

Application of SAN DIEGO GAS & ELECTRIC  
COMPANY (U 902 E) For Authority To  
Offer an Economic Development Rate.

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Application: 17-02-\_\_\_\_  
Exhibit No.:

**PREPARED DIRECT TESTIMONY OF**  
**TODD J. CAHILL**  
**CHAPTER 1**  
**ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**  
**BEFORE THE PUBLIC UTILITIES COMMISSION**  
**OF THE STATE OF CALIFORNIA**

February 24, 2017



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- Locating in a building that has been vacant for more than 18 months.

To be eligible for either the Standard or Enhanced rate, EDR applicants must declare, under penalty of perjury, that they would either move their existing operations outside of California or would close their business altogether, “but for” the electric rate discount provided by the EDR tariff option. Thus, each type of EDR is designed to retain, attract, or expand load in California that otherwise would be lost.

For the Enhanced EDR specifically, my testimony supports SDG&E’s proposal to adopt unique eligibility criteria, which are designed to strategically link the Enhanced EDR offering to eligible businesses that are expected to produce the greatest economic development benefits to the San Diego region through increased tax revenue and job creation. Specifically, SDG&E requests approval to offer an Enhanced EDR benefit for business customer segments that have been identified as having a significant impact on the local economy, through job and wage growth and increased gross regional product.

To develop this proposal, SDG&E engaged a team of San Diego State University (SDSU) Master of Business Administration (MBA) students (the Study Team) to conduct a study of industries in San Diego and to develop a framework identifying the key economic drivers and high performing industries within our region. The resulting report from this effort, the SDSU “Enhanced Development Rate Economic Impact Study” (the Study),<sup>1</sup> identified two industry segments that provide the greatest comprehensive benefits to the San Diego region, in terms of employment, Gross Domestic Product (GDP), and average wage: (1) Manufacturing, and (2) Professional, Scientific, and Technical Services (PST). SDG&E therefore proposes to offer its Enhanced EDR to Standard-eligible businesses within those two industry categories. My testimony describes the Study’s support for this proposal and explains why using a comparison

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<sup>1</sup> The Study is attached as Appendix A to this testimony chapter.

1 with California’s average unemployment rate would not be useful for determining Enhanced  
2 EDR eligibility in SDG&E’s service territory, as the Commission has adopted for PG&E and  
3 SCE’s Enhanced EDR options, and would not provide the same ratepayer benefits as SDG&E’s  
4 proposal.

5 My testimony below describes, in turn: (1) how all ratepayers will benefit from both  
6 Standard and Enhanced EDR options in the SDG&E service territory, including a description of  
7 the Study providing specific support for SDG&E’s Enhanced EDR proposal; (2) how SDG&E’s  
8 Standard and Enhanced EDR proposals are designed; and (3) how SDG&E proposes that its  
9 Standard and Enhanced EDRs will be administered. My testimony also sponsors the Study,  
10 attached as Appendix A; and letters of support from various San Diego regional economic  
11 development councils and industry advocates, attached as Appendix B.

## 12 **II. SDG&E RATEPAYERS WILL BENEFIT FROM EDR OPTIONS**

13 The Standard EDR and Enhanced EDR options are needed for SDG&E’s commercial and  
14 industrial customers for many reasons. The Commission has recognized the numerous benefits  
15 created with the ability to offer EDR options to utility customers, because, “on balance, it is  
16 better to have a large commercial or industrial customer who pays the marginal costs of  
17 receiving services, and pays [non-bypassable charges], than no customer at all - particularly  
18 when that ratepayer provides jobs for [a utility’s] ratepayers.”<sup>2</sup> My testimony below explains  
19 how:

- 20 • The Standard and Enhanced EDR options proposed here will promote California’s  
21 economy and mitigate the relatively high cost of doing business in this state;
- 22 • SDG&E’s Standard and Enhanced EDR options are needed to allow the San  
23 Diego region to provide economic development opportunities on par with PG&E  
24 and SCE’s service territories; and

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<sup>2</sup> D.13-10-019 at 8.

- SDG&E’s Enhanced EDR proposal is designed specifically to maximize ratepayer benefits, as supported by an economic development study of the San Diego region.

**A. EDR Options Promote California’s Economy and Mitigate the High Cost of Doing Business in California.**

SDG&E recognizes the importance of retaining, expanding and increasing its commercial and industrial customer base in support of the economic and social welfare of California and our region. And, as the Commission has recognized, a well-constructed EDR program can be an effective tool that benefits California’s economy.<sup>3</sup> EDRs help the regional economy by increasing the number of jobs, tax revenue, and overall regional vitality, therefore benefiting all customers. The Commission has recognized that EDRs have “direct and indirect benefits to customers,” that EDRs contribute to “increased employment opportunities and improved overall local and economic vitality,” and that EDRs “increas[e] the revenues available to contribute to the utilities’ fixed costs of doing business, thus lowering rates to other customers.”<sup>4</sup> Additionally, “[l]ocal communities benefit from the economic multiplier effect, resulting from local spending by newly employed, or continuously employed, workers where the businesses locate.”<sup>5</sup> All SDG&E customers also benefit because EDRs are designed to maintain or increase the customer base and maintain or reduce the system average rate, by spreading fixed costs over a larger kilowatt-hour base. The Commission has recognized this “indirect benefit,” noting that an increased economic base results in “the more complete use of the utilities’ transmission and distribution facilities which further reduces rates.”<sup>6</sup> In a period of declining sales, as SDG&E

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<sup>3</sup> *Id.* at 39, Finding of Fact (FOF) 6.

<sup>4</sup> *Id.* at 16-17.

<sup>5</sup> *Id.* at 17.

<sup>6</sup> *Id.* at 16-17.

1 has experienced recently,<sup>7</sup> maintaining and increasing SDG&E's customer base becomes even  
2 more important to keeping rates low for all customers.

3 EDR options help individual business customers to mitigate the less favorable realities of  
4 locating business in California, such as an average retail price of electricity that ranks as one of  
5 the highest in the country.<sup>8</sup> Energy cost is one factor that, when added to other relatively high  
6 non-utility related expenses, makes the cost of locating business in California substantially  
7 higher than the national average.<sup>9</sup> In my experience as Director of Business Services for  
8 SDG&E, energy prices are a key consideration when companies are considering relocation or  
9 expanding operations. This is consistent with the Commission's finding that "[e]nergy costs are  
10 a key factor in where some businesses decide to locate,"<sup>10</sup> in approving PG&E's EDR. In my  
11 professional opinion, the high cost of doing business in SDG&E's service territory has a negative  
12 impact on the region's ability to attract and retain high-paying manufacturing jobs, which is also  
13 consistent with the Commission's findings regarding the California business climate as a  
14 whole.<sup>11</sup>

15 California recognizes the need for continued economic development incentives through  
16 the California Competes Tax Credit, the California Small Business Loan Guarantee Program,  
17 and relocation and expansion services.<sup>12</sup> And, California Public Utilities (P.U.) Code Section  
18 740.4(a) provides that the Commission shall authorize public utilities to engage in programs to

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<sup>7</sup> See A.15-04-012, Phase 2 of SDG&E's General Rate Case (GRC), Exhibit SDG&E-14 (Rebuttal Testimony of Kenneth E. Schiermeyer, dated August 30, 2016) at KES 10, Line 19 through KES 11, Line 10.

<sup>8</sup> <http://www.eia.gov/electricity/state/> (last visited February 24, 2017).

<sup>9</sup> August 12, 2014, California Foundation for Commerce & Education (by Andrew Chang and Company, LLC), "The Cost of Doing Business in California," pp. 5, 6, 8, 29-30, at <http://cfce.calchamber.com/wp-content/reports/CFCE-Cost-of-Doing-Business-in-California.pdf> (last visited February 24, 2017).

<sup>10</sup> D.13-10-019 at 38, FOF 4.

<sup>11</sup> D.13-10-019 at 38, FOF 3 ("The high cost of doing business in California is having a negative impact on the State's ability to attract and keep high-paying manufacturing jobs.")

<sup>12</sup> <http://www.business.ca.gov/Programs/CaliforniaCompetesTaxCredit> (California Competes Tax Credit); <http://businessportal.ca.gov/Business-Assistance/Financing-a-Business> (California Small Business Loan Guarantee Program); <http://www.business.ca.gov/Programs/Business-Investment-Services/Business-Investment-Services> ((relocation and expansion services) (last visited February 24, 2017).

1 encourage economic development. In addition, P.U. Code 740.4(c) defines economic  
2 development activities to include industrial and commercial expansion and relocation assistance,  
3 and business retention and recruitment. SDG&E's EDR offering is consistent with this  
4 California policy and contributes to a holistic approach to economic development for California  
5 and San Diego.

6 **B. The San Diego Region Needs EDR Options to Develop Its Economy and**  
7 **Remain Competitive Statewide.**

8 Beyond promoting the statewide economy, SDG&E's ability to offer an EDR will allow  
9 the San Diego region to compete for business on par with the Los Angeles and San Francisco  
10 regions. Currently, PG&E and SCE both have EDR offerings, which provide their regions with a  
11 competitive advantage in California for attracting new businesses. SDG&E has no EDR  
12 offering. In my experience working with local Economic Development Councils (EDCs) to help  
13 attract and retain companies within our service territory, businesses ask about the availability of  
14 an EDR offering when considering opportunities in the San Diego region. The lack of an EDR  
15 offering in SDG&E's service territory is viewed unfavorably in comparison with PG&E's and  
16 SCE's service territories, in my opinion. The letters of support from San Diego regional  
17 economic development councils and industry advocates, attached as Appendix B, are consistent  
18 with this conclusion. Although there is no data showing the exact amount of lost business due to  
19 this discrepancy, it is reasonable to assume that denying SDG&E customers the same type of  
20 EDR offerings impacts the San Diego region's ability to compete in retaining existing businesses  
21 and gaining new business opportunities.

22 Moreover, although California and San Diego have rebounded somewhat from the  
23 prolonged economic slump of the recent recession, there is still a need for economic  
24 development in San Diego. A recent study suggests that San Diego was hit harder by the  
25 recession than similar-sized peer cities and continues to compare low in terms of job growth and



1 high in terms of unemployment.<sup>13</sup> And a recently published article by the National University  
2 System Institute for Policy Research suggests that San Diego is expected to continue trailing  
3 behind California in terms of GDP growth.<sup>14</sup> Another study shows that poverty rates have  
4 worsened in San Diego, in recent years.<sup>15</sup> These are all indications that the San Diego region  
5 needs the same type of economic development opportunities offered via EDR options in PG&E's  
6 and SCE's service territories.

7 **C. SDG&E's Enhanced EDR Proposal Is Supported by an Economic**  
8 **Development Study of the San Diego Region.**

9 As described below, the Study results identified two industry segments that provide the  
10 greatest comprehensive benefits to the San Diego region, in terms of employment, GDP, and  
11 average wage: (1) Manufacturing, and (2) Professional, Scientific, and Technical Services  
12 (PST). SDG&E therefore proposes to offer its Enhanced EDR to Standard-eligible businesses  
13 within those two industry categories. I also describe reasons why using a comparison with  
14 California's average unemployment rate would not be useful for determining Enhanced EDR  
15 eligibility in SDG&E's service territory, and would not provide the same ratepayer benefits as  
16 SDG&E's proposal.

17 **1. The Study Identified Industry Segments Where the Enhanced EDR**  
18 **Option Would Provide the Greatest Economic Development Benefits**  
19 **to SDG&E Customers.**

20 The Study Team's objective was to "ascertain through research and analysis the  
21 industries that would have the greatest positive economic impact on SDG&E's service area were

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<sup>13</sup> January 2016, San Diego Regional Economic Development Council, "Talent – Where San Diego Stands: A Comparison of US Metros," p. 16, at [http://www.sandiegobusiness.org/sites/default/files/Talent\\_San\\_Diego\\_2016.pdf?platform=hootsuite](http://www.sandiegobusiness.org/sites/default/files/Talent_San_Diego_2016.pdf?platform=hootsuite) (last visited February 24, 2017).

<sup>14</sup> San Diego 2016 Economic Outlook: Middling Along Amidst National, State, and Local Concerns, pp. 1, 6, at [http://www.nusinstitute.org/assets/resources/pageResources/Forecast\\_2016.pdf](http://www.nusinstitute.org/assets/resources/pageResources/Forecast_2016.pdf) (last visited February 24, 2017).

<sup>15</sup> January 2016, National University System Institute for Policy Research, "Concentrated Poverty in San Diego," *Key Findings* listed in Policy Brief summary, at <http://nusinstitute.org/Research/Briefs/Concentrated-Poverty-in-San-Diego-County.html> (last visited February 24, 2017).

