-3	\$203.56	0.2%

- SDG&E has proposed a Schools-ONLY electric rate in its 2019 General Rate Case (GRC) 2 application (A.19-03-002). If approved by the CPUC, SDG&E’s proposal would result in 11 percent reduction in revenue from schools. The corresponding rate impact of creating a school rate as proposed is broken out by customer classes is shown in the table below:

Table 9: Rate Impact of SDG&E Proposed Discount on Other Customer Classes

	Schools	Residential	Small Commercial	Medium and Large C&I	Agricultural	System Total
Current rate 1/1/2019 (C/kWh)	0	26.25	24.96	22.2	17.46	23.738
2019 GRC 2 Proposed (C/kWh)	25.9	27.74	26.03	22.81	18.16	24.88
Rate Change (C/kWh)	25.9	1.49	1.07	0.61	0.7	1.147
% change	0	5.58%	4.29%	2.75%	4.01%	4.83%

➤ **Gas:**

- PG&E’s analysis of a 10 percent discount to school gas rates results in a \$5.4 million in annual savings. The system average impact of a \$5.4 million annual estimated school gas rate discount would be 0.08 percent. To gauge the impact of the recovery of school rate discounts from other customers, the utility used \$10 million in annual savings. This results in rate increases of 0.0 percent to 0.35 percent for customer classes, with impacts on the major customer classes presented below:

Table 10: Rate Impact of 10% Discount to School Gas Rates to Other Customer Classes

PG&E Customer Classes	Bundled Residential	Bundled Small Commercial	Industrial Dist*	Industrial Trans*	Industrial Backbone*	Electric Gen/Dist/Trans*	Electric generation Backbone*
Rate Impact	0.26%	0.19%	0.29%	0.09%	0.17%	0.02%	0.22%

* = CARB Covered Entities

- SoCalGas and SDG&E assumed an illustrative 10 percent discount to public school transportation gas rates only. To determine the school rate and discount, SoCalGas and SDG&E applied the 10 percent discount to both the core C&I customer charge and volumetric rates, with the total cost allocated to all customer classes equally on a per therm basis to remain revenue neutral. The 10 percent public school’s transportation rate discount results in \$1.34 million in annual discount for SoCalGas and \$0.018 million for SDG&E customers.

3. Impact on Schools of Later Time-of-Use (TOU) Hours or Other Rate Design Changes (Electric Rates Only)³

Schools are expected to see overall electric bill savings resulting from recently implemented time-of-use (TOU) peak period changes, even without a dedicated school discount rate. This is because schools generally have less electric usage during the new, later peak hours of 4:00 PM to 9:00 PM as compared to the previous peak period of noon to 6:00 PM. SDG&E and SCE have already migrated to the new TOU period. PG&E will begin migrating their commercial customers (including schools) to rates with the updated TOU peak hours in November 2020.

³ The TOU hours applies only to electric rates, however, there will be gas rate changes in the future that will need to be accounted for in terms of rate and bill impacts.

Typically, schools have higher demand for electric and gas service during core daytime business hours, and much lower demand in the evenings as the total system demand is reaching its peak and the supply of solar energy begins to decline. This section describes the effect of these **newly** implemented TOU periods on public school bills (for electric rates).

- PG&E has reported the following for the revenues under the impact of old vs. new TOU peak periods before ANY potential additional school discount based on bundled rates:

Table 11: PG&E Annual Revenues and Bill Impact Under Old and New TOU Rates Before Any Additional School Discounts						
		Customers	Old Rates	New Rates	\$ Savings	% Saving
PG&E	Electric	7,339	\$233,526,817	\$228,488,384	\$5,038,433	2.16%
	Gas	4,825	\$50,750,980	\$53,528,961	-\$2,777,981	-5.47%
	Total	12,164	\$284,277,797	\$282,017,345	\$2,260,452	0.80%

- SCE concludes that recent modifications to the TOU peak period will be beneficial to the public-school customers as a whole.

Table 12: SCE Rate Changes for Public Schools Under Old and New TOU Periods					
	Rate	Old TOU Periods	New TOU Periods	Difference in Rates	% change in Average Rates
SCE	TOU-GS-1	19.11	17.83	1.28	-6.70%
	TOU-GS-2	21.94	18.81	3.13	-14.27%
	TOU-GS-3	20.73	17.96	2.77	-13.36%
	TOU-8-Sec	18.57	17.05	1.52	-8.19%
	TOU-8-PRI	17.55	15.14	2.41	-13.73%

- SDG&E implemented new TOU periods as part of D.17-10-018 (its 2016 GRC Phase II), and no other modification in TOU periods are proposed in its 2019 GRC 2 application. Some schools (161 out of total 1,038) have NEM metering and can stay on their grandfathered rates for 10 years. SDG&E has not provided the differential between old and new rates in its report.

