

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of Pacific Gas and Electric)
Company Proposing Cost of Service and Rates)
for Gas Transmission and Storage for)
the Period 2015-2017) Application A13-12-012
)
(U 39 G))

**TESTIMONY OF PAT FONG KUSHIDA, PRESIDENT AND CHIEF
EXECUTIVE OFFICER OF THE CALIFORNIA ASIAN PACIFIC CHAMBER
OF COMMERCE, INTERVENOR**

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Dated: August 7, 2014

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Pursuant to Rule 13.8 of the California Public Utilities Commission’s Rules of Practice and Procedure and the procedural schedule established by Assigned Commissioner Carla J. Peterman and Administrative Law Judge John S. Wong filed on April 17, 2014, the California Asian Pacific Chamber of Commerce (“CalAsian”) hereby submits its opening prepared testimony. This testimony will (i) express the concerns of small and medium sized and ethnically diverse businesses in California (“SMBs”) that will be adversely affected by Pacific Gas and Electric Company’s (“PG&E”) proposed rate increases and (ii) advocate for “best practice” actions that PG&E should take to mitigate these adverse impacts on these businesses. In addition to this opening testimony, CalAsian is also advancing an expert report by economist Antonio Avalos, Ph.D. (“Expert Report,” attached as Exhibit 1) that analyzes the economic impact of PG&E’s proposed rate increase on small- and medium-sized businesses and suggests certain best business practices and mitigation efforts that PG&E and the Commission should consider.

I. Introduction

On December 19, 2013, PG&E filed an application requesting the Commission to approve of their 2015 Gas Transmission and Storage (“GTS”) capital expenditures and expense forecasts. PG&E’s proposed plan would require revenues of \$1.286 billion for 2015, \$1.347 billion for 2016, and \$1.515 billion for 2017. These rates would become effective on January 1, 2015. The increased revenue would allow PG&E to implement a new safety plan consistent with industry best practices and to identify, assess, and mitigate risks in PG&E’s natural gas transmission system.¹

CalAsian intervened in these proceedings to ensure that the interests of SMBs in PG&E’s service regions will be protected. CalAsian is a statewide Chamber of Commerce that represents the interests of its members. Our members include 600+ Asian-owned small- and medium-sized businesses operating in California. In these proceedings and as part of its role as an intervenor in these proceedings, CalAsian is collaborating with other ethnic chambers of commerce in California to ensure that PG&E’s proposed rate increases will not have material negative effects on SMBs in this state.

II. CAPCC’s Position

SMBs² are the lifeline of California’s economy and contribute greatly as a source of employment, income, and economic prosperity at both the local and regional

¹ PG&E’s 2015 Gas Transmission and Storage Rate Case Application

² The Department of General Services defines “small businesses” to mean businesses that are: (1) independently owned and operated; (2) not dominant in the field of operation; (3) have their principal office located in California; (4) have owners who are domiciled in California; and (5) include affiliates that are either (i) a business with 100 or fewer employees; an average annual gross receipts of \$14 million or less, over the last three tax years; (ii) a manufacturer with 100 or fewer employees; or (iii) a

levels. In 2012, California's economy grew at a faster rate than the United States' economy. California's unemployment rate declined from 9.8% in December 2012 to 8.3% in December 2013. In 2011, California's small businesses employed half of the state's private workforce and created 104,360 net new jobs. Businesses with 1-4 employees displayed the greatest amount of growth during this time period.³

With PG&E's proposed rate increase, our community is worried about the significant impact it may have on small businesses in PG&E's service territory. As more fully set forth in the Expert Report of Dr. Avalos, our concerns are indeed warranted. The Expert Report identifies that there is a high likelihood that will have a disproportionately adverse impact on CalAsian members and other SMBs because: (i) there is a very high percentage of employers in the PG&E service area that have under 10 employees, (ii) there is a very negative "outflow" of money from within the PG&E service area because of the difference between the rate payers and the intended investment of PG&E within its service area for this project, and (iii) CalAsian members are businesses that fall into the category of business that have the highest adverse impact in the PG&E pay/investment equation. In our view, it is almost a certainty that there will be negative economic impact if these SMBs who must pay higher utility bills and compensate for these costs by downsizing their business or by forcing their consumers to pay higher prices. Additionally, the construction work that PG&E will need to perform to maintain and update their gas transmission lines could result in service interruptions or even impede the public's access to these small businesses. Service interruptions would make it difficult for small businesses to operate efficiently

microbusiness where gross annual receipts are less than \$3,500,000 or has 25 or fewer employees.
(<http://www.dgs.ca.gov/pd/Programs/OSDS/SBEligibilityBenefits.aspx>)

³ [http://www.sba.gov/sites/default/files/files/California13\(1\).pdf](http://www.sba.gov/sites/default/files/files/California13(1).pdf)

and smoothly, and those businesses with only 1-4 employees may find it hard to prepare and compensate for these interruptions. If PG&E's construction work makes it difficult for consumers to access these businesses, then those businesses may experience a substantial loss of buyers and revenue during that time. Currently, PG&E has not released a schedule that outlines where construction will take place and for how long. This lack of information only raises further concerns about the effects of PG&E's proposed rate increase on SMBs in its service regions. PG&E must be more forthcoming with this information so that CalAsian can also assess and quantify the potentially adverse consequences of this impact of the project.

Despite the potentially adverse results, CalAsian believes that there are also opportunities for PG&E to grow economic development prospects for SMBs in its rate-paying territories. The proposed rate increase primarily details investments into infrastructure and operations and maintenance expenses. However, PG&E should align its procurement needs with opportunities for SMBs. We believe that PG&E has not advanced a meaningful mitigation plan or has identified the specific best practice programs that it will use to help mitigate the adverse impact of the project on SMBs. For example, PG&E could invest in creating private and public partnerships between the non-profit, small business, and local government sectors. PG&E could propose to mitigate any increased financial costs on small businesses in their service regions by partnering with these local governments that have these initiatives. They could educate consumers and small businesses on how to offset the increased costs from construction by participating in certain gas conservation incentives. Before the rate increases become effective in January 2015, PG&E could send small businesses within its rate-paying territory a package about these conservation opportunities. This would allow

PG&E to continue with their proposed rate increase while also protecting the interests of SMBs in California. At this point, PG&E has not coordinated any joint efforts or ventures with local governments and non-profit organizations. We do not believe that the rate increase should be granted unless and until the important task of employing best practices to mitigate the adverse impact of the project has been completed and signed off on by CalAsian.

Currently, PG&E has not informed SMBs what some of the available cost mitigation tools are. CalAsian recognizes that requesting PG&E to perform further outreach and education can be expensive and at times inconsistent. To assist in this effort, CalAsian believes that its technology platform could help PG&E perform this task in a more efficient and innovative manner. CalAsian's technology platform matches SMBs in California with existing tools, resources, and opportunities for business growth. Through this platform, CalAsian would have access to hundreds and thousands of small businesses, and we would be able to educate them on how they can save money by conserving energy. By partnering with PG&E in this endeavor, CalAsian would be able to not only educate its community on conservation initiatives, but we would also be able to ensure that our constituents can offset any additional costs that will come with PG&E's rate increase.

III. Conclusion

As an intervenor in these proceedings, CalAsian is primarily concerned with how its community of small businesses will be affected by PG&E's rate increase and how PG&E can create economic development opportunities for SMBs. PG&E spent a substantial amount of time in its prepared testimony discussing its revenue requirements, safety and risk management plans, and infrastructure investments, but

they have not yet performed an economic analysis of the ongoing impact on SMBs in their service territory. The Expert Report by economist Antonio Avalos, Ph.D. (*previously mentioned*) further addresses the economic impact and advise on how PG&E can foster local economic development and increase supplier diversity.

SMBs are an essential component of California's economy. We strongly believe that in proposing to increase revenues, PG&E must also seriously consider the interests of SMBs and must make concerted efforts towards mitigating any material adverse effects before any rate increase is granted.

IV. Statement of Qualifications

My name is Pat Fong Kushida. I am the President and CEO of CalAsian, which formed in 2010. Together with the Sacramento Asian-Pacific Chamber of Commerce, we represent the largest ethnic chamber in California today. As President and CEO of CalAsian, I strive towards fostering relationships that link the most prominent Asian Pacific Islander ("API") businesses with opportunities throughout the state. CalAsian provides advocacy, education, and outreach to a significant portion of this state's demographics. I have worked to build programs that strengthen California's ethnically diverse business community and to create economic development opportunities for this community to prosper. I created a technology platform to connect small, disadvantaged business enterprises to contracts in the public and private supplier diversity contract arena. This platform is currently being used by many private companies, including the California Public Utilities Commission and the Department of Transportation.

I received my Bachelor's Degree in Business Administration with a concentration in Marketing from California State University-Sacramento in 1985.

I concurrently serve as the President and CEO of the Sacramento Asian-Pacific Chamber of Commerce, and I have been serving in this capacity since 1998. I am also on the boards of Goodwill Industries, Sutter Health, and Golden Pacific Bank. In 2013, I joined a national effort to successfully form a national chamber of commerce, the Asian Pacific Islander American Chamber of Commerce and Entrepreneurship.

I have previously testified before this Commission as the Chief Executive Officer of CalAsian in connection with General Order 156 Supplier Diversity Proceedings in 2010.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge. Dated this 7th day of August, 2014.

By:

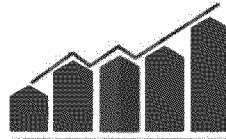


PAT FONG KUSHIDA
President and Chief Executive Officer
California Asian Pacific Chamber of
Commerce

Exhibit 1

Expert Report:

Antonio Avalos, Ph.D., Valley Economics Associates, Inc.



Valley Economics Associates, Inc.

August 7, 2014

Mr. Lawrence Garcia, Esq.
Gordon & Rees LLP
655 University Avenue, Suite 200
Sacramento, CA 95825

RE: PG&E's GT&S Rate Increase Application

Dear Mr. Garcia:

You requested that I conduct an independent appraisal of the potential net economic impact of PG&E's Gas Transmission & Storage (GT&S) rate increase on small and medium sized enterprises (SMEs) within PG&E's service area. You also requested that I conduct an independent assessment of the best business practices and mitigation efforts that PG&E and the California Public Utilities Commission (CPUC) could consider to strengthen its undertakings in fostering local economic development and increasing supplier diversity. These tasks are related to proceeding number A13-12-012 in which the California Asian Chamber of Commerce (CAPCC) intends to participate, and involve the CPUC's Intervenor Compensation Program. The attached document is my report.