1 they provided an enhanced EDR,<sup>16</sup> for purposes of attracting, retaining and expanding those  
2 industries. The Study Team used data from the Bureau of Labor and Statistics, the U.S. Census  
3 Bureau, the San Diego EDC, and other EDCs; and categorized the data by North American  
4 Industry Classification System (NAICS) codes. The Study Team then analyzed the economic  
5 drivers and metrics, identified the factors related to economic growth in San Diego, and  
6 compared their results with data supplied by the EDCs to confirm unbiased accuracy.<sup>17</sup>

7 The Study Team identified three key economic indicators for the San Diego region  
8 (direct employment, contribution to gross regional product, and average wage),<sup>18</sup> determined a  
9 ranking of industries contributing to each indicator, and then identified the top industry sectors  
10 contributing to each indicator. The Study Team then identified which sectors contribute the most  
11 to the San Diego economy by comparing results across all three indicators and weighting the  
12 value of each indicator equally. Using this methodology, the Study concluded that two industry  
13 segments currently provide the most economic growth in the San Diego region, across all  
14 indicators: (1) Manufacturing, and (2) PST.

15 The Study Team's identification of Manufacturing and PST as high-impact industry  
16 segments is consistent with feedback SDG&E has received from San Diego's local EDCs.  
17 Additionally, a recent San Diego Association of Governments (SANDAG) study highlighted the  
18 importance of the Manufacturing and PST segments to the San Diego economy, because they  
19 contain sub-segments that tend to add "recession-proof" jobs.<sup>19</sup> And a recent National

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<sup>16</sup> Appendix A at 8.

<sup>17</sup> Appendix A at 8.

<sup>18</sup> Appendix A at 10.

<sup>19</sup> "SANDAG Info, Traded Industry Clusters in the San Diego Region: 2016 Data Update," pp. 5, 9, 10 (Table 2), at [http://www.sandag.org/uploads/publicationid/publicationid\\_2017\\_20489.pdf](http://www.sandag.org/uploads/publicationid/publicationid_2017_20489.pdf) (last visited February 24, 2017).

1 University System Institute for Policy Research study suggested that both segments are among  
2 the top “real” GDP contributors for our region.<sup>20</sup>

3         Based on the Study’s results, SDG&E proposes an Enhanced EDR rate for EDR-eligible  
4 businesses in the Manufacturing and PST industries, identified according to NAICS codes within  
5 Census Bureau data. Understanding that these results may adjust over time, SDG&E proposes to  
6 utilize the framework established by the Study to analyze new data and update the results  
7 annually. Providing an effective tool to address concerns about the cost of doing business, such  
8 as the EDR program, can help keep businesses operating in California, as well as potentially  
9 attract new businesses to California. The reason to limit the Enhanced EDR to the industry  
10 segments identified above, as opposed to opening to all industries, is to strategically link the  
11 benefit to those who will produce the greatest return and benefit to the region through increased  
12 tax revenue and job creation. Table TC-1 below lists the various industry segments in the San  
13 Diego Region and their respective contributions to the Region’s GDP, jobs, and wages, as  
14 determined by the Study.

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16 //

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<sup>20</sup> San Diego 2016 Economic Outlook, pp. 8-9, at [http://www.nusinstitute.org/assets/resources/pageResources/Forecast\\_2016.pdf](http://www.nusinstitute.org/assets/resources/pageResources/Forecast_2016.pdf) (last visited February 24, 2017).

TABLE TC-1<sup>21</sup>

Sectors	GDP		Jobs		Avg Wage	
		%		%		%
<b>Manufacturing</b>	<b>\$ 20,471</b>	<b>12%</b>	<b>99,673</b>	<b>8%</b>	<b>\$ 6,329,071</b>	<b>22%</b>
<b>Professional, scientific, and technical services</b>	<b>\$ 21,092</b>	<b>12%</b>	<b>134,773</b>	<b>11%</b>	<b>\$ 2,844,790</b>	<b>10%</b>
Real estate and rental and leasing	\$ 42,823	25%	29,373	2%	\$ 952,204	3%
Retail trade	\$ 10,800	6%	150,398	12%	\$ 1,852,331	6%
Health care and social assistance	\$ 11,220	7%	155,862	13%	\$ 1,602,875	6%
Wholesale trade	\$ 9,523	6%	61,662	5%	\$ 3,575,232	12%
Accommodation and Food Service	\$ 6,484	4%	158,290	13%	\$ 302,671	1%
Finance and insurance	\$ 8,800	5%	53,390	4%	\$ 2,121,150	7%
Construction	\$ 7,148	4%	63,731	5%	\$ 1,697,356	6%
Administrative and support and waste management and remediation services	\$ 5,765	3%	96,501	8%	\$ 1,672,119	6%
Other services (except public administration)	\$ 4,114	2%	55,438	5%	\$ 1,612,812	6%
Educational services	\$ 2,120	1%	31,351	3%	\$ 592,903	2%
Information	\$ 6,977	4%	32,213	3%	\$ 1,245,985	4%
Arts, entertainment, and recreation	\$ 2,164	1%	33,813	3%	\$ 597,984	2%
Transportation and warehousing	\$ 2,066	1%	24,022	2%	\$ 1,250,508	4%
Management of companies and enterprises	\$ 3,657	2%	23,500	2%	\$ 179,853	1%
Utilities	\$ 2,872	2%	6,092	1%	\$ 78,363	0%
Agriculture, forestry, fishing and hunting	\$ 720	0%	598	0%	\$ 218,159	1%
Mining, quarrying, and oil and gas extraction	\$ 333	0%	367	0%	\$ 114,462	0%

**2. Comparing Local Unemployment Rates with a Statewide Average would not be Useful to Determine Enhanced EDR Eligibility in SDG&E’s Service Territory, and Would Not Provide the Same Ratepayer Benefits as SDG&E’s Proposal.**

In developing its Enhanced EDR proposal, SDG&E examined the feasibility of adopting the same eligibility criteria as adopted for PG&E and SCE. Both PG&E and SCE offer an Enhanced EDR option (of 30% off the monthly bill) to customers meeting the eligibility requirements of the Standard EDR and are located in California cities or counties with unemployment rates that are 125% or more of the previous year’s statewide average unemployment rate. However, for various reasons discussed below, adopting the same eligibility requirements for SDG&E’s service territory would not be useful in developing an Enhanced EDR program with meaningful economic development benefits for the San Diego region.

<sup>21</sup> Data from Appendix A, pp. 20-21, Table 5 and Figure 8.

1           *First*, San Diego is unique in its size, geography, regional economy and infrastructure,  
2 such that comparing unemployment in a particular city to the statewide average may not be  
3 indicative of the economic health of the region. For example, as noted above, San Diego is  
4 considered to have been hit harder by the recent recession than similar-sized peer cities.<sup>22</sup>  
5 However, if PG&E’s and SCE’s Enhanced EDR eligibility criteria were applied in San Diego  
6 during the height of the most recent recession, there would still be only two cities that would  
7 have qualified: Imperial Beach and National City.<sup>23</sup> And only one city would currently qualify:  
8 Imperial Beach, as shown below in Table TC-2. The state unemployment average may be more  
9 heavily influenced by hard-hit counties and cities outside of the San Diego region; however, this  
10 should not justify denying the benefits of Enhanced EDR options to SDG&E customers.

11           *Second*, the SDG&E service territory is relatively small in comparison with the PG&E  
12 and SCE service territories, and is highly connected with an extensive highway system, which  
13 facilitates travel between regions for work. Thus, for SDG&E’s service territory, increased job  
14 offerings in *any* city could help improve unemployment and economic development throughout  
15 the whole region. This is likely not the case in larger service territories, with decreased  
16 connectivity and increased travel times between cities.

17           *Third*, through my experience in working with the San Diego EDCs,<sup>24</sup> I understand that  
18 the San Diego region experiences much greater *total numbers* of unemployed people in cities  
19 with low unemployment ratios, compared with cities that have high unemployment ratios. This  
20 is demonstrated in Table TC-2 below, showing the monthly labor force data for the San Diego

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<sup>22</sup> January 2016, San Diego Regional Economic Development Council, “Talent – Where San Diego Stands: A Comparison of US Metros,” p. 16, at [http://www.sandiegobusiness.org/sites/default/files/Talent\\_San\\_Diego\\_2016.pdf?platform=hootsuite](http://www.sandiegobusiness.org/sites/default/files/Talent_San_Diego_2016.pdf?platform=hootsuite) (last visited February 24, 2017).

<sup>23</sup> In 2011, 125% of the average statewide employment rate was 15%. Only Imperial Beach (at 16%) and National City (at 19%) would have met the criteria at that time. See data available at State of California Employment Development Department, *Unemployment Rate and Labor Force*, at <http://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html> (last visited February 24, 2017).

<sup>24</sup> San Diego Region EDC, San Diego North EDC, San Diego East County EDC, and South County EDC.

1 region as of December 2016. For example, Table TC-2 shows that El Cajon and Imperial Beach  
2 experience high unemployment (at 6.0% and 6.5%, respectively), their combined *total number* of  
3 unemployed workers (at 3,600) is more than seven times less than the City of San Diego (with  
4 28,000 unemployed). Table TC-2 also shows that Chula Vista and the City of San Diego  
5 experience large total numbers of unemployed people (6,400 and 28,000), but neither city would  
6 be eligible for Enhanced EDR options using the unemployment rate model adopted for PG&E  
7 and SCE. Moreover, both cities host key industry for the region. In contrast, El Cajon and  
8 Imperial Beach experience relatively low total numbers of unemployed people (at 2,800 and  
9 800), but are the only two cities that approach an unemployment rate of 125% of the statewide  
10 average (at 6.0% and 6.5%). And, as noted above, increasing job offerings in Chula Vista or San  
11 Diego would positively impact employment opportunities (and the unemployment rates) in El  
12 Cajon and Imperial Beach, because workers can and do travel easily between these areas.

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TABLE TC-2<sup>25</sup>

Monthly Labor Force Data for Cities and Census Designated Places (CDP)						
December 2016 - Preliminary						
Data Not Seasonally Adjusted						
Area Name	Labor Force	Employment	Unemployment Number	Unemployment Rate	Census Ratios	
					Emp	Unemp
<b>California</b>				<b>5.2%</b>	<b>125% of CA</b>	<b>6.5%</b>
San Diego County	1579400	1513900	65600	4.2%	1	1
Bonita CDP	6800	6500	300	4.2%	0.0042735	0.0043
Bostonia CDP	7700	7300	400	5.1%	0.0047986	0.006
Carlsbad city	54600	52500	2000	3.7%	0.03468906	0.0312
Casa de Oro Mount Helix CDP	9800	9300	500	5.1%	0.00614373	0.0076
<b>Chula Vista city</b>	<b>121800</b>	<b>115500</b>	<b>6400</b>	<b>5.2%</b>	<b>0.07626433</b>	<b>0.0973</b>
Coronado city	8900	8700	200	2.4%	0.00576353	0.0032
Del Mar city	2600	2600	0	0.4%	0.00173971	0.0002
<b>El Cajon city</b>	<b>46500</b>	<b>43700</b>	<b>2800</b>	<b>6.0%</b>	<b>0.02887988</b>	<b>0.0425</b>
Encinitas city	33500	32400	1100	3.4%	0.02138011	0.0171
Escondido city	70000	67100	2900	4.2%	0.04429102	0.0444
Fallbrook CDP	13400	12800	600	4.7%	0.00843693	0.0097
<b>Imperial Beach city</b>	<b>12300</b>	<b>11500</b>	<b>800</b>	<b>6.5%</b>	<b>0.00759385</b>	<b>0.0121</b>
La Mesa city	30900	29600	1300	4.2%	0.01956984	0.0198
Lakeside CDP	9800	9300	500	4.9%	0.00616963	0.0073
Lemon Grove city	12600	11900	700	5.5%	0.00785602	0.0105
National City city	24900	23600	1300	5.3%	0.01555986	0.02
Oceanside city	83100	79600	3500	4.3%	0.05256208	0.0541
Poway city	26000	25300	700	2.7%	0.01669153	0.0105
Ramona CDP	11300	10800	500	4.7%	0.00714	0.0081
<b>San Diego city</b>	<b>709900</b>	<b>681900</b>	<b>28000</b>	<b>3.9%</b>	<b>0.45044385</b>	<b>0.4271</b>
San Marcos city	41300	40000	1300	3.2%	0.02641039	0.0204
Santee city	29400	28200	1200	4.1%	0.01861455	0.0182
Solana Beach city	6900	6700	300	3.9%	0.00440012	0.0041
Spring Valley CDP	15400	14800	700	4.3%	0.00976049	0.0101
Valley Center CDP	5500	5400	200	3.2%	0.00354194	0.0027
Vista city	44100	42500	1600	3.7%	0.0280671	0.0248

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Although PG&E and SCE used high unemployment rates to define variability between cities for their enhanced EDR, thus identifying areas of greatest need, this same logic does not work within the San Diego region. For example, Table TC-2 shows that Imperial Beach (with the highest unemployment rate) is only separated from Del Mar (with the lowest unemployment rate) by 6.5%; while counties in other parts of the state, like Kern and Tuolumne, experience

<sup>25</sup> Data in Table TC-2 is gathered from the State of California Employment Development Department, *Unemployment Rate and Labor Force*, at <http://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html> (last visited February 24, 2017).