4. Total Cost Shift Caused by Rate Discounts for Schools

Any approved discount for one group of customers leads to a revenue deficiency and a cost shift that must be recovered from all other customers. However, it is important to note that the size of the cost shift depends on the amount of discount, as well as the unique cost of service for each school in each IOU territory, which may vary depending on load profiles. In other words, depending on their patterns of energy consumption, schools may pay more or less than the actual cost of service. Likewise, the burden on other customer classes depends on the cost allocation methodology used to allocate revenue for recovery from each customer class. The Legislature has required electric and gas corporations to quantify the cost shifts that would occur, if any, and to which customers the costs would shift, as a result of rate discounts for schools. This section summarizes the IOUs' cost shift analyses:

➤ **Electricity:**

- PG&E's annual total cost shift to other customers from a 10 percent discount:

Table 13: Cost Shift Resulting from PG&E 10% Discount		
PG&E	Electric	\$22,848,838
	Gas	\$5,352,896
	Total	\$28,201,735

- SCE reported approximately \$15M reduction in electric revenue as the result of 10 percent discount for the public schools. The cost shift to other SCE customers is described in item #2 above.
- SDG&E estimated the annual revenue requirement for recovering the schools rate discount in the table below:

Table 14: Annual Electric Cost Shift Resulting from SDG&E Schools Rate Discount			
	Customer Class	% System Sale	Estimated Annual Revenue Requirement
SDG&E	Residential	35.1%	\$3,054,097
	Small Commercial	11.4%	\$989,240
	Med/Large C&I	51.5%	\$4,476,073
	Agriculture	1.5%	\$134,116
	Lighting	0.4%	\$37,260
	System	100%	\$8,690,785

➤ **Gas:**

- SoCalGas and SDG&E assumed that all core and noncore customer classes would share the cost shifts on an equal-cents-per-therm basis.
- SoCalGas residential customers would bear 66.7 percent (\$307,000) and Core C&I customers 13.9 percent (\$229,000), of the rate increase resulting from public school discount rate, as shown below:

SoCalGas Customer Class	% of System Revenue	Estimated School Discount Revenue Increase (\$ in thousands)
Residential	66.7%	\$307
Core C&I	13.9%	\$229
NGV	1.0%	\$21
Gas A/C	0.0%	\$0
Gas Engine	0.1%	\$0
Non-Core C&I	4.1%	\$206
Non-Core EG	2.8%	\$364
Wholesale	0.9%	\$213
BTS	9.7%	\$0
UBS	0.7%	\$0
Total	100.0%	\$1,340

- SDG&E residential customers would bear 74.9 percent (\$8,000) and Core C&I customers 17.3 percent (\$6,000), of the rate increase resulting from a 10 percent public school discount rate, as shown below:

SDG&E Customer Class	% of System Revenue	Estimated School Discount Revenue Increase (\$ in thousands)
Residential	74.9%	\$8
Core C&I	17.3%	\$6
NGV	1.0%	\$0
Non-Core C&I	1.4%	\$1
Non-Core EG	5.4%	\$3
Total	100.0%	\$18

III. Conclusions and Recommendations

As demonstrated in the IOU reports submitted in compliance with PU Code Section 749.5, gas and electric rate discounts for public schools lead to a measurable revenue shortfall and cost shift, which must be recovered by increasing rates for other customers. However, the calculation of this cost shift does not include an analysis as to whether schools are currently paying the true cost to the utility of serving them, which can vary depending on their load profile or consumption patterns during different times of day. Indeed, it is possible that schools are paying more than their cost of service and that a schools-only rate would result in a more accurate rate based on their usage characteristics. The CPUC evaluates cost of service studies and revenue allocation in its General Rate Cases (electric) and cost allocation (gas) proceedings for each IOU on a triennial basis (generally), and can address any proposed schools rate designs, discounts and resulting cost shifts therein. Therefore, it is reasonable to consider a gradual and incremental approach to the implementation of school's rate discounts in order to minimize and carefully manage the attendant bill impacts to non-participating ratepayers.