The data sources employed in conducting the economic impact appraisal as well as the best business practices and mitigation effort assessment are referenced in the report. The rationale and methodology employed to arrive at my conclusions and opinions are summarized in the next pages, along with the exhibits to support them.

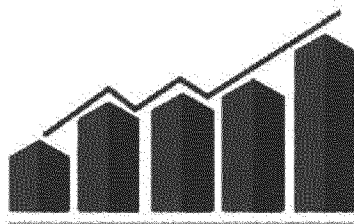
Antonio Avalos, Ph.D.
Valley Economics Associates, Inc.

**PG&E's Gas Transmission & Storage (GT&S) Rate Increase:
Economic Impact on Small and Medium Sized Enterprises,
Best Business Practices and Mitigation Efforts**

Report presented on August 7, 2014 to

**Gordon & Rees LLP
(ATTN: Mr. Lawrence Garcia, Esq.)**

By



Valley Economics Associates, Inc.

**P.O. Box 1507
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EXECUTIVE SUMMARY

On December 19, 2013 PG&E filed a Gas Transmission and Storage (GT&S) rate increase application before the California Public Utilities Commission (CPUC). This report has two main goals. First, it provides an appraisal of the potential net economic impact of PG&E's GT&S rate increase, particularly on small and medium enterprises (SMEs) within PG&E's service area in California. Second, in light of the GT&S rate increase application, it provides a brief assessment of the best business practices and mitigation efforts that PG&E and the CPUC could consider to strengthen their undertakings in fostering local economic development and increasing supplier diversity. This executive summary is comprised of two sections: 1) findings and 2) opinions.

Section 1) Findings are summarized as follows:

- PG&E is requesting a 121.0% increase in authorized revenue requirement for 2015, a 131.5% increase for 2016, and 160.3% increase for 2017 over the authorized level in 2014. This request is higher than the request made in the most recent GT&S rate case corresponding to the period 2011-2014 in which the requested increase averaged 21.8% per year.

Profile of Small and Medium Sized Enterprises (SMEs)

- Small and medium sized enterprises (SMEs) comprise the majority of employer businesses within PG&E's service region (99.8% of the total).
- A substantial share of SMEs is comprised by significantly small business. 71.9% of all SMEs within PG&E's service region employ between 1 and 4 workers, while 82.3% employ less than 10 workers.

- Except for the Indian Subcontinent and Native American categories, businesses within PG&E's service region show a slightly lower proportion of minority ownership than at the state level in all other categories.
- Businesses owned by Asian entrepreneurs rank second (11.2% of the total within PG&E's service region) after Hispanic entrepreneurs (14.6% of the total).
- Businesses tend to concentrate in six major industries accounting for 64.6% of the total: Construction, Retail Trade, Professional, Scientific, and Technical Services, Administrative, Support, Waste Management & Remediation Services, Health Care and Social Assistance, and Other Services.

Gas Consumption Profile and the Gas Bill of SMEs

- PG&E estimates an average 16% increase in the gas bill for 2015 for commercial businesses. This implies a gas bill similar to the one observed in 2006. The relevance of this reflection comes from the fact that while the spot price of Henry Hub natural gas was \$6.73/Million BTU in 2006, the price in 2015 is forecasted to be \$3.32/Million BTU. This means that PG&E intends to charge commercial businesses in 2015 rates similar to those charged in 2006 despite the fact that gas would cost half the price.

Economic and Fiscal Impact

- The net economic impact in the regional economy, as well as the net impact on small and medium enterprises (SMEs), depends on the relative strength of two opposite forces. First, the negative impact associated to the gas rate surge and second, the positive impact associated to the expenses in PG&E's investment and improvement plans.
- Out of every dollar spent by PG&E, only 70 cents are spent within PG&E's service territory, which implies a leakage of income out of the serviced region and thus a diminished positive economic impact.

- If approved, the aggregate economic and fiscal impacts of the GT&S rate increase within PG&E service region would be negative. Employment would decrease by 5,583 jobs while business sales would decrease by \$491.8 million. Similarly, tax revenue at the local and state levels would decrease by a total of \$46.4 million.
- The aggregate net economic impact is not equally distributed among industries and thus affects SMEs differently depending on the industry they operate.
- Three industries would exhibit a net positive economic output and employment impact: Mining, Quarrying, and Oil and Gas Extraction, Utilities and Construction.
- The Construction industry in particular stands out not only because it is the industry with the largest net positive economic output and employment impacts, but also because 9.6% of SMEs operate within this industry and thus would benefit from the GT&S rate increase.
- In contrast, in the Retail Trade, Health Care and Social Assistance, and Accommodation and Food Services industries, the output and employment net impacts are negative and substantial. This is relevant since 24.2% of SMEs operate within these industries combined and thus would be negatively impacted by the GT&S rate increase.

Best Business Practices and Mitigation Efforts

- PG&E should commission an internal study assessing the effectiveness and success of currently active programs and initiatives aimed at nurturing economic development and increasing supplier diversity.
- Should the CPUC and PG&E be committed to keeping more dollars within the regional economy of the serviced region, thus augmenting the positive economic impact through the multiplier effect and consequently nurturing sustainable economic development,

they could consider launching a “diverse local supplier outreach campaign”, a “diverse local supplier mentoring program” and possibly even implementing a “buy/hire local” program establishing similar goals to the ones used in the Supplier Diversity Program.

- PG&E could extend its CARE program to commercial customers, particularly SMEs. Mirroring the criteria for households, the qualifying criteria for businesses could for example be based on total annual revenue and the number of employees.
- Rather than working indirectly through its 100 local and regional economic development organizations as partners, PG&E could become more directly involved by offering for example site selection, brownfield redevelopment programs, shovel-ready site programs, entrepreneurial development programs, etc.
- If the goal and commitment is to maximize the impact on job creation, attraction and retention within the area of service, PG&E could extend the relatively new Economic Development Rate (EDR) to include gas as well. Further, similar to other utilities around the country, special incentives could be added for existing customers who expand or new customers locating at places listed as brownfield sites.
- PG&E could extend the Demand Response programs and the Time-Varying Price programs to include gas as well.
- Given the potentially high rate of return to investing in local initiatives to attract, retain or expand local businesses; provide business development, incubation or acceleration opportunities; and to provide workforce training; PG&E could expand the budget of the relatively new Economic Vitality Grants program.
- Given the potential rate of return in terms of energy conservation, PG&E could expand the extent and coverage of its rebates and incentives program to invest in renewable and non-renewable technologies placing particular emphasis on small and medium size enterprises.

Section 2) Opinions are summarized as follows:

- A high percentage (71.9%) of SMEs within PG&E's service region employ less than 5 workers. Authorizing the requested revenue increase would imply a disproportionate burden for these gas consumers.
- The SMEs (including California Asian Chamber of Commerce members) that would sustain negative net impacts belong to industries that employ a substantial number of workers (24.2% of the total within PG&E's service region): Retail Trade, Health Care and Social Assistance, and Accommodation and Food Services industries.
- At least 30% of PG&E total expenses leaks out of its service region. This implies a considerable amount of resources that do not return to the income stream of the region and thus imply a sizeable negative economic and fiscal impact.
- The fact that PG&E intends to charge commercial businesses in 2015 rates similar to those charged in 2006 despite the fact that gas would cost half the price suggests the need to examine PG&E's internal business practices and operations in terms of efficiency and productivity.
- It would be valuable and informative to all stakeholders if PG&E conducted and made publicly available an internal study assessing the effectiveness and success of currently active programs and initiatives aimed at nurturing economic development and increasing supplier diversity. It would also be useful if PG&E's programs and initiatives were contrasted with those of other utility companies across the nation.
- The depth and precision of the calculations in this report were constrained by the fact that PG&E has not disclosed the details of its investment and improvement plans.

I. Introduction

On December 19, 2013 PG&E filed a Gas Transmission and Storage (GT&S) rate increase application and requested that the California Public Utilities Commission (CPUC) approves base revenue requirements of \$1.286 billion for 2015, \$1.347 billion for 2016, and \$1.515 billion for 2017.¹ With the GT&S rate increase application, PG&E is requesting funding for investment in people and assets necessary to identify, assess, and mitigate risks in PG&E's natural gas transmission system, and allow PG&E to continue to provide safe and reliable gas service. The potential GT&S revenue increase has received an assorted list of criticisms from stakeholders mainly claiming that the proposed revenue increase is extraordinary relative to recent history and which, if approved, could imply substantial negative economic impacts. Table 1 below shows that PG&E is requesting a 121.0% increase in authorized revenue requirement for 2015, a 131.5% increase for 2016, and 160.3% increase for 2017 over the authorized level in 2014.

Table 1: GT&S Revenue Increase Requested and Approved by the CPUC

	Increased Revenue (billion)		
	Requested	Approved	% Increase Requested
2011	\$529.1	\$514.2	12.2% *
2012	\$561.5	\$541.4	19.1% *
2013	\$592.2	\$565.1	25.6% *
2014	\$614.8	\$581.8	30.4% *
2015	\$1,286.0	--	121.0% **
2016	\$1,347.0	--	131.5% **
2017	\$1,515.0	--	160.3% **

SOURCE: A-13-12-012 and D-11-04-031.

* % Increase requested over the authorized level in 2010.

** % Increase requested over the authorized level in 2014.

This request is higher than the request made in the most recent GT&S rate case corresponding to the period 2011-2014 in which the requested increase averaged 21.8% per year.² In addition, stakeholders have also claimed that PG&E's gas rates are already high, that higher rates will negatively impact low-income customers the most, and that it is not clear yet how PG&E will spend the money to improve safety and reliability, among others.

¹ Application number: A-13-12-012.

² In a settlement reached in 2010 known as Gas Accord V (D-11-04-031) the CPUC approved the revenue increases for the period 2011-2014.

A particular important issue that also needs to be considered by the CPUC in making a decision regarding the GT&S rate increase application is the potential negative economic impact of the gas rate hike on small and medium sized enterprises (SMEs) within PG&E's service area. Such negative impact can be produced by at least four factors. First, the consumption of gas implies a direct effect since businesses would pay a higher utility bill. Second, higher gas prices also may affect the intermediate products that businesses consume such as food, supplies, and services such as transportation. Third, since residential customer gas rates would also increase, the disposable income of households living within PG&E's service area would decrease affecting the sales of businesses. Finally, the CPUC needs to also consider the negative impact on business activity of potential service interruptions due to work on gas pipeline infrastructure improvements. Therefore, the job creation and tax revenue generating potential by SMEs would be diminished by the gas rate increases as business production and operation costs increase while their sales decrease.