1 unemployment disparities between high- and low-unemployment cities (and census designated  
2 places) of over 20%. In addition, Tulare and San Bernardino counties show disparities between  
3 underlying cities of over 9%.<sup>26</sup> Clearly, the differences in unemployment between cities is more  
4 noticeable outside the San Diego region, which further validates the weakness of simply using  
5 unemployment rates as a benchmark within SDG&E's service territory.

6 For all of these reasons, comparing unemployment levels in a particular city within  
7 SDG&E's territory with statewide averages would not be a useful tool for determining Enhanced  
8 EDR eligibility. In contrast, SDG&E's proposed Enhanced EDR eligibility for Manufacturing  
9 and PST industry sectors would allow more customers considering out-of-state options to  
10 become eligible for the Enhanced EDR. Greater customer eligibility and participation in the  
11 Enhanced EDR program would lead to greater economic development benefits for the San Diego  
12 region and California. Finally, the Study indicates that targeted participation in the Enhanced  
13 EDR program by Manufacturing and PST industry customers would allow for benefits to the  
14 regional economy by increasing job, wage, and GDP growth on an even greater scale, thus  
15 increasing economic development benefits for San Diego and California even further. Taking all  
16 of these factors into account, SDG&E's Enhanced EDR eligibility proposal would provide the  
17 most economic development benefits for ratepayers and is the preferred approach.

### 18 **III. SDG&E'S EDR PROPOSAL**

#### 19 Standard EDR

20 SDG&E is proposing in this Application an EDR with a participation cap of 50 MW.  
21 Eligible non-residential, non-governmental customers with demand of less than 150 kW will  
22 have 5 MW of the cap available to them while the remaining 45 MW will be available to non-

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<sup>26</sup> See December 2016 data for Kern, Tuolumne, Tulare, and San Bernardino counties, *available at* <http://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html> (last visited February 24, 2017) (under Current Month Unemployment Rate and Labor Force Summary – Cities and Sub-County Places).



1 residential, non-governmental customers with 150 kW or more of demand. The company  
2 selection process will be time-stamped based on submittal requests to SDG&E, and the  
3 completion of the process to include responding to Governor's Office of Business and Economic  
4 Development (GO-Biz) questionnaires. Those companies who submit and complete the vetting  
5 process first will be given first opportunity to participate in the program.

6         The Standard EDR equates to a five-year discount of 12% off of an eligible EDR  
7 customer's total monthly bill relative to the customer's OAT [otherwise applicable tariff].  
8 SDG&E is also proposing an Enhanced EDR applicable to eligible business customers that  
9 provides a five-year discount of 20%, with the option to receive up to 30% off an eligible EDR  
10 customer's total monthly bill relative to the customer's OAT. Eligibility for both EDRs is  
11 conditioned on businesses evaluating a viable out-of-state option. This could be a new out-of-  
12 state business considering San Diego as their new location or an existing business evaluating out-  
13 of-state options to expand or to leave California. Participant businesses can also apply for an  
14 additional five-year extension to the EDR, which may be granted through GO-Biz if the business  
15 and economic indicators warrant. Determination for extensions will be a reevaluation of a new  
16 application and vetting process.

#### 17         Enhanced EDR

18         Structurally, SDG&E's Enhanced EDR offering will be contained within the Standard  
19 EDR participation cap of 50 MW, and will share the same size-based eligibility threshold  
20 demands of less than 150 kW for 5 MW of the cap and 150 kW or more for the remaining 45  
21 MW of the cap. The company selection process will mirror that of the Standard EDR offering.

22         The Enhanced EDR will allow companies in the Manufacturing and PST industries to  
23 apply for a 20% discount at the base line and add up to 10% in additional discount (a total  
24 discount of 30%) when they provide any or all of the additional community value-added features  
25 listed below (each results in a 2.5% discount):

- 1 • Participation in Energy Efficiency;
- 2 • Participation in Demand Response;
- 3 • Locating, remaining, or expanding in an area with unemployment 110% of the
- 4 state unemployment rate; or
- 5 • Locating in a building that has been vacant for more than 18 months.

6 Although the EDR features of PG&E and SCE have been discussed, it is also important  
7 to review EDR criteria in other parts of the country. Common criteria for EDRs in the United  
8 States include electric load and job creation, and reestablishing service in stranded assets by  
9 occupying dormant premises. Each of these components is included in SDG&E's EDR rates  
10 offering and the value added features of the Enhanced EDR offering.

#### 11 **IV. ADMINISTRATION OF THE EDR PROGRAM**

##### 12 **A. Basic Eligibility Criteria**

13 Consistent with PG&E and SCE's approved EDR programs both the Standard and  
14 Enhanced EDRs will be open to bundled service or Direct Access commercial (non-residential,  
15 non-governmental) customers. However, unlike PG&E and SCE's program, SDG&E  
16 recommends allowing businesses of all sizes to apply for the EDR and our program carves out  
17 5 MW specifically for small and medium-size businesses with 150kW demand or less. Small  
18 and mid-sized businesses play an important role in our region. SDG&E's commercial customer  
19 segment comprises eighty-five percent small business customers (with demand less than 20 kW),  
20 compared to twenty-two percent within PG&E's service territory.<sup>27</sup> More than 70% of both

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<sup>27</sup> See A.17-01-014, *Application of San Diego Gas & Electric Company (U 902-M) to Adopt Energy Efficiency Rolling Portfolio Business Plan* (filed January 17, 2017), Exhibit 1 ("SDG&E Energy Efficiency Business Plan, 'Building A Better Energy Efficient Future, 2018-2025'") at p. 71 (Figure 3.9), available at [https://www.sdge.com/sites/default/files/regulatory/SDGE%20EE%20BP%20Application%20FINAL%20with%20BP\\_2.PDF](https://www.sdge.com/sites/default/files/regulatory/SDGE%20EE%20BP%20Application%20FINAL%20with%20BP_2.PDF).

1 industrial and agricultural customers in our territory are under 20kW.<sup>28</sup> Additionally, within San  
2 Diego County, almost two-thirds of the businesses have fewer than five employees.<sup>29</sup>

3 For the Enhanced EDR, eligible service accounts must fall within the business sectors of  
4 Manufacturing or PST. Additional discounts up to 30% will be available to businesses providing  
5 additional community benefit such as locating in areas or buildings in need of revitalization.

6 Once a business qualifies for the EDR option it will remain in effect for the length of their signed  
7 contract, regardless of economic changes within the region. Both Standard and Enhanced EDR  
8 contracts are valid up to five years with the ability to extend for up to an additional five years.

9 Upon the expiration of the first five-year period, SDG&E will include a proposal via advice letter  
10 to extend the EDR.

#### 11 **B. Program Cap**

12 SDG&E's proposed EDR program cap (including both Standard and Enhanced  
13 customers) is 50 MW. 5 MW will be reserved for businesses with less than 150 kW demand and  
14 the remaining 45 MW would be reserved for the larger businesses.

#### 15 **C. Application Process**

16 Interested commercial and industrial businesses will file an application that would  
17 include a business case for the rate request and verification of a viable out-of-state option. After  
18 SDG&E screens and approves the application, GO-Biz would perform a second review similar to  
19 the process already in place for both PG&E and SCE. Successful applicants would then be  
20 categorized as either eligible for the Standard EDR, or the Enhanced EDR for applicants that fall  
21 within the Manufacturing or PST business sectors. The Standard EDR would be given a 12%  
22 discount off their OTA. Successful applicants of the Enhanced EDR would then undergo an  
23 additional evaluation to determine the exact discount rate as outlined in section III.

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<sup>28</sup> *Id.* at 137 and 169 (Figure 6.7).

<sup>29</sup> *Id.* at p. 71-72 (Figure 3.10).

1           **D.     Safeguards Against Potential Free-Ridership**

2           As the Commission stated in D.13-10-019, “[f]ree-riders are a risk to any program that  
3 provides discounts to qualifying customers.”<sup>30</sup> SDG&E proposes the following methods to  
4 mitigate the risk of potential free-ridership, defined by the Commission as “a customer whose  
5 decision to close, locate or expand facilities in [the utility’s] territory is not based upon the  
6 proposition that ‘but for’ these lower rates the customer would locate, relocate or expand  
7 somewhere outside of [the utility’s] territory, or close.”<sup>31</sup> In past EDR programs, the  
8 Commission had required all EDR applicants to sign a declaration, under penalty of perjury, that  
9 “but for” the electric rate discount provided by the EDR tariff option, either alone or in  
10 combination with other incentives made available to the customer from other sources, they  
11 would either move their existing operations outside of California or would close their business  
12 altogether. In D.13-10-019, however, the Commission concluded that “[r]etention customers are  
13 more likely to become free-riders than attraction or expansion customers,” and that “there is no  
14 need for an affidavit for attraction and expansion customers because ‘the customer would not  
15 actually receive the discount unless and until the attracted or expanded load materializes.”<sup>32</sup>  
16 Accordingly, SDG&E proposes that the “but-for” affidavit be required only for retention  
17 customers (not for attraction or expansion customers), regardless of whether the applicant is  
18 applying for the Standard or Enhanced EDR.

19           SDG&E also proposes to have the California GO-Biz office provide an independent  
20 review of all applications for the EDR. California GO-Biz is providing this service for both  
21 PG&E and SCE, and SDG&E would implement a similar review.

22           SDG&E proposes to include a Liquidated Damages provision in its EDR contracts to  
23 ensure that neither SDG&E nor its ratepayers are financially or otherwise damaged if the EDR

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<sup>30</sup> D.13-10-019 at 22.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* at 30.

1 contract is terminated prematurely before the end of its term based on fraud or misrepresentation.  
2 The Liquidated Damages amount will be equal to 200% of the cumulative difference between the  
3 amount the EDR customer would have paid for energy and demand if billed under its OAT, and  
4 the amount billed under the EDR.

#### 5 **E. Reporting Requirements**

6 SDG&E incorporates in this Application the same reporting requirements adopted by the  
7 Commission in D.13-10-019. Specifically, for the life of the program cycle adopted in this  
8 Application, SDG&E will file with the Director of the Energy Division two versions of an annual  
9 report every March 1 covering the prior calendar year's EDR activity. One version of the report  
10 will be confidential and will contain information, organized in table format, relative to each EDR  
11 participant based on information gathered from the EDR participants. A public version of the  
12 report shall contain an aggregated analysis of the information contained in the confidential  
13 report. In addition, these reports will include an update in the measures used for the Enhanced  
14 EDR.

#### 15 **F. Demand Side Management ("DSM")-Related Measures**

16 In D.13-10-019, the Commission required PG&E to present cost-effective DSM options  
17 to Enhanced EDR customers, and to achieve a 5% energy usage reduction over the life of the  
18 Enhanced EDR tariff across all participating customers. PG&E was also encouraged to pursue  
19 DSM at facilities on the Standard EDR tariff and to try to achieve a 5% energy usage reduction  
20 across all of the participating Standard EDR customers over the life of the Standard EDR tariff.  
21 SDG&E commits to exploring DSM options with its Standard and Enhanced EDR customers,  
22 and to set goals to the extent they are reasonable on a customer-by-customer basis.

1           **G.     Rate Treatment**

2           For a description of the discount computation and ratemaking treatment for SDG&E's  
3 Standard and Enhanced EDRs, including the recovery of costs associated with implementation of  
4 these programs, please refer to the direct testimony of Cynthia Fang (Chapter 2).

5           **V.     CONCLUSION**

6           This concludes my prepared direct testimony.

1 **VI. STATEMENT OF QUALIFICATIONS**

2 My name is Todd Cahill and my business address is 8330 Century Park Court, San  
3 Diego, California 92123. I am the Director of Business Services for SDG&E. My primary  
4 responsibilities include all customer service-related activities and relationships with SDG&E's  
5 business customers and community. I began work at SDG&E in 2002 as a Regulatory Analyst  
6 and have held positions of increasing responsibility.

7 In 1998, I graduated from Brigham Young University with a Bachelor of Arts in Political  
8 Science. I also received an MBA from San Diego State University in 2012.

9 I have previously testified before the California Public Utilities Commission.

**APPENDIX A**  
**ENHANCED DEVELOPMENT RATE ECONOMIC**  
**IMPACT STUDY**





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## ENHANCED DEVELOPMENT RATE ECONOMIC IMPACT STUDY

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Presented in partial fulfillment of the requirements for the  
Masters of Business Administration Degree  
Graduate School of Business Administration  
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## *Executive Summary*

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The purpose of this study was to determine whether or not SDG&E would be justified offering an Economic Development Rate in its service area to specific industries based upon their economic impact, rather than based upon unemployment. The study concluded that SDG&E would be justified in offering an Economic Development Rate to businesses in the sectors of (1) manufacturing and (2) professional, scientific and technical services on the basis of these industries' strong contributions to the service area's economy. This impact was measured by regional GDP, direct employment, and average wages.