On the other hand, the forecasted expenses related to identifying, assessing, and mitigating risks in PG&E's natural gas transmission system would also imply a positive economic impact as PG&E deploys its pipeline investment and improvement plan and spends the additional collected revenue throughout its service territory. This means that, in the aggregate, the injection of dollars back into the income stream of the regional economy comprised by the counties within the PG&E's area of service has an offsetting effect over the negative impact of the gas rate increase. Thus both, the aggregate net economic impact in the regional economy, as well as the net impact on small and medium enterprises (SMEs), depend on the relative strength of two opposite forces. First, the negative impact associated to the gas rate surge and second, the positive impact associated to the expenses in PG&E's investment and improvement plans.

The purpose of this report is twofold. First, it provides an appraisal of the potential aggregate net economic impact of PG&E's Gas Transmission & Storage (GT&S) rate and also the potential net economic impact on small and medium enterprises (SMEs) within PG&E's service area in California. Second, in light of the GT&S rate increase application and its net economic impact, it provides an assessment of best business practices and mitigation efforts that PG&E could consider to strengthen its undertakings in fostering local economic development and increasing supplier diversity.

II. Profile of Small and Medium Sized Enterprises (SMEs)

The State of California is characterized by a vibrant and resilient business sector that substantially contributes to placing its economy among the ten largest in the world. Small and medium sized enterprises (SMEs) in particular have been recognized to be a significant source of employment, income and economic prosperity at the local and regional level.³

According to 2014 data by Dun & Bradstreet, Inc.⁴ there are 957,975 establishments⁵ within PG&E's service region, which include businesses classified as employer entities (businesses that employ at least one paid worker) and non-employer entities (business that have no paid employees).⁶ The business establishments within PG&E's service region comprise 47.3% of the total number of business establishments in California sustaining more than 6.0 million jobs located in 47 counties totally or partially covered by PG&E. Table 2 shows establishments by size in individual counties comprising each of the four areas in which PG&E's service region is divided: Bay Area, Central Coast, Central Valley and Northern.

Using the threshold of less than 500 employees established by the U.S. Small Business Administration (SBA) to classify SMEs, data in Table 2 illustrate four salient facts. First, SMEs constitute the majority of employer businesses within PG&E's service region (99.8% of the total). There are only 1,026 large businesses that employ more than 500 workers (0.2% of the total). Second, a considerable share of SMEs is comprised by significantly small business. 71.9% of all SMEs within PG&E's service region employ between 1 and 4 workers while 82.3% employ less than 10 workers. Third, although the number of counties contained in each area comprising PG&E's service region varies substantially, the number of employer businesses is evenly distributed among the four areas. Each area represents approximately one fourth of the total number of businesses.

³ According to the U.S. Small Business Administration (SBA) for example, at the national level, small businesses provide 55% of all jobs and 66% of all net new jobs since the 1970s. <http://www.sba.gov>

⁴ <http://www.dnb.com>

⁵ An establishment is a single physical location at which business is conducted or services or industrial operations are performed. An establishment is not necessarily equivalent to a company or enterprise, which may consist of one or more establishments. A single-unit company owns or operates only one establishment.

⁶ The majority of all business establishments in the United States are non-employers which typically are self-employed individuals operating unincorporated businesses (known as sole proprietorships), which may or may not be the owner's principal source of income.

Table 2: Total Employer Establishments in PGE's Service Area by Size (2014)

	Unclassified	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000+	TOTAL
Bay Area											
ALAMEDA	4,828	59,129	8,625	4,918	3,657	1,598	823	181	49	39	83,847
CONTRA COSTA	2,663	41,611	5,471	2,886	2,052	874	389	81	32	19	56,078
MARIN	991	18,821	2,393	1,143	731	273	91	23	7	10	24,483
NAPA	436	7,098	1,123	556	436	158	62	16	9	2	9,896
SAN FRANCISCO	4,369	43,579	6,841	3,925	2,850	1,069	558	172	62	48	63,473
Subtotal	13,287	170,238	24,453	13,428	9,726	3,972	1,923	473	159	118	237,777
Central Coast											
MONTEREY	933	13,361	2,367	1,167	887	347	179	38	12	8	19,299
SAN BENITO	80	1,721	258	140	121	32	13	2	3	0	2,370
SAN LUIS OBISPO	953	15,404	2,175	1,064	777	217	104	26	7	4	20,731
SAN MATEO	2,448	32,649	4,864	2,552	1,940	734	365	83	23	21	45,679
SANTA BARBARA	1,253	17,792	2,635	1,553	1,112	436	206	64	15	7	25,073
SANTA CLARA	5,656	72,331	10,736	5,652	4,477	1,852	944	236	109	60	102,053
SANTA CRUZ	783	13,960	1,836	934	586	265	96	16	7	6	18,489
Subtotal	12,106	167,218	24,871	13,062	9,900	3,883	1,907	465	176	106	233,694
Central Valley											
ALPINE	6	69	8	10	4	0	1	0	0	0	98
AMADOR	96	1,744	252	123	74	19	17	3	2	2	2,332
CALAVERAS	106	1,878	284	113	91	17	12	2	0	0	2,503
FRESNO	1,873	27,882	4,206	2,450	1,944	807	322	64	17	13	39,578
KERN	1,461	22,652	3,669	1,890	1,491	606	307	92	38	12	32,218
KINGS	199	2,766	534	273	246	75	44	5	8	5	4,155
MADERA	259	4,158	581	320	226	100	38	4	4	4	5,694
MARIPOSA	34	812	111	54	25	11	5	2	1	1	1,056
MERCED	313	5,742	928	562	401	171	67	17	15	2	8,218
SAN BERNARDINO	4,075	58,124	8,151	4,726	3,679	1,547	793	137	43	23	81,298
SAN JOAQUIN	1,272	18,532	2,963	1,661	1,309	510	249	64	13	8	26,581
STANISLAUS	985	15,286	2,321	1,329	975	408	157	40	15	7	21,523
TULARE	712	11,186	1,856	1,023	816	300	132	32	8	4	16,069
TUOLUMNE	130	2,542	388	174	139	44	18	3	3	0	3,441
Subtotal	11,521	173,373	26,252	14,708	11,420	4,615	2,162	465	167	81	244,764
Northern											
BUTTE	474	9,301	1,379	723	506	191	80	15	6	3	12,678
COLUSA	42	800	143	80	64	24	6	0	2	0	1,161
EL DORADO	468	9,217	1,132	490	347	160	45	12	2	3	11,876
GLENN	67	1,240	171	89	64	21	12	2	0	0	1,666
HUMBOLDT	362	5,185	899	491	353	114	44	12	4	0	7,464
LAKE	141	2,296	337	175	110	33	17	9	1	0	3,119
LASSEN	44	931	143	81	67	26	20	1	1	1	1,315
MENDOCINO	265	4,234	695	353	230	84	39	4	1	0	5,905
NEVADA	343	6,865	733	353	219	70	22	7	4	1	8,617
PLACER	1,007	17,333	2,272	1,229	890	335	148	28	5	7	23,254
PLUMAS	54	1,012	164	71	56	24	10	2	0	0	1,393
SACRAMENTO	3,669	55,893	6,929	3,933	3,021	1,303	692	165	52	57	75,714
SHASTA	452	8,790	1,141	632	470	165	68	17	8	2	11,745
SIERRA	7	124	16	12	6	2	0	0	0	0	167
SISKIYOU	153	2,656	355	168	148	38	24	3	1	0	3,546
SOLANO	918	13,802	1,967	1,053	705	303	164	46	15	4	18,977
SONOMA	1,550	24,464	3,691	1,742	1,214	441	190	28	8	11	33,339
SUTTER	196	3,698	575	290	192	79	32	3	2	0	5,067
TEHAMA	124	2,099	259	156	103	35	18	9	2	0	2,805
YOLO	487	6,420	1,037	628	507	194	121	27	6	3	9,430
YUBA	133	1,783	259	141	96	41	14	28	5	2	2,502
Subtotal	10,956	178,143	24,297	12,890	9,368	3,683	1,766	418	125	94	241,740
PG&E Service Region	47,870	688,972	99,873	54,088	40,414	16,153	7,758	1,821	627	399	957,975
CALIFORNIA	101,942	1,465,054	206,833	111,876	82,921	33,041	17,337	3,896	1,374	838	2,025,112

SOURCE: Dun & Bradstreet, Inc. (2014)

Fourth, annual average salaries and wages paid by businesses within PG&E's service region (\$58,366) are slightly higher than those paid in California as a whole (\$54,050).⁷ However, there are noteworthy disparities among the areas of service. For example, while annual average salaries and wages in the Central Coast are \$78,242, in the Central Valley area they amount to only \$38,391. These differences are more marked when looking at individual counties. While in Santa Clara County for example annual average salaries and wages are \$91,037, in Fresno County they are only \$37,675.

Another relevant dimension when looking at the profile of SMEs is business ownership by minority groups. Table 3 contains relevant information for 2014. Despite the large number of unclassified businesses, the data illustrates three salient facts. First, except for the Indian Subcontinent and Native American categories, businesses within PG&E's service region show a slightly lower proportion of minority ownership than at the state level in all other categories. Second, in terms of race/ethnicity, businesses owned by Asian entrepreneurs rank first (1.04% of the total) closely followed by Hispanic entrepreneurs (0.97% of the total). Asian-owned businesses are particularly prevalent in the Bay Area and Central Coast counties such as Alameda, San Francisco and Santa Clara, while Hispanic-owned businesses are more abundant in Central Valley counties such as Fresno, Kern and San Bernardino. Third, business owned by Indian Subcontinent and Native American entrepreneurs exhibit the lowest ownership share of all minority groups, which mirrors their relative low population share.

It should be noted that although data from Dun & Bradstreet, Inc. is the most up to date available (for 2014), the information on business ownership by minority groups relies on multiple federal, state and local sources, which does not fully capture business ownership by minority groups. In contrast, although data from the U.S. Census Bureau County Business Patterns is for 2007, the information on business ownership by minority groups comes from self-identified data better capturing these indicators. According to these data, businesses owned by Asian entrepreneurs rank second (11.2% of the total) after Hispanic entrepreneurs (14.6% of the total).

⁷ Annual average salaries and wages are calculated by dividing annual payroll by paid employees using 2012 data from the U.S. Census Bureau County Business Patterns.

Table 3: Business Ownership by Minority Group (% of Total) in PGE's Service Area (2014)

	Unclassified	Asian	African American	Hispanic	Indian Subcontinent	Native American	TOTAL
Bay Area							
ALAMEDA	80,103	1,753	728	867	340	56	83,847
CONTRA COSTA	54,628	576	284	448	102	40	56,078
MARIN	24,173	136	29	118	13	14	24,483
NAPA	9,781	36	11	55	5	8	9,896
SAN FRANCISCO	61,007	1,488	297	517	124	40	63,473
Central Coast							
MONTEREY	18,786	173	29	272	24	15	19,299
SAN BENITO	2,301	13	3	50	1	2	2,370
SAN LUIS OBISPO	20,495	60	8	134	12	22	20,731
SAN MATEO	44,322	782	65	406	80	24	45,679
SANTA BARBARA	24,584	117	32	293	21	26	25,073
SANTA CLARA	98,268	2,003	224	1,039	471	48	102,053
SANTA CRUZ	18,236	95	10	135	6	7	18,489
Central Valley							
ALPINE	97	0	0	0	0	1	98
AMADOR	2,303	6	0	13	0	10	2,332
CALAVERAS	2,473	8	1	15	0	6	2,503
FRESNO	38,530	251	103	594	61	39	39,578
KERN	31,458	127	72	460	52	49	32,218
KINGS	4,047	24	7	67	3	7	4,155
MADERA	5,584	22	5	60	12	11	5,694
MARIPOSA	1,044	3	1	6	0	2	1,056
MERCED	8,039	26	18	118	14	3	8,218
SAN BERNARDINO	78,477	739	449	1,429	127	77	81,298
SAN JOAQUIN	25,946	183	113	265	50	24	26,581
STANISLAUS	21,148	79	26	222	29	19	21,523
TULARE	15,706	48	13	263	23	16	16,069
TUOLUMNE	3,400	5	0	18	5	13	3,441
Northern							
BUTTE	12,564	29	2	58	5	20	12,678
COLUSA	1,146	1	0	8	4	2	1,161
EL DORADO	11,746	37	11	54	12	16	11,876
GLENN	1,644	1	0	11	4	6	1,666
HUMBOLDT	7,352	18	2	43	4	45	7,464
LAKE	3,094	6	3	7	2	7	3,119
LASSEN	1,277	2	1	6	0	29	1,315
MENDOCINO	5,847	10	3	24	2	19	5,905
NEVADA	8,563	14	3	23	2	12	8,617
PLACER	22,971	79	43	102	29	30	23,254
PLUMAS	1,382	3	1	4	0	3	1,393
SACRAMENTO	74,029	599	389	518	111	68	75,714
SHASTA	11,616	27	6	46	4	46	11,745
SIERRA	166	0	0	0	0	1	167
SISKIYOU	3,497	5	3	18	1	22	3,546
SOLANO	18,440	157	157	175	32	16	18,977
SONOMA	32,981	121	29	170	13	25	33,339
SUTTER	4,975	26	6	33	17	10	5,067
TEHAMA	2,769	8	0	21	1	6	2,805
YOLO	9,170	91	27	115	13	14	9,430
YUBA	2,441	12	4	29	7	9	2,502
PG&E Service Region	932,606	9,999	3,218	9,329	1,838	985	957,975
CALIFORNIA	1,963,649	24,249	7,870	24,184	3,363	1797	2,025,112

SOURCE: Dun & Bradstreet, Inc. (2014)

Finally, Table 4 shows the distribution of employer establishments in the PG&E's service by industry according to the North American Industry Classification System (NAICS) at the 2-digit level.⁸ Businesses within PG&E's service region tend to concentrate in six major industries accounting for 64.6% of the total. These are Construction, Retail Trade, Professional, Scientific, and Technical Services, Administrative, Support, Waste Management & Remediation Services, Health Care and Social Assistance, and Other Services. Among the industries with the smallest representation Mining, Quarrying, and Oil and Gas Extraction, Utilities, Management of Companies and Enterprises, and Arts, Entertainment and Recreation stand out. Together, these four industries account for only 2.2% of the total.

Table 4: Employer Establishments in PGE's Service Area by Industry (2014)

NAICS CODE	DESCRIPTION	NUMBER	SHARE
11	Agriculture, Forestry, Fishing and Hunting	22,356	2.3%
21	Mining, Quarrying, and Oil and Gas Extraction	842	0.1%
22	Utilities	1,944	0.2%
23	Construction	91,867	9.6%
31	Manufacturing	39,224	4.1%
42	Wholesale Trade	44,264	4.6%
44	Retail Trade	99,081	10.3%
48	Transportation and Warehousing	25,265	2.6%
51	Information	21,294	2.2%
52	Finance and Insurance	39,771	4.2%
53	Real Estate and Rental and Leasing	44,645	4.7%
54	Professional, Scientific, and Technical Services	143,131	14.9%
55	Management of Companies and Enterprises	1,332	0.1%
56	Administrative, Support, Waste Management & Remediation Services	102,798	10.7%
61	Educational Services	23,015	2.4%
62	Health Care and Social Assistance	85,431	8.9%
71	Arts, Entertainment, and Recreation	16,637	1.7%
72	Accommodation and Food Services	47,321	4.9%
81	Other Services (except Public Administration)	96,230	10.0%
99	Industries not classified	11,527	1.2%
TOTAL		957,975	100.0%

SOURCE: Dun & Bradstreet, Inc. (2014)

⁸ NAICS replaced the U.S. Standard Industrial Classification (SIC) system and was developed jointly by the U.S., Canada, and Mexico to provide new comparability in statistics about business activity across North America.

III. Gas Consumption Profile and the Gas Bill of SMEs

The gas rates that apply to Small and Medium Enterprises (SMEs) are explained in PG&E's Gas Schedule G-NR1. This schedule applies everywhere PG&E provides natural gas service. In order to qualify, businesses must not have exceeded 20,800 therms in those months during the last 12 months in which gas use exceeded 200 therms. Customers on this schedule pay a customer charge, a procurement charge and a transportation charge.

According to PG&E, if the GT&S rate increase application is approved, a typical small business customer using 284 therms per month⁹ would see an average monthly gas bill increase of \$42.50 (or 16%), from \$266.15 to \$308.65.¹⁰ For comparison purposes, Table 5 shows the average monthly gas bill of businesses of different consumption levels below the 20,800 therms/month in order to qualify to Gas Schedule G-NR1. The table also shows the average monthly gas bill since 2006, when the price of Henry Hub natural gas was relatively elevated and kept raising until 2008 when it reached a historical record high (see Figure 1).¹¹

Table 5: Average Monthly Gas Bill by Usage (therms/month) for Small Commercial Customers Based on Gas Schedule G-NR1: 2006-2015

	100	250	500	1,000	5,000	10,000	20,000
2006	\$118.90	\$286.18	\$571.37	\$1,125.27	\$5,325.65	\$9,630.92	\$18,241.47
2007	\$121.62	\$288.35	\$585.01	\$1,152.55	\$5,482.67	\$10,027.45	\$19,117.02
2008	\$132.02	\$319.08	\$637.00	\$1,256.54	\$6,035.61	\$11,265.26	\$21,724.57
2009	\$89.98	\$210.18	\$426.78	\$836.10	\$3,923.54	\$7,001.75	\$13,158.18
2010	\$93.48	\$222.43	\$444.27	\$871.08	\$4,082.78	\$7,257.52	\$13,606.98
2011	\$95.84	\$224.35	\$456.10	\$894.74	\$4,221.82	\$7,618.57	\$14,412.06
2012	\$85.39	\$202.14	\$403.84	\$790.21	\$3,687.43	\$6,502.77	\$12,133.44
2013	\$88.30	\$204.67	\$418.40	\$819.33	\$3,854.97	\$6,925.65	\$13,066.99
2014*	\$102.01	\$246.61	\$486.93	\$956.40	\$4,546.75	\$8,335.00	\$15,911.50
2015**	\$118.33	\$286.06	\$564.84	\$1,109.42	\$5,274.23	\$9,668.60	\$18,457.34

SOURCE: Author's calculations based on Gas Schedule G-NR1 and gas rates published at the PG&E's official website.

* The average gas rates for 2014 include the months of January through June.

** The 2015 average monthly bill is calculated by adding 16% to the 2014 average monthly bill, which is the increase PG&E calculates would result assuming that the GT&S rate increase is approved.

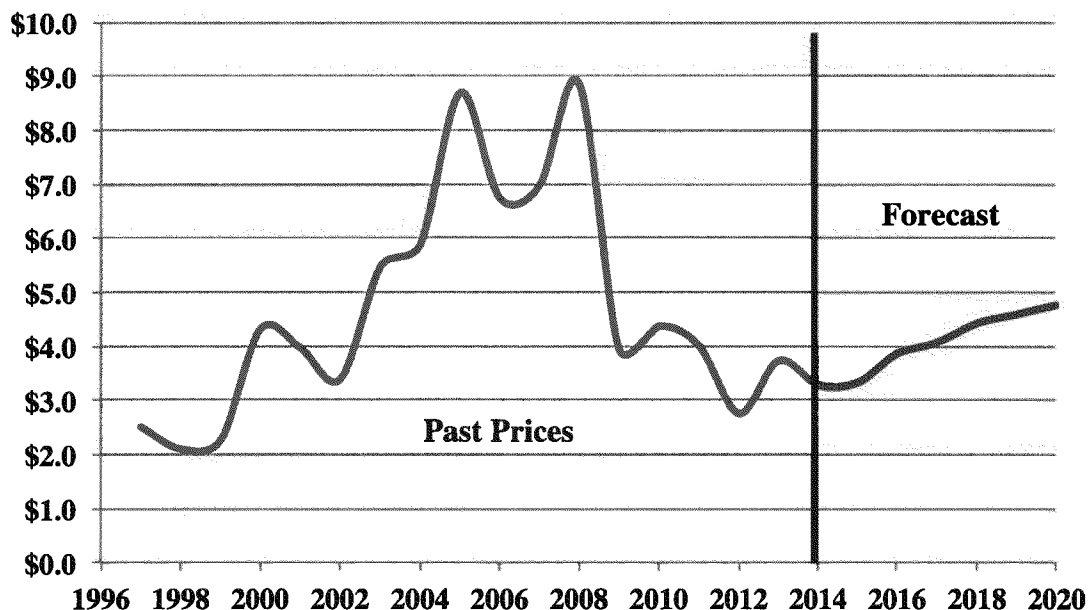
⁹ As background research for this report, CAPCC conducted a survey among its members and among members of partner organizations and they reported a similar average consumption (266.6 therms per month), which substantiates PG&E's estimates.