Data for the analysis and recommendations was mainly obtained from the Bureau of Labor and Statistics, the United States Census Bureau, San Diego Economic Development Council (EDC), and other Economic Development Councils. The data collected from these sources allowed for the economic mix of SDG&E's service area to be sufficiently captured in order to make predictions.

The study was able to conclude that the question as to which industries the EDR should be extended could not be answered as originally phrased due to the categorization of available data. The initial hypothesis posed by SDG&E was that Defense, Life Sciences, Information and Communication Technology, and Manufacturing industries provided the most economic impact to the region and therefore should be targeted for the enhanced EDR. Research showed that the concept of offering enhanced economic development rates based upon the initial 'industry' classifications insufficiently segregated businesses.

In lieu of classification by priority industry, data was categorized by North American Industry Classification System (NAICS) codes. By using NAICS codes, the business sectors could be properly categorized without duplication. By using NAICS codes, we were able to clearly differentiate businesses and make recommendations based upon certain subsections of industries. Based upon the NAICS analysis, our recommendation of the sectors of (1) Manufacturing and (2) Professional, Scientific, and Technical Services encompass the Defense, Life Sciences, Information and Communication Technology, and Manufacturing industries as they are described by the EDC. Although it cannot be definitively determined that the four industries as initially envisioned are the proper targets for the enhanced EDR, most companies that would be expected to fall within those industries will be encompassed by the recommended sectors.

## *Introduction*

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### **Background**

#### **SDG&E Company Background**

SDG&E is an investor owned utility company that operates in San Diego County and Orange County. Founded on April 18, 1881, SDG&E has been a key provider of electricity and natural gas to the city of San Diego for the past 130 years. Currently, SDG&E services 3.6 million people, both residential and commercial, in an area of over 4,100 square miles situated in San Diego County and parts of Orange County. SDG&E retains a staff of over 5,000 employees who maintain and operate a grid of over 1.4 million electrical meters and 860,000 natural gas meters.

SDG&E is a subsidiary of Sempra Energy, a Fortune 500 company, and the largest provider of natural gas in the United States. Sempra Energy is a publicly traded company on the New York Stock Exchange with reported revenues of over \$11 billion in 2014.

As a regulated public utility, SDG&E faces little competition in providing the services of electricity and natural gas to residents of San Diego County and Orange County. At the end of the fiscal year 2014 SDG&E posted revenues of \$4.3 billion with net profit of \$507 million, a 25.5% increase over the fiscal year 2013.

#### **Economic Development Rates**

Other investor owned utilities, such as Pacific Gas and Electric and Southern California Edison, have used Economic Development Rates (EDRs) to stimulate economic activities within their service areas. EDRs come in two different forms: standard and enhanced. Although the rates vary for specific counties or companies, the standard rate normally grants businesses a 12% discount, whereas the enhanced rate provides a 25-30% discount on their energy bills. The purpose of EDRs is to retain current businesses, attract new enterprises, and encourage expansion of existing businesses within the service area. Enhanced EDRs have normally been implemented in counties with an unemployment rate that is 125% of the average unemployment rate of California.

The California Public Utilities Commission (CPUC) must approve an EDR before Investor Owned Utilities (IOUs) may begin offering them. Any business that applies for EDR must also sign an affidavit that confirms that but for the EDR discount, they would be unable to conduct business in the state of California.

SDG&E operates mainly in the county of San Diego, which currently has an unemployment rate of 5.1%, well below the state average of 6.1%. Because of this, SDG&E has taken a different approach to its enhanced EDR program by proposing to offer enhanced rates only to certain industries rather than basing them on the level of unemployment.

## **Problem Statement**

Throughout California, energy prices are increasing due to the regulatory requirements for renewable energy. Other IOUs, such as Pacific Gas and Electric and Southern California Edison, have implemented EDRs to defray the increased cost placed upon business customers. In order to spur economic development in its service area, SDG&E sought objective data to support its EDR proposal that it is planning to place before the CPUC. Specifically, SDG&E requires data that could justify the rationale for using industry rather than county data for an EDR program, a departure from the current practice and other EDR proposals.

## **Project Objectives**

The project objective was to ascertain through research and analysis the industries that would have the greatest positive economic impact on SDG&E's service area were they provided an enhanced EDR. The enhanced EDR's purpose is to attract, retain, and expand these industries in SDG&E's service area. Below are the specific objectives and measures taken to complete this report:

### **Objective #1**

The first objective was to determine the leading economic indicators from all major industries in SDG&E's service area. Once all the indicators were compiled, the top drivers were evaluated to ascertain which industries would contribute the greatest economic growth in the region and benefit the greatest amount of people within SDG&E's service area were they offered an enhanced EDR. The initial information provided focused on direct employment and gross regional product (GRP), but other key metrics were also evaluated to validate the choice of those economic indicators.

### ***Research Methodology***

We used secondary research to gather three years of economic data from Bureau of Labor Statistics, the United States Census Bureau, San Diego Economic Development Council, San Diego Workforce Partnership, San Diego Sourcebook, and California Employment Development Department for labor economics and statistics. Thorough analysis of economic drivers and metrics for the area identified the factors that related closest to economic growth in SDG&E's service area. The results of our analyses were then compared to the data supplied by the Economic Development Council (EDC) to confirm unbiased data for the CPUC proposal.

### **Objective #2**

The second objective was to determine the industries with the most economic impact on SDG&E's service area using the measures selected in Objective 1. We first considered the industries initially proposed by SDG&E, namely Defense, Life Sciences, Information and Communication Technology, and Manufacturing, before expanding the scope to include all other industries in the service area.

## Methodology

Primary research was conducted by using the indicators determined in Objective 1 to evaluate all major industries present in SDG&E's service area. Each industry was then ranked in order of the magnitude of impact upon the region's economy. From this list, we assessed the overall worthiness of the proposed EDR and the type of industries that could be eligible for the program.

## Results

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### Economic Analysis of Service Area

SDG&E's service area extends across San Diego County and parts of Orange County, as shown in Figure 1. To determine the economic indicators with which to select the industries to be eligible for EDR, the economies of both counties were analyzed.

Figure 1: SDG&E Service Area



Source: SDG&E

The analysis was conducted in a stepwise fashion. NAICS codes were used to determine the economic make up of each region. Once a clear picture of the region's economic mix was established, the most influential economic indicators shared by all, or the majority of industries, were selected. These indicators were subsequently used to determine the overall impact of a given industry on the county's economy.

SDG&E service area only covers 16% of Orange County, so the major focus, per the client's directions, was on San Diego County. The unavailability of data at a zip code level also lead to decreased weight being put on Orange County results for the final recommendations.

## Analysis of San Diego County

Data for San Diego County was collected at the most granular level for which data could be found. NAICS codes can range from two to six digits per code. Two-digit codes give a general overview of a business sector, whereas six-digit codes are for specific industries. The more numbers that a code has, the more specific that it is to the industry being analyzed.

To conduct our analysis, data was gathered at the six-digit level to ensure accuracy and then converted to the three or fourth digit codes to make predictions. The purpose for the conversion, rather than just gather data at the two-digit level, was to avoid the possibility of double counting a single business entity that could be classified in multiple industries. By converting the six-digit codes to two-digit codes our models would provide a higher level of accuracy.

To illustrate the conversion process, we will use the NAICS code of a Bed-and-Breakfast Inn as an example, highlighted in Table 1 below. The NAICS code for the Bed-and-Breakfast Inns is 721191. The six-digit code is the most accurate data available for industry classification. As some businesses can be classified into multiple industries, gathering data at the six-digit code level is the best way to avoid double counting businesses in multiple industry categories; however, the code now is too specific, in terms of classification, to make useful predictions. In order to make predictions with this data, the NAICS code was regressed from the six-digit code back to the third or fourth level. Specifically, the Bed-and-Breakfast Inns code regresses from 721191 to 7211 or 721 depending on the prediction being made. This gives us either the subsector of Accommodation or the Industry Group of Traveler Accommodation.

**Table 1: Example NAICS Code**

Sector Code	Sector Industry	3 Level NAICS	3rd Digit NAICS Subsector	4 Level NAICS	4th Digit NAICS Industry Group	6 Level NAICS	Meaning of 6 Digit NAICS code Industry
72	Accommodation and Food Service	721	Accommodation	7211	Traveler Accommodation	721110	Hotels (except casino hotels) and motels
						721120	Casino hotels
						721191	Bed-and-breakfast inns
						721199	All other traveler accommodation
		721	Accommodation	7212	RV Parks and Recreational Camps	721211	RV (recreational vehicle) parks and campgrounds
						721214	Recreational and vacation camps (except campgrounds)
		721	Accommodation	7213	Rooming and Boarding Houses	721310	Rooming and boarding houses
		722	Food Services and Drinking Places	7223	Special Food Services	722310	Food service contractors
						722320	Caterers
						722330	Mobile food services
		722	Food Services and Drinking Places	7224	Drinking Places (Alcoholic Beverages)	722410	Drinking places (alcoholic beverages)
		722	Food Services and Drinking Places	7225	Restaurants and Other Eating Places	722511	Full-service restaurants
						722513	Limited-service restaurants
						722514	Cafeterias, grill buffets, and buffets
722515	Snack and nonalcoholic beverage bars						

By using this conversion method, a realistic model of the industries that make up San Diego County was created. The economy of San Diego County was described using three different metrics: contribution to overall employment, contribution to Gross Regional Product (GRP or GDP by county/metropolitan area) and average wage. While these were the indicators



applied in order to describe the economic make up of San Diego County, no decision was made as to whether one of these indicators takes precedence over the others.

Table 2 shows the top 5 industries that contribute to direct employment in San Diego County. These sectors are: Accommodation and Food Services; Healthcare and Social Assistance; Retail Trade; Professional, Scientific, and Technical Services; Administrative and Support; and Manufacturing. While these industries do not represent the totality of employment in San Diego County, they are the largest contributors to employment, accounting for almost 60% of all jobs in San Diego County.

**Table 2: San Diego County Direct Employment by Industry**

Sector	2014 Direct Employment		
	Total Number of Paid Employees	Sector % of Jobs	Rank of # of Jobs
Accommodation and Food Service	158,290	13%	1
Health care and social assistance	155,862	13%	2
Retail trade	150,398	12%	3
Professional, scientific, and technical services	134,773	11%	4
Manufacturing	99,673	8%	5
Administrative and support and waste management and remediation services	96,501	8%	6
Construction	63,731	5%	7
Wholesale trade	61,662	5%	8
Other services (except public administration)	55,438	5%	9
Finance and insurance	53,390	4%	10
Arts, entertainment, and recreation	33,813	3%	11
Information	32,213	3%	12
Educational services	31,351	3%	13
Real estate and rental and leasing	29,373	2%	14
Transportation and warehousing	24,022	2%	15
Management of companies and enterprises	23,500	2%	16
Utilities	6,092	1%	17
Agriculture, forestry, fishing and hunting	598	0%	18
Mining, quarrying, and oil and gas extraction	367	0%	19
	1,211,042	100%	

*Top 5 Sectors Account for ~58% of Direct Jobs in SD*

As demonstrated by the above table, direct employment is most impacted by the contribution from the top 5 sectors with a dramatic drop off in industries outside of the top rankings. The range of figures within the top five are between 13% and 8%. Although not in the top 5, Administrative and Support and Waste Management and Remediation Services is worth mentioning, as the category accounts for 8% of total employment, a near tie with manufacturing in San Diego County. Despite the exception of Administration and Support, there is a precipitous drop in employment contribution once outside the top 5 rankings. Employment is mainly concentrated within only a few industries in San Diego.