¹⁰ Prepared testimony by PG&E (page 17-13) as part of application number A-13-12-012.

¹¹ The two major hubs that affect the California market are the AECO-C hub in eastern Alberta (run by Alberta Energy Company) and the Henry Hub in Louisiana, which is the point used by the New York Mercantile Exchange for pricing natural gas.

A few observations based on these data are relevant. First, the estimated average 16% increase in the gas bill for 2015 only applies to small commercial businesses that pay for the core retail bundled service (78% of the total) as opposed to businesses that pay core retail transportation only (22% of the total). The distinction is pertinent since PG&E estimates that businesses paying core retail transportation only, would see an average increase in their gas monthly bill of 28.8%.¹² Second, the estimated average 16% increase in the gas bill for 2015 would imply a gas bill similar to the one observed in 2006 (around \$286 for commercial businesses consuming 250 therms per month). The relevance of this observation comes from the fact that while the spot price of Henry Hub natural gas was \$6.73/Million BTU in 2006, the price in 2015 is forecasted to be \$3.32/Million BTU. This means that PG&E intends to charge commercial businesses in 2015 rates similar to those charged in 2006 despite the fact that gas would cost half the price. Although the U.S. Energy Information Administration (EIA) forecast a slight upward trend in the price of gas, even in the year 2020 (several years after the current GT&S rate increase application expires), the price of gas is expected to be well below the 2006-2008 levels during which record high prices were recorded.

Figure 1: Henry Hub Natural Gas Spot Price (Nominal Dollars per Million Btu) Past (1996-2013) and Forecast Prices (2014-2020)



SOURCE: U.S. Energy Information Administration (EIA)

¹² Prepared testimony by PG&E (page 17-11, Table 17-5) as part of application number A-13-12-012.

Also, although the estimated gas bill increase does not seem substantial for the typical small business customer (\$42.50 per month), those small businesses consuming more than the average would see a more substantial gas bill increase if the GT&S rate increase application is approved. For example, the monthly gas bill for businesses consuming 1,000 therms per month would increase by \$153.02, while for those businesses consuming 10,000 therms per month, it would increase by \$1,333.60.

It must be noted that according to a U.S. Small Business Administration (SBA) report,¹³ the majority of small businesses in California are not energy-intensive, meaning that energy-related costs represent only a small fraction of total revenues (around 1.5%).¹⁴ Although the SBA study does not break down energy-related costs, which include the use of electricity, fuels such as oil and gas for heating, and the use of transportation fuels, it suggests that the direct financial impact on small businesses of gas rate hikes is likely to be modest. However, the SBA study does not take into consideration the indirect channels that can affect businesses. For example, higher gas prices also affect the intermediate products small businesses use, such as food, supplies, and services. Also, since the GT&S rate increase under examination also contemplates higher rates for residential customers, it implies that the disposable income of small business customers would decrease, thus negatively affecting their sales. The direct and indirect impacts that the pending GT&S rate increase application could generate are discussed and quantified in the next section.

¹³ Andy Bollman, "Characterization and Analysis of Small Business Energy Costs," U.S. Small Business Administration (SBA), Office of Advocacy, April 2008.

¹⁴ As background research for this report, CAPCC conducted a survey among its members and among members of partner organizations and they reported similar percentages (between 1% and 1.5% of total revenue), which reinforced the findings of the SBA report.

IV. Economic and Fiscal Impact: Methodology and Data Requirements

The net aggregate economic and fiscal impacts of the GT&S rate increase, assuming that it is approved in the amount that PG&E applied for, stems from two opposing forces. The first force is comprised by the direct negative economic impact of the gas rate increase on all gas consumers within PG&E's service area since they would have to pay a higher gas bill. These consumers of course include small and medium sized enterprises (SMEs). For businesses, the direct impact is compounded as higher gas rates would also increase operation costs given that some of the intermediate products that businesses consume would also experience a price increase. Similarly, since the aggregate disposable income of residential customers would be reduced as they also face higher gas prices, business sales would also be negatively impacted. The second force is comprised by the direct positive economic impact generated as PG&E deploys its investment and improvement plans and spends the additional collected revenue throughout its service region. The direct impact is also compounded as business see their sales increase, thus potentially investing and hiring more. Therefore, to evaluate the net impact of these two forces over SMEs it is necessary to assess the negative and positive impacts separately based on a different set of inputs and assumptions in each case.

The analysis mainly relies on the use of input-output (IO) models and associated databases, which are techniques for quantifying interactions between firms, industries, and social institutions within a regional economy. IO models are the standard techniques that regional economists utilize to conduct economic impact analysis. In particular, the assessment makes extensive use of IMPLAN, which is a computer software package that allows users to build economic models to estimate the impacts of economic changes in their regional economies.¹⁵ The total economic impact (also known as the multiplier effect) is equal to the sum of three components, the direct effect, the indirect effect and the induced effect. The total economic impact is measured in three categories, employment (jobs created or supported), output (business sales) and tax (state and local taxes and fees generated including sales, property, income, and several other categories). The different input data and assumptions for both the negative and the positive economic impacts are discussed next.

¹⁵ Minnesota IMPLAN Group, Inc. was founded in 1993 by Scott Lindall and Doug Olson based on their work at the University of Minnesota starting in 1984. Currently, there are over 1,500 active users of IMPLAN databases and software globally. For more information see: www.implan.com

IV. 1 Negative Impact of the Gas Rate Increase: Inputs and Assumptions

For 2015, PG&E expects a revenue increase of \$1.286 billion dollars collected from a variety of sources. For example, PG&E forecasts a consumption of 211 MDTH/D by small commercial customers, 528 MDTH/D by residential customers and 423 MDTH/D by industrial customers.¹⁶ PG&E also estimates that the proposed rates for small commercial customers would increase by 16%, from \$9.373/DTH to \$10.868/DTH, 12.6% for residential customers, from \$12.215/DTH to \$13.752, and 29.8% for industrial customers (calculated as the average of distribution, transmission and backbone) from \$1.078/DTH to \$1.399.¹⁷ This means that the revenue increase in 2015 from selling gas to small commercial customers would increase in \$115.2 million, by \$296.2 million from selling to residential customers, and by \$58.2 million from selling to industrial customers as shown in Table 6.¹⁸

Table 6. Annual Revenue Increase from Representative PG&E Customers

Year		Gas Demand Forecast (MDTH/D)	Revenue Before Rate Increase	Revenue After Rate Increase	Revenue Increase
2015	From	211	\$721,784,580	\$836,999,020	\$115,214,440
2016	Small Commercial Customers	212	\$725,205,360	\$840,965,840	\$115,760,480
2017		219	\$749,150,820	\$868,733,580	\$119,582,760
2015		From	528	\$2,354,074,800	\$2,650,285,440
2016	Residential Customers	525	\$2,340,699,375	\$2,635,227,000	\$294,527,625
2017		525	\$2,340,699,375	\$2,635,227,000	\$294,527,625
2015		From	493	\$193,980,710	\$251,743,055
2016	Industrial Customers	492	\$193,587,240	\$251,232,420	\$57,645,180
2017		497	\$195,554,590	\$253,785,595	\$58,231,005

SOURCE: Prepared testimony by PG&E as part of application number A-13-12-012

Although PG&E provides gas demand forecast estimates for 2016 and 2017, it does not provide estimates of the corresponding gas rate increases for these years. Thus, the table shows revenue increases for 2016 and 2017 assuming that gas rates will remain the same as in 2015, which implies a conservative estimate since gas prices will likely increase even more in subsequent years. It should be noted that close to 37% of the requested revenue

¹⁶ Prepared testimony by PG&E (page 14-3, Table 14-1) as part of application number A-13-12-012. MDTH/D means thousand dekatherms per day and 1 dekatherm = 10 therms. Thus, 211 MDTH is equivalent to 2,110,000 therms per day.

¹⁷ Prepared testimony by PG&E (page 17-13) as part of application number A-13-12-012. DTH means dekatherms.

¹⁸ PG&E estimates that a typical residential customer consuming 34 therms per month would see an average monthly gas bill increase of \$5.23 (or 12.6%), from \$41.53 to \$46.76. (Prepared testimony by PG&E, page 17-13, as part of application number A-13-12-012)

increase would come from these three representative customers. The rest would come from other customers and other services provided by PG&E. For analytical purposes, the requested revenue increase of \$1.286 billion dollars, if approved, would imply that the same amount of dollars would be taken out of the income stream of the regional economy composed by the counties within PG&E service region.

For the particular case of businesses, this means that the production cost rise generated by the gas rate increase would require them to adjust their business and pricing strategies in some fashion. In 2001, the National Federation of Independent Businesses (NFIB) conducted a national survey of approximately 750 small businesses to determine how these firms adjust to energy price increases, which included natural gas.¹⁹ Results showed that those businesses experiencing energy costs increases adjusted to them with lower earnings or profits (75%), reducing (conserving) energy consumption (57%), raising selling prices (29%), cutting, eliminating or delaying business investment (27%), laying off employees or not filling existing vacancies (13%), and freezing or cutting employee wages and benefits (13%).²⁰ Further, as background research for this report, the California Asian Chamber of Commerce (CAPCC) conducted a survey among its members and among members of partner organizations to assess the likely response to the gas price increases. 75% of them reported that they would raise selling prices (passing through the increased cost to consumers), 20% would absorb the price increase (in the form of lower profits), and 20% would reduce gas consumption (conserving energy).²¹

Based on this information, the calculation of the negative economic impact of the gas assumes that the disposable income of households within PG&E service region would be reduced by \$1.286 billion dollars. Supporting this assumption is the fact that raising selling prices, absorbing the price increase, firing workers, etc. or a combination of these actions, implies a reduction in the disposable income of the business owner, the customer or both. Similarly, the gas price increase over residential customers would reduce their disposable income and they would respond by adjusting their consumption pattern in proportion to the income reduction.

¹⁹ National Federation of Independent Business, NFIB (2006), "National Small Business Poll (NSBP), Adjusting to Cost Increases," Volume 1, Issue 4, 2001.

²⁰ The percentages obtained from the survey do not add to 100% since businesses respond in multiple ways to energy cost increases.

²¹ The percentages obtained from the survey do not add to 100% since businesses respond in multiple ways to energy cost increases.

IV.2 The Negative Impact of the Gas Rate Increase

A summary of the negative economic impact of gas rate increase within PG&E's service region is shown in Tables 7 and 8. Through the multiplier effect, the \$1.286 billion taken out of the income stream of the regional economy would reduce the output level by \$1.595 billion (which represents business sales) while eliminating 10,461 jobs throughout the PG&E's service region.²²

Table 7: Negative Economic Impact by Type of Impact

	Employment	Output
Direct Effect	6,602	\$961,373,277
Indirect Effect	1,694	\$302,613,383
Induced Effect	2,165	\$331,423,322
Total Effect	10,461	\$1,595,409,982

SOURCE: IMPLAN with data from PG&E

Table 8: Negative Economic Impact by Industry

NAICS	Code Description	Employment	Output
11	Agriculture, Forestry, Fishing and Hunting	74	\$14,795,149
21	Mining, Quarrying, and Oil and Gas Extraction	6	\$2,940,776
22	Utilities	22	\$22,200,237
23	Construction	83	\$14,258,877
31	Manufacturing	221	\$156,114,102
42	Wholesale Trade	272	\$61,904,847
44	Retail Trade	1,930	\$168,233,514
48	Transportation and Warehousing	258	\$37,971,282
51	Information	159	\$69,986,660
52	Finance and Insurance	708	\$176,014,148
53	Real Estate and Rental and Leasing	398	\$284,267,210
54	Professional, Scientific, and Technical Services	229	\$38,355,920
55	Management of Companies and Enterprises	52	\$7,298,176
56	Administrative, Support, Waste Management & Remediation Services	665	\$67,999,866
61	Educational Services	415	\$31,651,188
62	Health Care and Social Assistance	2,051	\$233,479,248
71	Arts, Entertainment, and Recreation	373	\$26,344,140
72	Accommodation and Food Services	1,361	\$89,510,361
81	Other Services (except Public Administration)	1,046	\$71,510,582
99	Industries not classified	138	\$20,573,698
TOTAL		10,461	\$1,595,409,982

SOURCE: IMPLAN with data from PG&E

²² IMPLAN jobs include all full-time, part time, and temporary positions.

Notice that the negative economic impact would concentrate in four major industries: Retail Trade, Health Care and Social Assistance, Accommodation and Food Services and Other Services (except Public Administration). Together, they would absorb more than 61% of the total employment reduction and over 35% of the business sales reduction.

Table 9 shows the negative fiscal impact of the gas rate increase, which would reduce tax revenue collections by over \$39 million in sales taxes and over \$34 million in property taxes.

Table 9: Negative Fiscal Impact

	Employee Compensation	Proprietor Income	Tax on Production & Imports	Households	Corporations
Dividends					\$256,473.00
Social Ins Tax- Employee Contribution	\$634,051				
Social Ins Tax- Employer Contribution	\$1,246,609				
Tax on Production & Imports: Sales Tax			\$39,234,489		
Tax on Production & Imports: Property Tax			\$34,642,080		
Tax on Production & Imports: Motor Vehicle Lic			\$857,451		
Tax on Production & Imports: Severance Tax			\$24,894		
Tax on Production & Imports: Other Taxes			\$5,852,762		
Tax on Production & Imports: S/L NonTaxes			\$538,216		
Corporate Profits Tax					\$5,383,470
Personal Tax: Income Tax				\$14,850,843	
Personal Tax: NonTaxes (Fines- Fees)				\$2,086,314	
Personal Tax: Motor Vehicle License				\$627,275	
Personal Tax: Property Taxes				\$235,273	
Personal Tax: Other Tax (Fish/Hunt)				\$143,166	
Total State and Local Tax	\$1,880,660		\$81,149,892	\$17,942,871	\$5,639,943

SOURCE: IMPLAN with data from PG&E

IV. 3 Positive Impact of the Pipeline Investment Plan: Inputs and Assumptions

Since the GT&S rate increase application is still under review, PG&E has not released a detailed plan to deploy the pipeline investment and improvement plan. However, in the prepared testimony as part of application, PG&E released information (for example in Table 16-4, page 16-23 of the application), that contains the operating expenses of the plan for 2015, which total \$1,002.6 billion. These expenses are broken down by category (i.e. storage, transmission, distribution, customer services, etc.) and by unbundled cost categories (i.e. gathering, storage services, transmission in northern and southern paths, etc.). Although this information is not optimal to assess the economic impact of the plan at the county level, the expenses data available allow for the impact calculation in the aggregate for the entire PG&E's service area. The same Table 16-4 shows \$286.5 million labeled "net of return" which is assumed profits to be distributed among PG&E owners and whom may or may not be residents of PG&E region of service. This amount was assumed to leak out of PG&E region of service.

In an economic impact study commissioned by PG&E, the Economic Development Research Group (EDRG), Inc. estimates that 70% of the total direct spending is expected to flow to residents (households, businesses and government) in the PG&E service area. EDRG reasons that 100% of construction (for both new facilities and upgrading of existing facilities) is normally carried out by workers living within PG&E's service region. In contrast, some suppliers of parts and materials (vendors) are located anywhere. According to EDRG, 39% of all PG&E purchases of parts and materials take place outside California (either in other states or in other countries around the world) and only 43% of the purchases in California take place within PG&E's service territory.²³ This means that of every dollar spent by PG&E on parts and materials, only 26.3 cents are spent within PG&E's service territory, which implies a leakage of income out of the serviced region and thus a diminished positive economic impact. In line with the EDRG study, this report makes exactly the same assumptions implying that out of the \$1,002.6 billion in total expenses to develop the pipeline investment and improvement plan, only \$701.8 billion will be spent within PG&E's

²³ "Economic Impact of PG&E Proposed Generation, Distribution & Related Infrastructure Investments," Economic Development Research Group, Inc., June 29, 2012.

service territory. It is also assumed that 43.7% of these resources (\$306.7 billion) will be spent on construction, repair and maintenance.²⁴

The three components of the total positive economic impact are: the direct effect, which refers to the immediate upshot caused by PG&E's expenses on its pipeline investment and improvement plan. Due to the interactions between firms, industries, and social institutions that naturally occur within the regional economy (PG&E's service area in this case), the direct effect initiates a series of iterative rounds of income creation, spending and re-spending that result in indirect and induced effects. The indirect effects are changes in production, employment and income that result from the inter-industry purchases triggered by the direct effect. Finally, induced effects arise due to changes in household income and spending patterns caused by direct and indirect effects.

IV. 4 The Positive Impact of the of the Pipeline Investment Plan

A summary of the positive economic impact of the pipeline investment plan in PG&E's service region is shown in Tables 10 and 11. Through the multiplier effect, the \$1,002.6 billion spent in the pipeline investment plan would produce an output level of \$1,077.9 billion (which represents business sales) while generating or supporting 4,471 jobs throughout the PG&E's service region.²⁵

Table 10: Positive Economic Impact by Type of Impact

	Employment	Output
Direct Effect	2,292	\$701,864,797
Indirect Effect	852	\$173,033,226
Induced Effect	1,327	\$203,003,782
Total Effect	4,471	\$1,077,901,806

SOURCE: IMPLAN with data from PG&E

Notice that the positive economic impact would concentrate in four major industries: Utilities, Construction, Retail Trade and Health Care and Social Assistance. Together, they would benefit with more than 65% of the total employment support/creation and over 70% of the business sales increase.

²⁴ Out of the total 70% spent within PG&E's service area, 26.3 percent points represent parts and materials while 43.7 percent points represent construction.

²⁵ IMPLAN jobs include all full-time, part time, and temporary positions.

Table 11: Positive Economic Impact by Industry

NAICS	Code Description	Employment	Output
11	Agriculture, Forestry, Fishing and Hunting	17	\$3,050,190
21	Mining, Quarrying, and Oil and Gas Extraction	41	\$19,962,106
22	Utilities	343	\$400,152,219
23	Construction	1,984	\$311,620,732
31	Manufacturing	93	\$56,500,639
42	Wholesale Trade	69	\$15,761,674
44	Retail Trade	355	\$30,873,968
48	Transportation and Warehousing	87	\$17,807,890
51	Information	34	\$15,527,564
52	Finance and Insurance	139	\$36,556,709
53	Real Estate and Rental and Leasing	97	\$45,967,858
54	Professional, Scientific, and Technical Services	217	\$31,848,761
55	Management of Companies and Enterprises	16	\$2,236,336
56	Administrative, Support, Waste Management & R	202	\$20,812,961
61	Educational Services	55	\$4,250,373
62	Health Care and Social Assistance	259	\$29,450,143
71	Arts, Entertainment, and Recreation	55	\$3,922,404
72	Accommodation and Food Services	191	\$12,614,863
81	Other Services (except Public Administration)	192	\$15,412,617
99	Industries not classified	25	\$3,571,798
TOTAL		4,471	\$1,077,901,806

SOURCE: IMPLAN with data from PG&E

Finally, Table 12 shows the fiscal impact of the of the pipeline investment plan which would generate over \$22 million in sales taxes and over \$19 million in property taxes.

Table 12: Positive Fiscal Impact

	Employee Compensation	Proprietor Income	Tax on Production & Imports	Households	Corporations
Dividends					\$91,709.00
Social Ins Tax- Employee Contribution	\$374,010				
Social Ins Tax- Employer Contribution	\$735,341				
Tax on Production & Imports: Sales Tax			\$22,232,873		
Tax on Production & Imports: Property Tax			\$19,630,509		
Tax on Production & Imports: Motor Vehicle Lic			\$485,889		
Tax on Production & Imports: Severance Tax			\$14,106		
Tax on Production & Imports: Other Taxes			\$3,316,564		
Tax on Production & Imports: S/L NonTaxes			\$304,989		
Corporate Profits Tax					\$1,925,014
Personal Tax: Income Tax				\$9,144,791	
Personal Tax: NonTaxes (Fines- Fees				\$1,284,702	
Personal Tax: Motor Vehicle License				\$386,261	
Personal Tax: Property Taxes				\$144,875	
Personal Tax: Other Tax (Fish/Hunt)				\$88,158	
Total State and Local Tax	\$1,109,351		\$45,984,930	\$11,048,786	\$2,016,723

SOURCE: IMPLAN with data from PG&E

IV. 5 The Net Economic Impact

Since PG&E has not disclosed the geographical details of its investment plan, it is not possible to calculate the net economic and fiscal impacts by county. However, it is possible to estimate it by industry and then compare the most impacted industries with those where SMEs tend to concentrate. Tables 13, 14 and 15 show the employment, output and fiscal net economic impacts by industry and also the aggregate net economic and fiscal impacts. If approved, the aggregate net economic and fiscal impacts of the GT&S rate increase within PG&E service region would be negative. Employment would decrease by 5,583 jobs while business sales would decrease by \$491.8 million. Similarly, tax revenue at the local and state levels would decrease by a total of \$46.4 million. As described earlier, this is explained by the fact that out of every dollar spent by PG&E, only 70 cents are spent within PG&E's service territory, which implies a leakage of income out of the serviced region and thus a diminished positive economic impact. In other words, PG&E is extracting more resources out of the income stream of the regional economy, than the resources PG&E is investing back into it.