Figure 2: San Diego County Total Employment by Sector

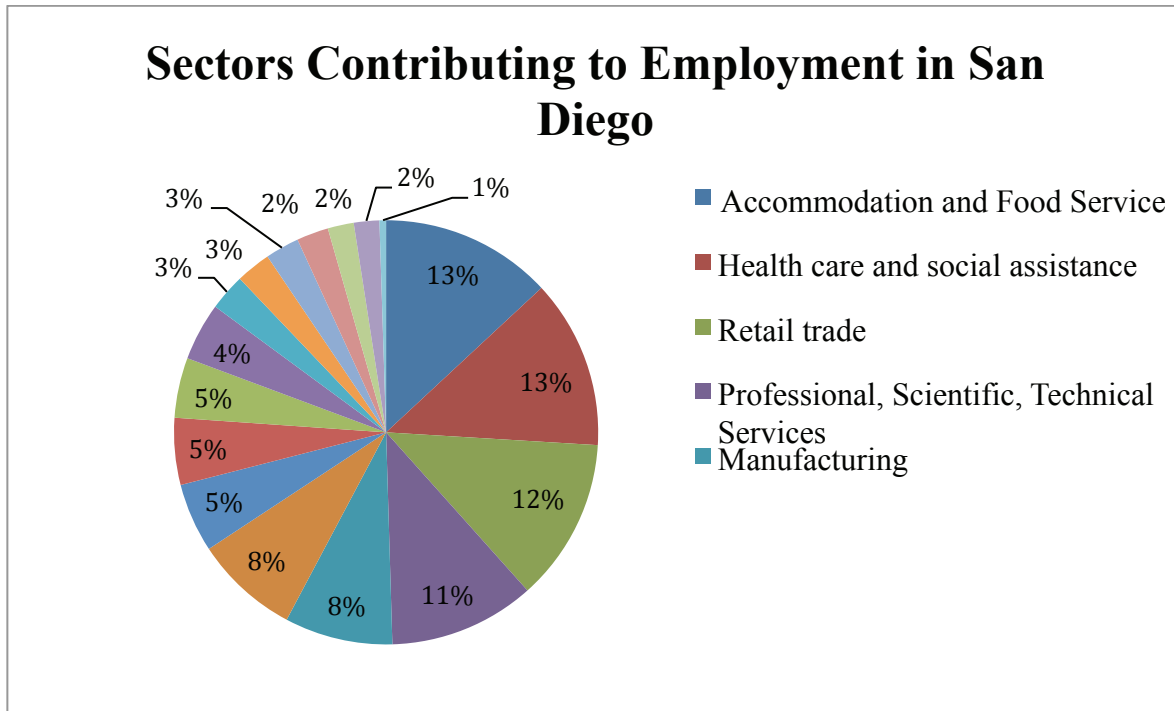


Figure 2 illustrates the whole picture of which industries contribute to employment in San Diego County. It shows more clearly how much of employment is concentrated in the 5 top sectors.

Figure 3: Top Sectors for Direct Employment in San Diego County

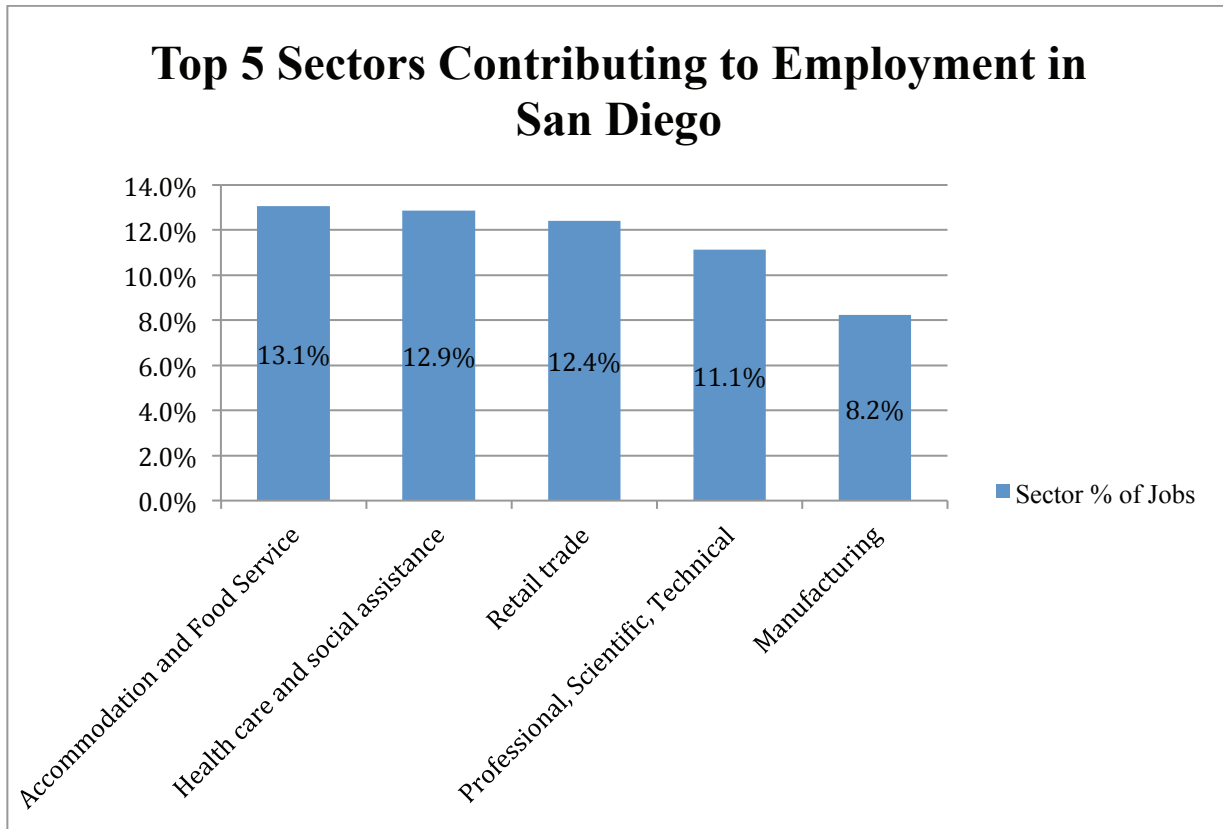


Figure 3 gives more detail on the top sectors for San Diego County. It helps demonstrate which sectors are the most important as well as how close several of them are in terms of job contributions.

Table 3: San Diego County GDP by Sector

Sector	2014 San Diego GDP for Private Sector (Gov't Excl)		
	GDP (\$1000)	Sector % of GDP	Rank of Private Industries GDP
Real estate and rental and leasing	\$ 42,823	25%	1
Professional, scientific, and technical services	\$ 21,092	12%	2
Manufacturing	\$ 20,471	12%	3
Health care and social assistance	\$ 11,220	7%	4
Retail trade	\$ 10,800	6%	5
Wholesale trade	\$ 9,523	6%	6
Finance and insurance	\$ 8,800	5%	7
Construction	\$ 7,148	4%	8
Information	\$ 6,977	4%	9
Accommodation and Food Service	\$ 6,484	4%	10
management and remediation services	\$ 5,765	3%	11
Other services (except public administration)	\$ 4,114	2%	12
Management of companies and enterprises	\$ 3,657	2%	13
Utilities	\$ 2,872	2%	14
Arts, entertainment, and recreation	\$ 2,164	1%	15
Educational services	\$ 2,120	1%	16
Transportation and warehousing	\$ 2,066	1%	17
Agriculture, forestry, fishing and hunting	\$ 720	0%	18
Mining, quarrying, and oil and gas extraction	\$ 333	0%	19
	169,149	100%	

Top 5 Sectors Account for ~63% of GDP in SD

Table 3 displays the overall contribution by industries to regional GDP. Similar to the employment figures, regional GDP is heavily concentrated in the top 5 rankings sectors. The top 5 sectors being Real estate and Rental and Leasing; Professional, Scientific, and Technical Services; Manufacturing; Healthcare and Social Assistance; and Retail Trade. These 5 sectors contribute over 63% to regional GDP.

Figure 4: San Diego County Total GDP By Sector

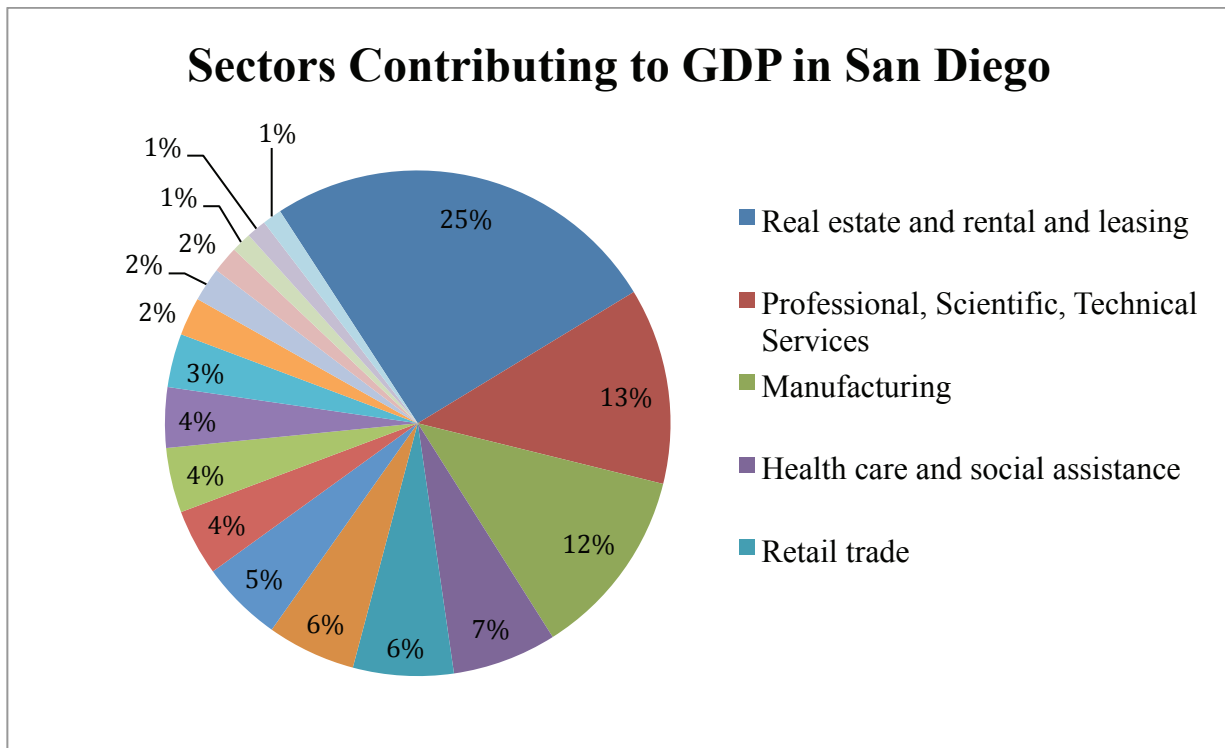


Figure 4 shows the “whole pie” of sectors contributing to GDP in San Diego County. The highest contributors are further analyzed below.

Figure 5: Top Sectors for GDP San Diego County

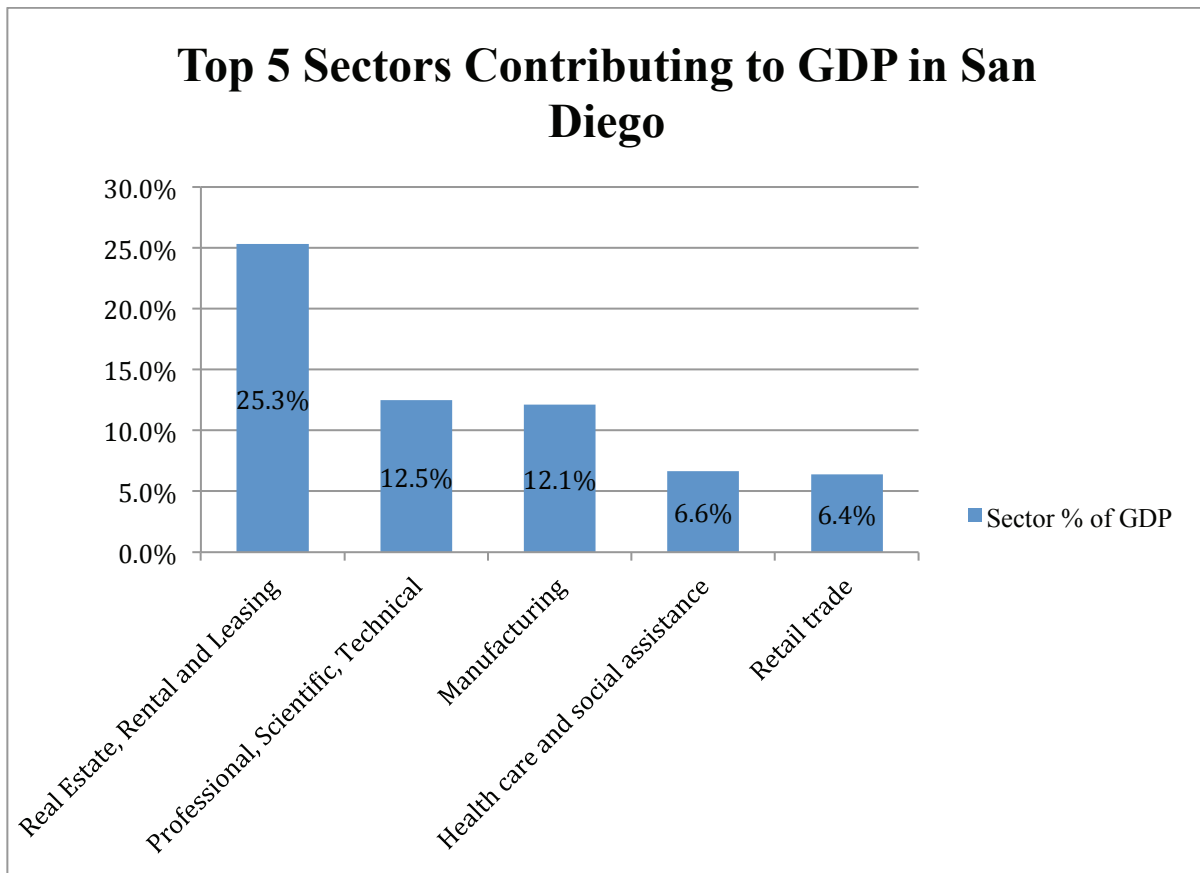


Figure 5 shows the top 5 sectors in greater detail. In the top 5, the sector of Real Estate and Rental and Leasing deserves further analysis. As can be seen in the table above, Real Estate accounts for over 25% of regional GDP, more than Professional, Scientific, and Technical Services and Manufacturing combined. San Diego is one of the most valued real estate markets in the country, making the contribution from that sector not entirely surprising. Real estate is the largest contributor to regional GDP, but further analysis with other indicators detailed later demonstrate why real estate is not a good sector on which to focus the enhanced EDR.