Table 13: Net Employment Impact by Industry

NAICS	Code Description	NET IMPACT	EMPLOYMENT	
			Loss	Gain
11	Agriculture, Forestry, Fishing and Hunting	-57	74	17
21	Mining, Quarrying, and Oil and Gas Extraction	35	6	41
22	Utilities	320	22	343
23	Construction	1901	83	1,984
31	Manufacturing	-128	221	93
42	Wholesale Trade	-203	272	69
44	Retail Trade	-1575	1,930	355
48	Transportation and Warehousing	-171	258	87
51	Information	-125	159	34
52	Finance and Insurance	-569	708	139
53	Real Estate and Rental and Leasing	-301	398	97
54	Professional, Scientific, and Technical Services	-12	229	217
55	Management of Companies and Enterprises	-36	52	16
56	Administrative, Support, Waste Management & Remediation Services	-463	665	202
61	Educational Services	-360	415	55
62	Health Care and Social Assistance	-1792	2,051	259
71	Arts, Entertainment, and Recreation	-319	373	55
72	Accommodation and Food Services	-1169	1,361	191
81	Other Services (except Public Administration)	-854	1,046	192
99	Industries not classified	-114	138	25
TOTAL		-5583	10,461	4,878

SOURCE: IMPLAN with data from PG&E

Although the aggregate net economic impact is negative, it is not equally distributed among industries and thus affects SMEs differently depending on the industry they operate. The following two observations illustrate this point. First, only three industries would exhibit a net positive economic output and employment impact: Mining, Quarrying, and Oil and Gas Extraction, Utilities and Construction. The Construction industry in particular stands out not only because it is the industry with the largest net positive economic output and employment impacts, but also because 9.6% of SMEs operate within this industry and thus would benefit from the GT&S rate increase. In contrast, both the positive and negative economic impacts in the Retail Trade, Health Care and Social Assistance, and Accommodation and Food Services industries are relatively larger than all other industries. In these industries, the net output and employment impacts are negative and substantial. This is relevant since 24.2% of SMEs operate within these industries combined and thus would be negatively impacted by the GT&S rate increase.

Table 14: Net Output (Business Sales) Impact by Industry

NAICS	Code Description	NET IMPACT	OUTPUT	
			Loss	Gain
11	Agriculture, Forestry, Fishing and Hunting	-\$11,744,959	\$14,795,149	\$3,050,190
21	Mining, Quarrying, and Oil and Gas Extraction	\$17,021,330	\$2,940,776	\$19,962,106
22	Utilities	\$377,951,982	\$22,200,237	\$400,152,219
23	Construction	\$297,361,855	\$14,258,877	\$311,620,732
31	Manufacturing	-\$99,613,463	\$156,114,102	\$56,500,639
42	Wholesale Trade	-\$46,143,172	\$61,904,847	\$15,761,674
44	Retail Trade	-\$137,359,545	\$168,233,514	\$30,873,968
48	Transportation and Warehousing	-\$20,163,392	\$37,971,282	\$17,807,890
51	Information	-\$54,459,096	\$69,986,660	\$15,527,564
52	Finance and Insurance	-\$139,457,439	\$176,014,148	\$36,556,709
53	Real Estate and Rental and Leasing	-\$238,299,352	\$284,267,210	\$45,967,858
54	Professional, Scientific, and Technical Services	-\$6,507,159	\$38,355,920	\$31,848,761
55	Management of Companies and Enterprises	-\$5,061,840	\$7,298,176	\$2,236,336
56	Administrative, Support, Waste Management & Remediation Services	-\$47,186,905	\$67,999,866	\$20,812,961
61	Educational Services	-\$27,400,815	\$31,651,188	\$4,250,373
62	Health Care and Social Assistance	-\$204,029,105	\$233,479,248	\$29,450,143
71	Arts, Entertainment, and Recreation	-\$22,421,737	\$26,344,140	\$3,922,404
72	Accommodation and Food Services	-\$76,895,497	\$89,510,361	\$12,614,863
81	Other Services (except Public Administration)	-\$56,097,965	\$71,510,582	\$15,412,617
99	Industries not classified	-\$17,001,900	\$20,573,698	\$3,571,798
TOTAL		-\$491,868,533	\$1,595,409,982	\$1,103,541,450

SOURCE: IMPLAN with data from PG&E

Table 15: Net Fiscal Impact by Major Tax Category

	NET IMPACT	Loss	Gain
Dividends	-\$164,764	\$256,473	\$91,709
Social Ins Tax- Employee Contribution	-\$260,041	\$634,051	\$374,010
Social Ins Tax- Employer Contribution	-\$511,268	\$1,246,609	\$735,341
Tax on Production & Imports: Sales Tax	-\$17,001,616	\$39,234,489	\$22,232,873
Tax on Production & Imports: Property Tax	-\$15,011,571	\$34,642,080	\$19,630,509
Tax on Production & Imports: Motor Vehicle Lic	-\$371,562	\$857,451	\$485,889
Tax on Production & Imports: Severance Tax	-\$10,788	\$24,894	\$14,106
Tax on Production & Imports: Other Taxes	-\$2,536,198	\$5,852,762	\$3,316,564
Tax on Production & Imports: S/L NonTaxes	-\$233,227	\$538,216	\$304,989
Corporate Profits Tax	-\$3,458,456	\$5,383,470	\$1,925,014
Personal Tax: Income Tax	-\$5,706,052	\$14,850,843	\$9,144,791
Personal Tax: NonTaxes (Fines- Fees	-\$801,612	\$2,086,314	\$1,284,702
Personal Tax: Motor Vehicle License	-\$241,014	\$627,275	\$386,261
Personal Tax: Property Taxes	-\$90,398	\$235,273	\$144,875
Personal Tax: Other Tax (Fish/Hunt)	-\$55,008	\$143,166	\$88,158
TOTAL	-\$46,453,575	\$106,613,366	\$60,159,791

SOURCE: IMPLAN with data from PG&E

V. Best Business Practices and Mitigation Efforts

PG&E has a commendable record supporting programs and initiatives that nurture economic development and increase supplier diversity. However, it is worth noticing that PG&E has neither conducted an internal study nor produced a report assessing the effectiveness and success of such programs and initiatives, particularly within its region of service.²⁶ An analysis of this kind could aid in identifying strong and weak programs and initiatives that ultimately could evolve in determining best business practices and mitigation efforts, especially if PG&E's programs and initiatives are contrasted with those of other utility companies across the nation. Further, as discussed earlier, a large amount of resources leaks out of the income stream of the regional economy as PG&E purchases from businesses located outside the its region of service. Isolating effective programs and initiatives could also assist in identifying the necessary practices to keep more resources within the PG&E's service region which would translate in larger multiplier output and employment effects.

Without pretending to do an exhaustive review of all the programs and projects that PG&E offers, this section shows a brief overview of those that are geared toward supporting small and medium sized enterprises (SMEs), as well as those that support economic development and supplier diversity. In light of this overview, this section also brings to the discussion the areas in which these programs and initiatives can be enhanced or modified. Thus, at the end of the section, a list of best business practices that the CPUC and PG&E could consider implementing in order to mitigate the impact of the proposed gas rates and investment projects on SMEs is offered.

A) Economic Development Programs and Initiatives

Economic Development partners: PG&E works with the California Governor's Office of Economic Development and over 100 local and regional economic development organizations to promote California a great place to live, work and do business. Partners handle questions on location incentives, labor costs and supply, transportation and communications infrastructure, real estate costs and availability, as well as fees and taxes. However, it is not clear the role that PG&E plays on this initiative.

²⁶ Or if such report exists, it is not publicly available or easily accessible.

Analyze Energy Use: Offers energy assessment tools will help businesses identify and prioritize ways to save energy and money, such as updating equipment, shifting energy use to off-peak hours, or leveraging renewable energy sources.

Rebates and Incentives: PG&E offers rebates on energy-efficient products and improvements for businesses. The rebates and incentives vary depending on the type of business (health care, hospitality, retail, biotech, etc.) and the kind of product purchased (lighting, heating, ventilation, air conditioning, food service equipment, refrigeration, maintenance, retrofitting, new construction, etc.) Despite the attractive benefits of reducing the cost of products, some of these rebates and incentives are still out of reach to most small businesses that operate with low profit margins.

Energy Efficiency Partners: PG&E's program partners, local contractors and trade professionals offer special assistance in implementing energy efficiency measures for businesses. These specialists assist businesses to take advantage of rebates and incentives by distributing, installing, and servicing the energy efficient equipment and systems that PG&E supports.

Demand Response: These programs offer incentives to businesses that reduce the energy use of their facilities during times of peak demand. For small businesses, two programs are available. First, the SmartAC program which involved a device that prevents summer energy supply emergencies from disrupting day-to-day activities as well as pay businesses reward checks. This program however, is currently not accepting new applications. Second, the Home and Business Area Networking (HAN) program, which involves is a wireless technology that allows customers to view their electricity consumption in near real-time, via their SmartMeter. The program however, applies to electricity only, no gas.

Time-Varying Price: As part of a plan by the CPUC to ensure greater power reliability and a better energy future, businesses are moving to a Time-Varying Pricing electric rate structure. Instead of a single flat rate for energy use, time-of-use rates are higher when electric demand is higher. Higher demand periods are typically weekdays May through October, noon to 6 p.m. In return, time-of-use rates are lower at all other times. This means that both when and how much energy is used are important factors. Thus, conserving electricity during business during peak hours can save money on electric bills. Small and

Medium Businesses began the transition to Time-Varying Pricing in November 2012. The program applies to electricity only, no gas.

Solar and Renewables: These are programs supporting the use of solar and other renewable energy. PG&E offers the tools to learn about the state and federal incentives for renewable energy, about how to prepare businesses for the conversion and about how to choose the right contractor.

Self-Generation Incentive Program (SGIP): Provides financial incentives for business customers installing new, qualifying equipment for generating energy. The SGIP applies both to renewable and non-renewable technologies.