**Table 4: San Diego County Total Wage by Industry**

Sector	2014 San Diego Average Wage		
	Average Wage (\$1000)	Industry % of Avg Wages	Rank of Avg Wage
Manufacturing	\$ 6,329	22%	1
Wholesale trade	\$ 3,575	12%	2
Professional, scientific, and technical services	\$ 2,845	10%	3
Finance and insurance	\$ 2,121	7%	4
Retail trade	\$ 1,852	6%	5
Construction	\$ 1,697	6%	6
Administrative and support and waste management and remediation services	\$ 1,672	6%	7
Other services (except public administration)	\$ 1,613	6%	8
Health care and social assistance	\$ 1,603	6%	9
Transportation and warehousing	\$ 1,251	4%	10
Information	\$ 1,246	4%	11
Real estate and rental and leasing	\$ 952	3%	12
Arts, entertainment, and recreation	\$ 598	2%	13
Educational services	\$ 593	2%	14
Accommodation and Food Service	\$ 303	1%	15
Agriculture, forestry, fishing and hunting	\$ 218	1%	16
Management of companies and enterprises	\$ 180	1%	17
Mining, quarrying, and oil and gas extraction	\$ 114	0%	18
Utilities	\$ 78	0%	19
	28,841	100%	

*Top 5 Sectors Account for ~58% of Average Wage in SD*

Table 4 displays the wage contribution of each business sector to the San Diego economy. Once again, the top 5 industries make the largest contribution to the indicator with a precipitous drop off outside of the top 5 ranks. The top 5 sectors are Manufacturing; Wholesale Trade; Professional, Scientific, and Technical Services; Finance and Insurance; and Retail Trade. Together, these 5 sectors contribute approximately 58% to the wage level in San Diego County.

Figure 6: San Diego County Average Wage by Sector

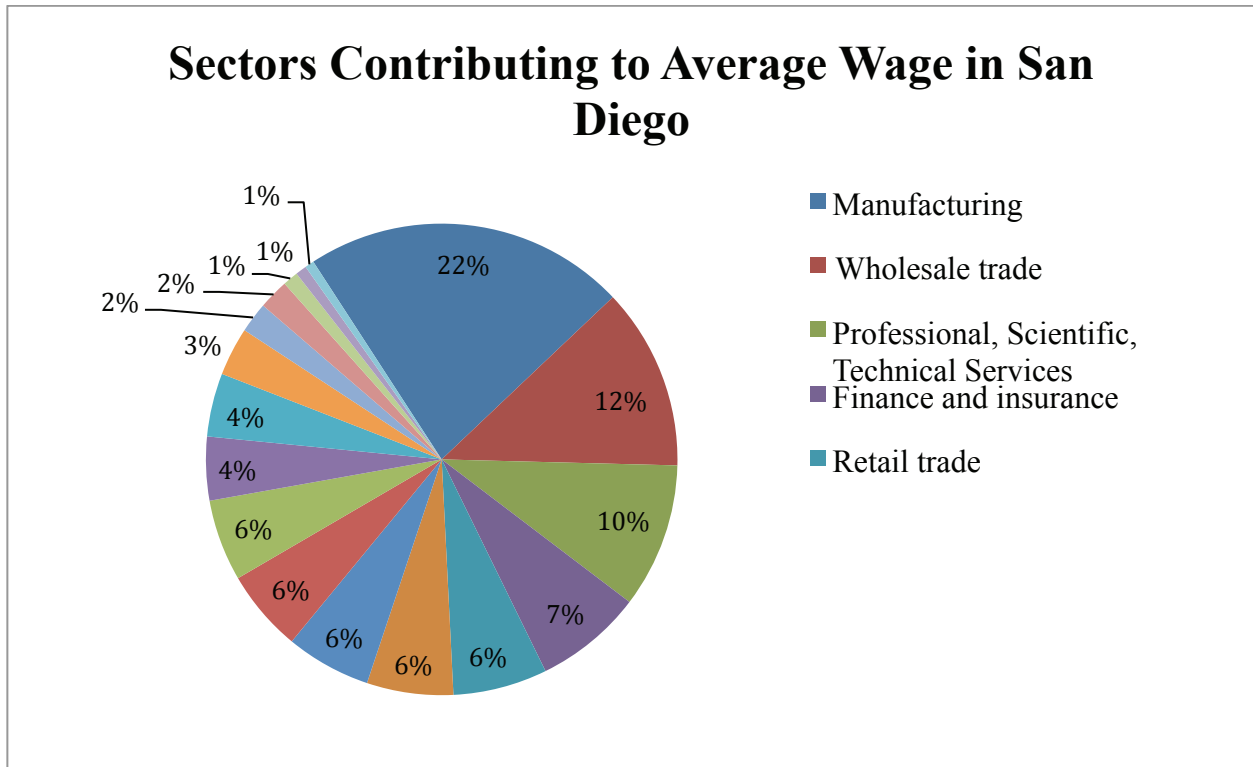


Figure 6 shows the average wage by sector in San Diego County for all industries.



Figure 7: Top Sectors for Average Wage San Diego County

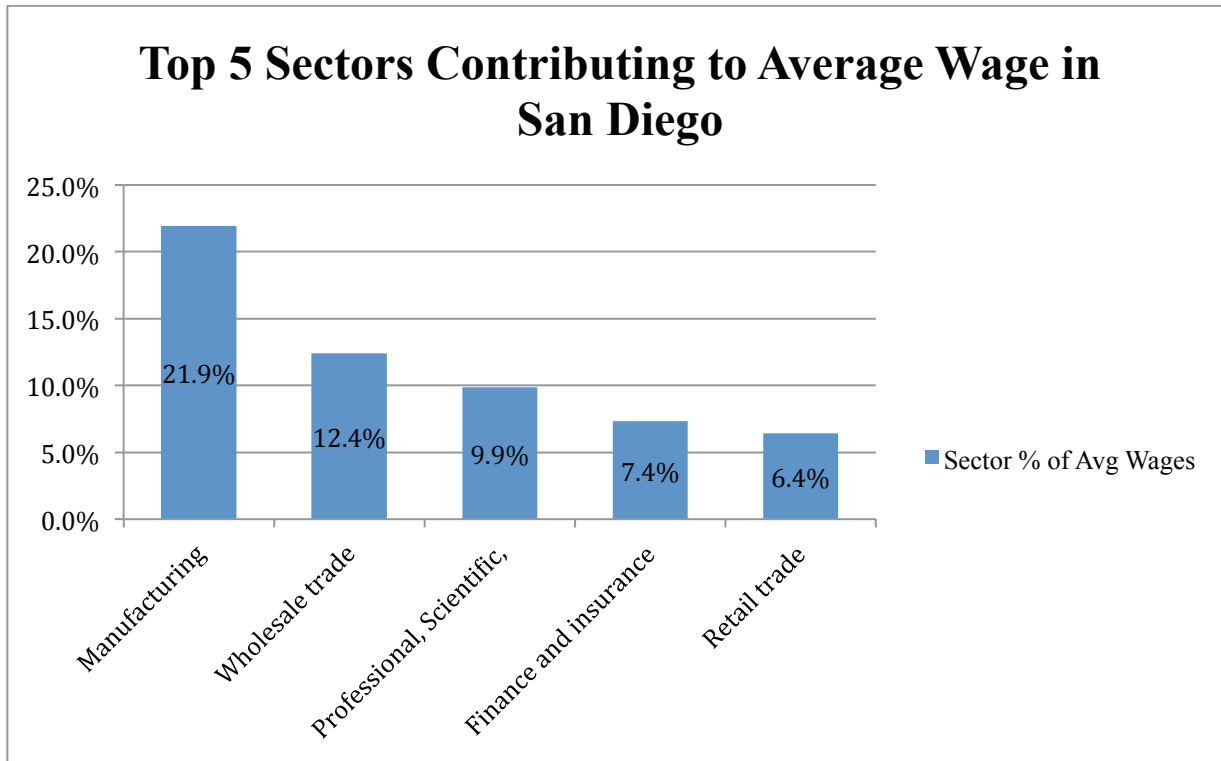


Figure 7 shows the top sectors contributing to average wages in San Diego County. Similar to regional GDP, the top industry in the rankings warrants further discussion. Manufacturing contributes 22% to the overall wage rate in San Diego County, 10% higher than the Wholesale Trade, which holds the second place on the ranking list. Manufacturing makes such a large contribution to wages due to the type of items being manufactured in San Diego. This is demonstrated by the important subsectors for San Diego County in the Manufacturing Sector, such as Chemical, Computer and Electronic Products, and Transportation Equipment Manufacturing. These areas of manufacturing rise above menial assembly line jobs and require specialized knowledge, which in turn increases the overall wage.

## Summary of San Diego Economic Indicators

Table 5: San Diego County Summary of Economic Indicators

Sector	Direct Employment			GDP			Average Wage		
	Total Number of Paid Employees	Sector % of Jobs	Rank of # of Jobs	GDP (\$1000)	Sector % of GDP	Rank of Private Industries GDP	Average Wage (\$1000)	Sector % of Avg Wages	Rank of Avg Wage
Accommodation and Food Service	158,290	13%	1	\$ 6,484	4%	10	303	1%	15
Administrative and support and waste management and remediation services	96,501	8%	6	\$ 5,765	3%	11	1,672	6%	7
Agriculture, forestry, fishing and hunting	598	0%	18	\$ 720	0%	18	218	1%	16
Arts, entertainment, and recreation	33,813	3%	11	\$ 2,164	1%	15	598	2%	13
Construction	63,731	5%	7	\$ 7,148	4%	8	1,697	6%	6
Educational services	31,351	3%	13	\$ 2,120	1%	16	593	2%	14
Finance and insurance	53,390	4%	10	\$ 8,800	5%	7	2,121	7%	4
Health care and social assistance	155,862	13%	2	\$ 11,220	7%	4	1,603	6%	9
Information	32,213	3%	12	\$ 6,977	4%	9	1,246	4%	11
Management of companies and enterprises	23,500	2%	16	\$ 3,657	2%	13	180	1%	17
Manufacturing	99,673	8%	5	\$ 20,471	12%	3	6,329	22%	1
Mining, quarrying, and oil and gas extraction	367	0%	19	\$ 333	0%	19	114	0%	18
Other services (except public administration)	55,438	5%	9	\$ 4,114	2%	12	1,613	6%	8
Professional, scientific, and technical services	134,773	11%	4	\$ 21,092	12%	2	2,845	10%	3
Real estate and rental and leasing	29,373	2%	14	\$ 42,823	25%	1	952	3%	12
Retail trade	150,398	12%	3	\$ 10,800	6%	5	1,852	6%	5
Transportation and warehousing	24,022	2%	15	\$ 2,066	1%	17	1,251	4%	10
Utilities	6,092	1%	17	\$ 2,872	2%	14	78	0%	19
Wholesale trade	61,662	5%	8	\$ 9,523	6%	6	3,575	12%	2
	1,211,042	100%		169,149	100%		28,841	100%	190

To complete our analysis, we had to utilize all three economic indicators across the industries and compare their total contributions. Table 5 shows each of those indicators by rank for the industries. It demonstrates why Accommodation and Food Service as well as Real Estate and Rental and Leasing are not good sectors to target. Although they have high ranks for a single indicator (direct employment for Accommodation and Food Service and GDP for Real Estate and Rental and Leasing), they are very low for the other indicators.

Figure 8: San Diego County Comparison of Economic Indicators

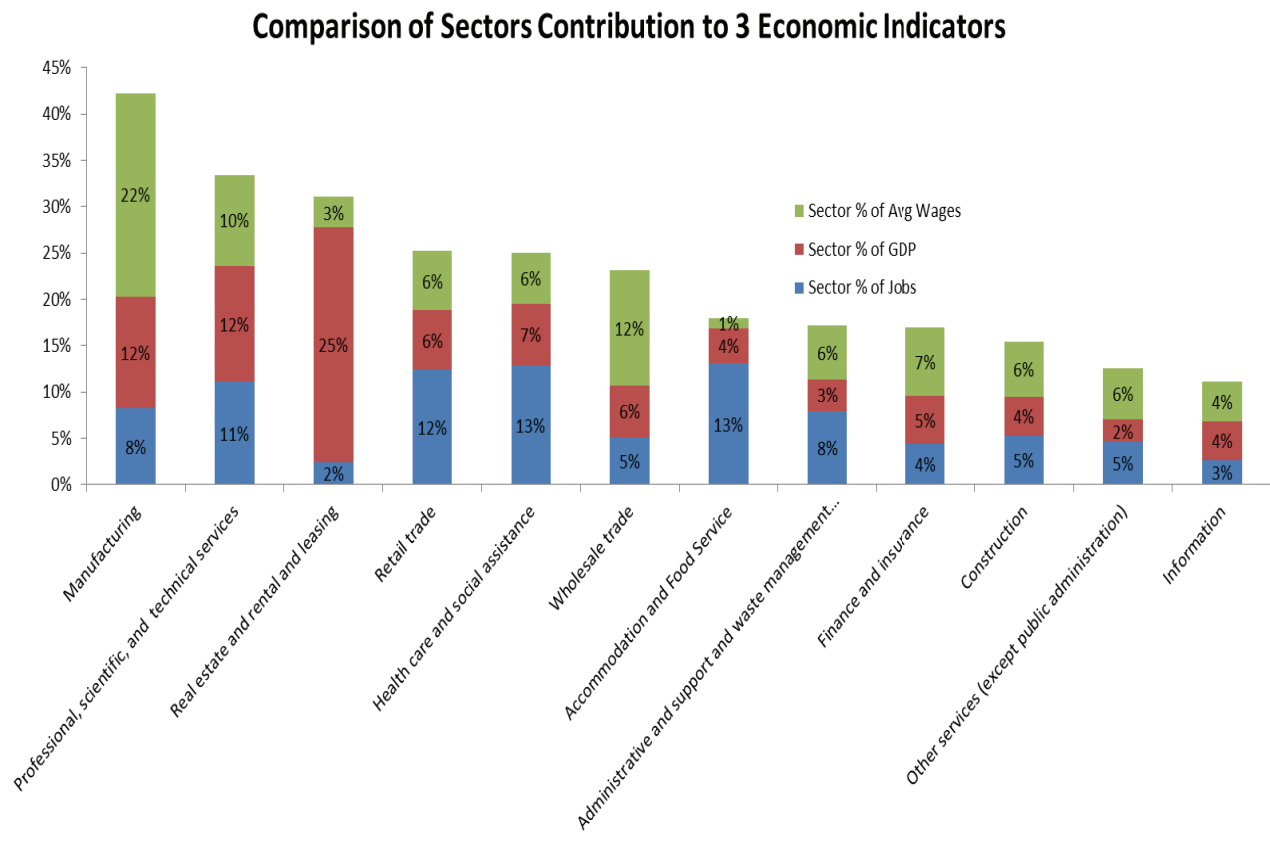


Figure 8 illustrates which sectors contribute the most across all indicators. It shows that Manufacturing and Professional, Scientific, and Technical services contribute the most, and are highly ranked among every economic indicator. As mentioned, Real Estate and Rental and Leasing is high on the list, but almost all of its contribution is only due to its GDP. So, if an enhanced EDR were offered to that sector, it wouldn't be likely to create many jobs or many high quality jobs. Additionally, it is unlikely that targeting real estate-based businesses would meet the purpose of the enhanced EDR, as they tend to exist due to the demand for the land where it is located. San Diego County is a popular place to live; that is not going to change based upon electric costs, so the purpose of attracting, retaining, and expanding business would not likely be served. Below is analysis of the highest ranked sectors, with more information available in Appendix 2.

Table 6: San Diego County Manufacturing Sector Economic Indicators – Durable and Nondurable

Sector Industry	Manufacturing Category	Direct Employment		GDP		Average Wage	
		Total Number of Paid Employees	Sector % of Jobs	GDP (\$1000)	Sector % of GDP	Average Wage (\$1000)	Sector % of Avg Wages
Manufacturing	Durable	73,161	73%	\$ 12,807	63%	\$ 4,202	66%
	Nondurable	26,512	27%	\$ 7,665	37%	\$ 2,127	34%
		99,673	100%	\$ 20,472	100%	\$ 6,329	100%

Next, we looked into more detail for the highest ranked sectors. Table 6 shows durable versus nondurable manufacturing. Durable is significantly higher across the economic indicators, but, as demonstrated below, going beyond the categorization of durable or nondurable to actual subsector will better represent the companies that actually contribute the most to San Diego County’s economy.

**Table 7: San Diego County Manufacturing Subsector Economic Indicators**

Sector Industry	Manufacturing Category	3rd Digit NAICS Subsector	Direct Employment			GDP			Average Wage		
			Total Number of Paid Employees	% of Jobs	Rank of # of Jobs	GDP (\$1000)	Sector % of GDP	Rank of Private Industries GDP	Average Wage (\$1000)	Sector % of Avg Wages	Rank of Avg Wage
Manufacturing	Durable	Computer and Electronic Product Manufacturing	15,183	15%	2	\$ 6,151	30%	1	\$ 1,051	17%	1
		Electrical Equipment, Appliance, and Component Manufacturing	3,511	4%	9	\$ 238	1%	9	\$ 203	3%	10
		Fabricated Metal Product Manufacturing	8,262	8%	6	\$ 654	3%	7	\$ 587	9%	4
		Furniture and Related Product Manufacturing	1,461	1%	12	\$ 123	1%	12	\$ 369	6%	7
		Machinery Manufacturing	8,571	9%	4	\$ 1,343	7%	5	\$ 757	12%	3
		Miscellaneous Manufacturing	10,924	11%	3	\$ 1,937	9%	4	\$ 525	8%	5
		Nonmetallic Mineral Product Manufacturing	1,616	2%	11	\$ 150	1%	11	\$ 148	2%	15
		Primary Metal Manufacturing	305	0%	17	\$ 72	0%	16	\$ 33	1%	17
		Transportation Equipment Manufacturing	22,862	23%	1	\$ 2,092	10%	3	\$ 331	5%	8
	Nondurable	Wood Product Manufacturing	469	0%	16	\$ 47	0%	18	\$ 200	3%	11
		Apparel and leather and allied products manufacturing	1,152	1%	13	\$ 94	0%	15	\$ 249	4%	9
		Food and beverage and tobacco products manufacturing	7,284	7%	7	\$ 850	4%	6	\$ 489	8%	6
		Chemical Manufacturing	8,426	8%	5	\$ 5,848	29%	2	\$ 774	12%	2
		Paper Manufacturing	713	1%	15	\$ 106	1%	13	\$ 187	3%	12
		Petroleum and Coal Products Manufacturing	138	0%	18	\$ 104	1%	14	\$ -	0%	18
		Plastics and Rubber Products Manufacturing	4,843	5%	8	\$ 386	2%	8	\$ 156	2%	13
		Printing and Related Support Activities	3,183	3%	10	\$ 225	1%	10	\$ 123	2%	16
Textile mills and textile product mills	774	1%	14	\$ 52	0%	17	\$ 148	2%	14		
			99,673	100%		20,472	100%		6,329	100%	

Table 7 shows the economic indicators for the subsectors of manufacturing by rank. The classification as durable or nondurable is included for further information.

**Figure 9: San Diego County Manufacturing Subsector Comparison**

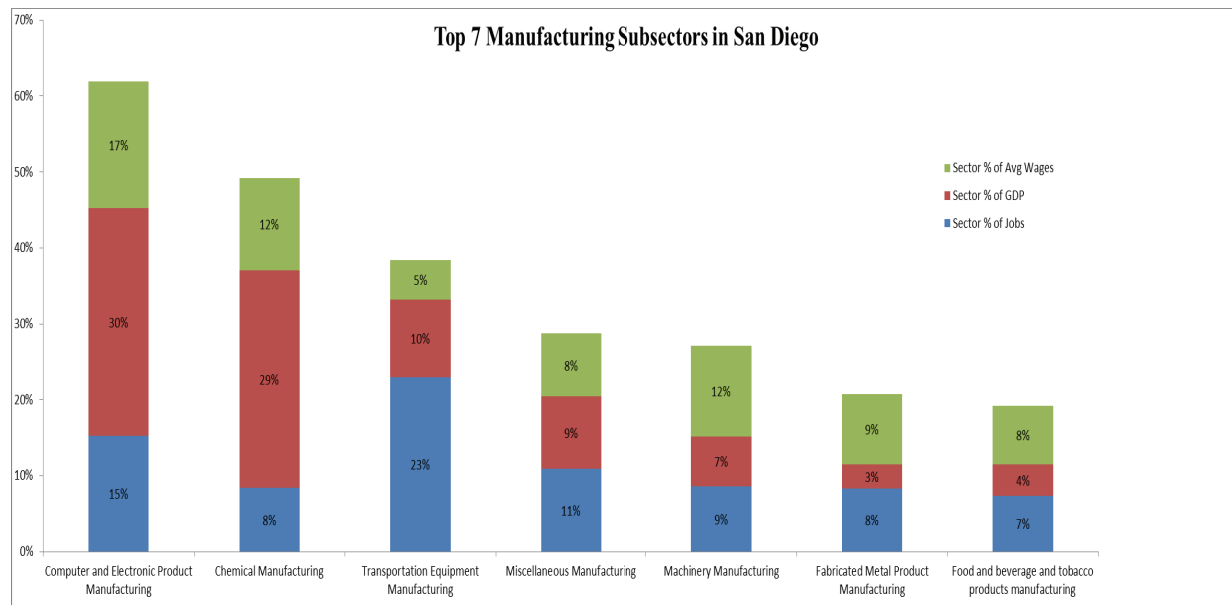


Figure 9 shows the top manufacturing subsectors by their contribution to all three economic indicators. Computer and Electronic Product Manufacturing, Chemical Manufacturing, and Transportation Equipment Manufacturing are the highest ranked.

**Table 8: San Diego County Manufacturing Subsector Comparison**

Manufacturing Category	3rd Digit NAICS Subsector	Sector % of Jobs	Sector % of GDP	Sector % of Avg Wages	Rank of Industries
Durable	Computer and Electronic Product Manufacturing	15%	30%	17%	1.0
Nondurable	Chemical Manufacturing	8%	29%	12%	2.0
Durable	Transportation Equipment Manufacturing	23%	10%	5%	3.0
Durable	Miscellaneous Manufacturing	11%	9%	8%	4.0
Durable	Machinery Manufacturing	9%	7%	12%	5.0
Durable	Fabricated Metal Product Manufacturing	8%	3%	9%	6.0
Nondurable	Food and beverage and tobacco products manufacturing	7%	4%	8%	7.0

The top 7 subsectors account for approximately 82% of the manufacturing sector's overall contribution. Table 8 provides another look at the subsector comparison.

Examples of top Industries within computer and electronic product manufacturing which account for approximately 68% of that subsector's jobs and wages are:

- Radio and television broadcasting and wireless communications equipment manufacturing
- Electro-medical and electrotherapeutic apparatus manufacturing
- Other electronic component manufacturing
- Semiconductor and related device manufacturing
- Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing
- Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables
- Analytical laboratory instrument manufacturing
- Printed circuit assembly (electronic assembly) manufacturing
- Other measuring and controlling device manufacturing
- Electronic connector manufacturing

Examples of top industries within chemical manufacturing which account for approximately 78% of that subsector's for jobs and wages are:

- In-vitro diagnostic substance manufacturing
- Pharmaceutical preparation manufacturing
- Biological product (except diagnostic) manufacturing
- Medicinal and botanical manufacturing
- Polish and other sanitation good manufacturing
- All other basic organic chemical manufacturing
- Synthetic rubber manufacturing

**Table 9: San Diego County Professional, Scientific, and Technical Services Subsector Summary**

Sector Industry	4th Digit NAICS Industry Group	Sector % of Jobs	Sector % of Avg Wages	Rank of Industries
Professional, scientific, and technical services	Architectural, Engineering, and Related Services	15%	16%	1
	Computer Systems Design and Related Services	17%	14%	2
	Management, Scientific, and Technical Consulting Services	10%	19%	3
	Scientific Research and Development Services	17%	12%	4
	Advertising, Public Relations, and Related Services	16%	12%	5
	Other Professional, Scientific, and Technical Services	6%	9%	6
	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	8%	6%	7
	Legal Services	10%	5%	8
	Specialized Design Services	1%	8%	9

Table 9 shows greater detail about the subsectors within Professional, Scientific, and Technical Services. GDP information is not available at this level for San Diego County, so the other economic indicators (direct employment and average wage) were the only ones used for the comparison.