B) Economic Vitality Programs and Initiatives

Education: Over the last decade, PG&E has invested more than \$60 million in youth educational programs to provide scholarships to aspiring youth, prepare students for the energy sector jobs of the future and help teachers create innovative classroom projects focused on energy and the environment. Among the programs supported by this initiative the Bright Minds Scholarship, Bright Ideas Grants and New Energy Academy stand out.

Economic and Community Vitality: These programs aim to create safe and vibrant neighborhoods for PG&E's customers and employees. These programs help communities prepare for and recover from natural disasters, create career-training opportunities, support local businesses and provide energy assistance for low-income families. Among the programs supported by this initiative the following stand out:

- *Summer Jobs for Youth Program:* Designed to connect underserved youth with their first career opportunity while supporting small business customers and making local economies more vibrant.
- *Relief for Energy Assistance through Community Help (REACH) program:* In order to help customers who are in danger of losing their electricity and gas services because of financial hardship, the program provides one-time emergency financial assistance. The program however, is designed for households and electricity only, not for gas or businesses.
- *Economic Vitality Grants Program* (launched in 2013): Designed to promote economic growth in communities throughout its service area. This \$200,000 new program, which offers grants for up to \$20,000, is part of PG&E's nearly \$2.5 million

charitable commitment to economic development in 2013. The program is designed to invest in local initiatives that aim to attract, retain or expand local businesses; provide business development, incubation or acceleration opportunities; or provide valuable workforce training. In addition, these grants will be awarded to projects that aim to spur job creation within local economies struggling to recover from the economic downturn.

C) Supplier Diversity and Inclusion Programs and Initiatives

Since 1981, with the launching of its Supplier Diversity Program, PG&E has provided diverse suppliers with economic opportunities to supply products and services. A diverse supplier is defined as 51 percent owned by a woman, minority or disabled veteran (WMDVBE) who manages and controls the firm’s day-to-day business operations. In 2012, PG&E also added lesbian, gay, bisexual and transgender (LGBT) business enterprises to its well-established Supplier Diversity Program. Firms must be located in the United States or its territories; and the owners must be U.S. citizens or legal permanent residents. In 2013, PG&E achieved its highest level of diversity spending at \$2.3 billion (42.10% of the \$5.5 billion total spent by the company). This represents the fifth consecutive year PG&E surpassed the cumulative percentage established by the California Public Utilities Commission (CPUC) for procurement from diverse vendors (38.5%). Further, for eight consecutive years, PG&E has exceeded the CPUC minority, woman and disabled veteran goal of 21.5% (See Table 16).

Table 16: PG&E’s Current Results Compared to CPUC Goals

Category	2013 Results	2013 Goals
Minority Men	19.80%	12.00%
Minority Women	7.55%	3.00%
Minority Business Enterprise (MBE)	27.35%	15.00%
Woman Business Enterprise (WBE)	12.47%	5.00%
Subtotal Woman, Minority Business Enterprise (WMBE)	39.82%	20.00%
Service-Disabled Veteran Business Enterprise (DVBE)	2.28%	1.50%
Total DBE	42.10%	21.50%

SOURCE: PG&E’s Supplier Diversity 2013 Annual Report – 2014 Annual Plan

Given the requirements of this program regarding location in the United States or its territories, although a laudable effort by PG&E in terms of supplier diversity, the information about this program does not show that the number of diverse businesses located within PG&E's service region participating in the program is relatively small. Consequently, the economic impact in terms of employment and output is also limited. According to the diversity supplier clearinghouse operated by the CPUC, in 2012 there were a total of 6,915 certified businesses in its database,²⁷ which in 2014 expanded to 7,751. But this number includes businesses of all sizes, either located in California or not, and operating as suppliers to any of the utilities in California, not just PG&E. When considering that a substantial percentage of the 957,975 small and medium size enterprises located within PG&E's service region are owned by minorities, it is evident that there is significant room for improvement in terms of supplier diversity. Even under the assumption that all 6,915 certified businesses are located within PG&E's service area, they represent less than 1% of the total small and medium size enterprises in the same area.²⁸

V. 1 Best Business Practices and Mitigation Efforts: Actions to Consider

The following is a non-exhaustive list of actions for the CPUC and PG&E to consider for implementation in order to mitigate the impact of the proposed gas rates and construction projects:

1. *PG&E should commission an internal study assessing the effectiveness and success of currently active programs and initiatives aimed at nurturing economic development and increasing supplier diversity.* This analysis could assist PG&E and the CPUC in identifying strong and weak programs and initiatives that ultimately could evolve in determining best business practices and mitigation efforts, especially if PG&E's programs and initiatives are contrasted with those of other utility companies across the nation.

²⁷ "Year 2012 Utility Procurement of Goods, Services, and Fuel from Women-, Minority-, and Disabled Veteran-owned Business Enterprises," Report to the Legislature, California Public Utilities Commission (CPUC), September 2013. It should be noted that in a recent communication between CAPCC representatives and CPUC representatives, this number was reported to have increased to 7,751 certified businesses.

²⁸ CAPCC reports having only 306 members certified as diverse suppliers (less than 0.1% of the total), which suggest that making such assumption is unrealistic.

2. The Supplier Diversity Program requires that firms be located in the United States or its territories, and that the owners be U.S. citizens or legal permanent residents. As discussed, over the last few years PG&E has consistently exceeded the goals set by the CPUC. However, although supplier diversity is enhanced through the program, it does not guarantee that billions of dollars spent by PG&E stay within its area of service. As estimated by the Economic Development Research Group, Inc. (EDRG), out of every dollar spent by PG&E, only 70 cents are spent within PG&E's service territory.²⁹ This means that of every dollar spent by PG&E, 30 cents leak out of PG&E's service territory. *Should CPUC and PG&E be committed in keeping more dollars within the regional economy of the serviced region augmenting the positive economic impact through the discussed multiplier effect and thus nurturing sustainable economic development, they could consider launching a "diverse local supplier outreach campaign", a "diverse local supplier mentoring program" and possibly even implementing a "buy/hire local" program establishing similar goals to the ones used in the Supplier Diversity Program.*
3. Based on total annual household income and household size, PG&E's CARE program offers qualifying non-commercial customers a 20% discount on transportation and procurement and they do not pay the CARE-related portions of the Public Program Surcharge rate and the California Solar Initiative (CSI). *PG&E could extend this program to commercial customers, particularly SMEs. Mirroring the criteria for households, the qualifying criteria for businesses could for example be based on total annual revenue and number of employees.*
4. PG&E works with over 100 local and regional economic development organizations. Yet, PG&E's role is not clearly defined, particularly when considering that the mission of these organizations is precisely the promotion of economic development in the regions they serve. *PG&E could become more directly involved by offering for example site selection, brownfield redevelopment programs, shovel-ready site programs, entrepreneurial development programs, etc.*

²⁹ "Economic Impact of PG&E Proposed Generation, Distribution & Related Infrastructure Investments," Economic Development Research Group, Inc., June 29, 2012.

5. In a press release dated October 3, 2013 by the External Communications Office, PG&E announced the launching of a program targeting electric rate reductions to promote economic development. The new Economic Development Rate (EDR) is aimed at supporting job growth by attracting and retaining customers who would otherwise relocate to other states, close their existing California operations, or expand elsewhere because of high power costs. The EDR however applies only to electricity. *If the goal and commitment is to maximize the impact on job creation, attraction and retention within the area of service, PG&E could extend this program to include gas as well. Further, similar to other utilities around the country, special incentives could be added for existing customers who expand or new customers locating at places listed as brownfield sites.*
6. Both the Demand Response programs (which offer incentives to businesses that reduce the energy use of their facilities during times of peak demand) and the Time-Varying Price programs (under which, in order to incentivize energy conservation and efficient use, instead of charging a single flat rate for energy, time-of-use rates are higher when energy demand is higher) are available only for electricity. *PG&E could extend these programs to include gas as well.*
7. The \$200,000 budget for the relatively new Economic Vitality Grants program (launched in 2013) seems inadequate for the ambitious goals of the plan (invest in local initiatives to attract, retain or expand local businesses; provide business development, incubation or acceleration opportunities; and to provide workforce training), for the size of a company like PG&E (\$16 billion in operating revenues), and for the size of the area of service covered (47 counties with a population of 19 million people generating over \$1 trillion in regional gross domestic product). *Given the potential rate of return to this investment, PG&E could expand the budget of the program contingent on its success.*
8. Despite the currently available rebates and incentives, investing in renewable and non-renewable technologies is an expensive decision for small businesses operating

with low profit margins and thus most can't afford it. *Given the potential rate of return in terms of energy conservation, PG&E could expand the extent and coverage of its rebates and incentives program* placing particular emphasis on small and medium size enterprises.



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VEA is a think tank and consulting company located in California, providing businesses, professional organizations, governments and individuals with the understanding of their economic environment and the application of economic tools needed to make confident and sound decisions about tactics, strategy and policy. VEA also offers independent expert legal testimony services, including forensic economic and valuation analyses in litigated cases. We provide expert witness services to assist clients at the evaluation, settlement, and adjudication stages of a dispute.

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Dr. Antonio Avalos – Author of this Report

Dr. Antonio Avalos specializes in economic development, regional economics, and economic and demographic forecasting. He holds a Ph.D. in Economics from Oklahoma State University. In the past, Dr. Avalos has worked as Herman Kahn Fellow at the Hudson Institute in Indianapolis, and later as an external consultant for the institute, conducting research on regional economics and workforce issues. He also was a visiting scholar at the Andean Corporation of Development in Caracas, Venezuela, where he conducted applied research in international trade, economic development and labor markets in Latin American economies.

Dr. Avalos has an extensive research and publication record in economic and fiscal impact analysis, as well as public policy analysis. In the recent past, Dr. Avalos has also investigated the dynamics of labor markets and migration in the Central Valley of California. Over the last few years, Dr. Avalos has participated and presented research at an assorted list of regional, national and international conferences, including countries such as Chile, Argentina, Nicaragua, China, and others. Currently, he is Associate Professor and Chair of the Department Economics at California State University, Fresno.

Dr. Avalos' relevant consulting experience conducting economic impact studies:

- “Economic Analysis (EB-5) of the Mendota Food Center,” October 2013, Mendota Food Center, LP1.
- “The Petroleum Industry and the Monterey Shale: Current Economic Impact and the Economic Future of the San Joaquin Valley,” August 2013, Western States Petroleum Association.
- “The Net Economic Contribution of the Carmelita Project to the Economy of Fresno County,” October 2012, Colony Land Company, LP.
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