**Figure 10: San Diego County Professional, Scientific, and Technical Services Subsector Comparison**

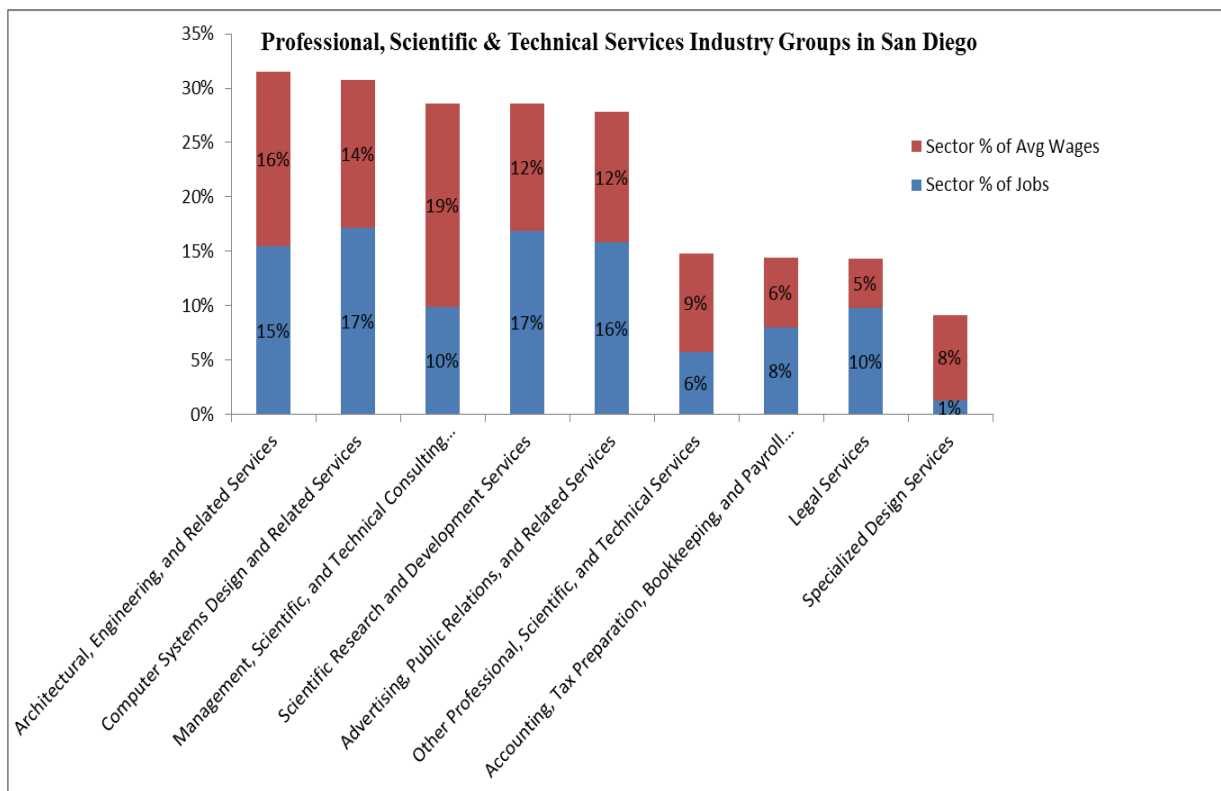


Figure 10 shows that Architectural, Engineering, and Related Services and Computer Systems Design and Related Services are the top subsectors for the sector.

## Analysis of Orange County

Although most of SDG&E's service area is in San Diego County, it also provides services Orange County in the following zip codes:

92679, 92675, 92692, 92688, 92691, 92653, 92656, 92651, 92694, 92677, 92629, 92673, 92624, 92672

Altogether, these zip codes account for approximately 16% of Orange County's population. Unfortunately, there is no availability of economic indicator data specifically by zip code. Data has been obtained for the entire county; however, including overall employment by industry, average wages by industry, and regional GDP by industry. We applied the same method we used in San Diego, that is, converted the six-digit NAICS codes into two-digit codes, and then generated a description of the economic mix of Orange County while avoiding double counting. The data follows below:

**Table 10: Orange County Total Labor by Sector**

Sector	2014 Orange County Direct Employment		
	Total Number of Paid Employees	Sector % of Jobs	Rank of # of Jobs
Manufacturing	42,915	26%	1
Arts, entertainment, and recreation	39,812	24%	2
Retail trade	34,031	21%	3
Finance and insurance	14,404	9%	4
Transportation and warehousing	5,719	3%	5
Utilities	4,356	3%	6
Accommodation and Food Service	3,819	2%	7
Professional, scientific, and technical services	3,499	2%	8
Health care and social assistance	3,482	2%	9
Wholesale trade	3,301	2%	10
Administrative and support and waste management and remediation services	2,368	1%	11
Information	2,150	1%	12
Other services (except public administration)	1,637	1%	13
Construction	924	1%	14
Educational services	819	0%	15
Real estate and rental and leasing	737	0%	16
Mining, quarrying, and oil and gas extraction	217	0%	17
Agriculture, forestry, fishing and hunting	157	0%	18
Management of companies and enterprises	10	0%	19

Table 10 shows the overall direct employment by sector for Orange County. Manufacturing is the top with Arts, Entertainment, and Recreation and Retail Trade close behind.

Figure 11: Orange County GRP by Industry

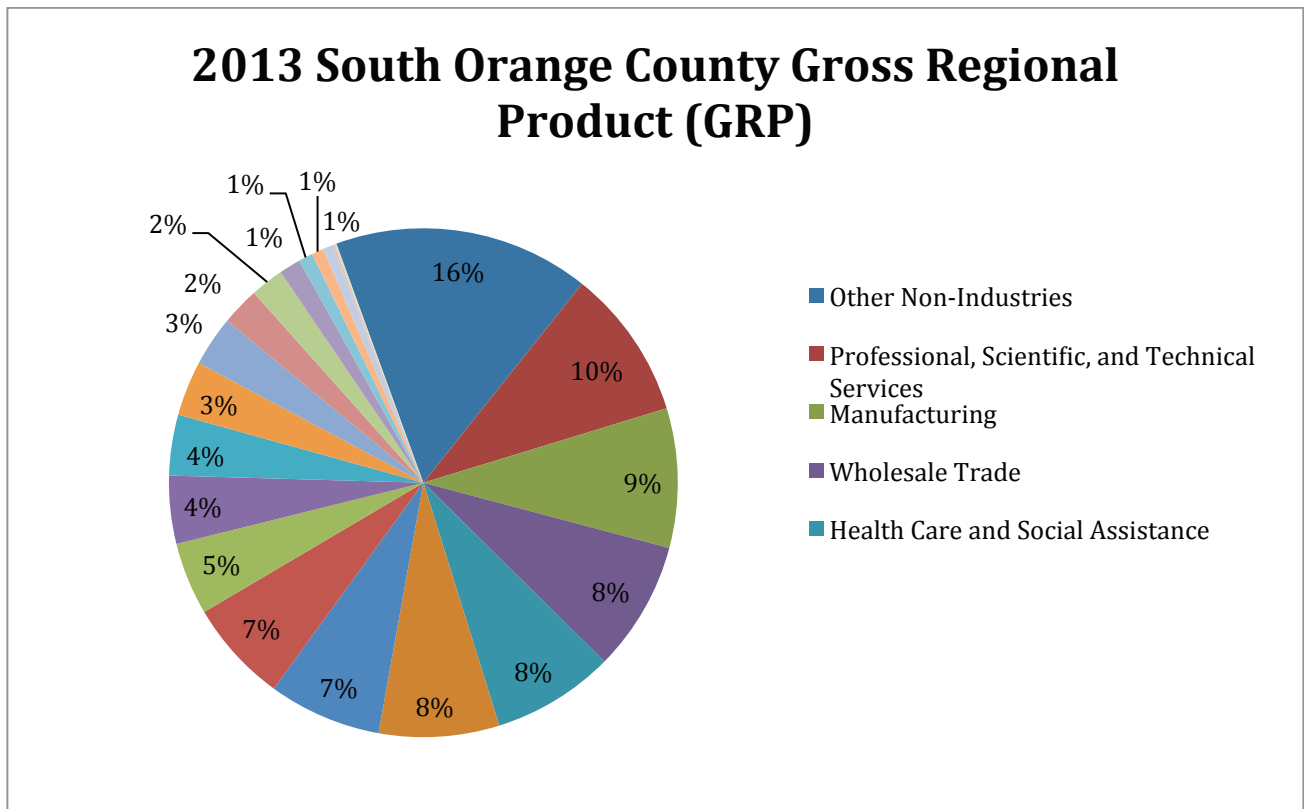


Figure 11 shows the GRP for the Southern Orange County region. The top five sectors are highlighted.

Table 11: Orange County Average Wage by Industry

Sector	2014 Orange County Average Wage		
	Average Wage (\$1000)	Sector % of Avg Wages	Rank of Avg Wage
Manufacturing	8,914	28%	1
Wholesale trade	4,384	14%	2
Professional, scientific, and technical services	3,014	9%	3
Finance and insurance	2,043	6%	4
Retail trade	1,909	6%	5
Construction	1,829	6%	6
Administrative and support and waste management and remediation services	1,738	5%	7
Other services (except public administration)	1,563	5%	8
Information	1,320	4%	9
Health care and social assistance	1,318	4%	10
Real estate and rental and leasing	1,251	4%	11
Transportation and warehousing	946	3%	12
Arts, entertainment, and recreation	655	2%	13
Educational services	490	2%	14
Accommodation and Food Service	236	1%	15
Management of companies and enterprises	206	1%	16
Mining, quarrying, and oil and gas extraction	185	1%	17
Agriculture, forestry, fishing and hunting	79	0%	18
Utilities	75	0%	19

Table 11 shows the rank of the industries for average wages.



The data gathered on Orange County shows a strong presence of the manufacturing sector on the regional economy. Manufacturing leads both in overall employment and wage contribution accounting for 26% and 28% respectively. Manufacturing is clearly the most important industry to the Orange County economy.

Although no other industry stood out as clearly as manufacturing in Orange County there are some other industries that are worth noting. Wholesale Trade ranked second in terms of wages contributing 14% to overall wages while accounting for only 2% in total employment. Conversely, Arts, Entertainment and Recreation accounted for 24% of overall employment while contributing only 2% to wages. These two industries are of particular note due to the strong presence in one category but weak presence in another.

Despite the quality of data gathered, regrettably there is no way to use this data to accurately assess the economic character of the zip codes covered in SDG&E's service area from the data obtained. The temptation would be to take the current data on Orange County as a whole and reduce the numbers to 16% of county levels to reflect SDG&E's service area. The danger of implementing such an approach is that there is no way to be certain how many business entities are in the zip codes in SDG&E's service area. Without an understanding of the concentration of the industries in Orange County, making such an assumption could jeopardize the integrity of the research and unfairly bias results.

## ***Recommendation***

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### **Selection of Economic Indicators**

Based upon the available information, the economic indicators we selected were average wage, direct labor, and GDP. We chose these indicators because they had detailed information available by geographic region, allowing in depth analysis, and because they all measure different aspects of how a company contributes to the economy of the region. They demonstrate how many people they actually employ, the quality of those jobs, and the total impact to the region based upon their activity. This gives a full picture of what a company offers to SDG&E's service area. Because each of the indicators provides slightly different information, we decided to analyze and use all three rather than narrowing them down.

### **Selection of Priority Industries**

We recommend that SDG&E pursue offering the enhanced EDR rate to the (1) manufacturing sector and (2) the professional, scientific, and technical services sector based upon their total wage, GDP, and employment contribution to the economy of their service area. We also recommend that SDG&E implement the program with a focus on NAICS classification of companies because it allows for a categorization that is consistent and can be easily compared to available data. The two sectors chosen encompass 331 six-digit NAICS codes for San Diego industries, which is why we recommend focusing only on those two sectors, as they are fairly large categories. The same data we gathered could be utilized to a more granular level of subsector or industry, as further explored below.

If SDG&E wishes to narrow the scope of its enhanced EDR, we recommend it focus on the subsectors that create the highest economic impact within the Manufacturing and Professional, Scientific, and Technical Services sectors. Depending on the weight SDG&E would like to give to average wage, employment, or if it'd like to weigh both equally, it can decide which of these subsectors to offer the enhanced EDR to, as demonstrated below in Tables 12, 13, and 14. No matter which combination of sectors and subsectors SDG&E chooses, it should be able to quickly determine which companies the enhanced EDR will apply, as the tax filings of businesses provide their NAICS codes. SDG&E can check the latest filing to determine whether to include or exclude a company.

**Table 12: Manufacturing and Professional, Scientific, and Technical Services Subsectors by Average Wage**

Sector	Subsector	% of Subsector Avg Wage (Avg)	Rank
Manufacturing	Computer and Electronic Product Manufacturing	3.64%	1
Manufacturing	Chemical Manufacturing	2.68%	2
Manufacturing	Machinery Manufacturing	2.62%	3
Manufacturing	Fabricated Metal Product Manufacturing	2.03%	4
Professional, Scientific, and Technical Services	Management, Scientific, and Technical Consulting Services	1.85%	5
Manufacturing	Miscellaneous Manufacturing	1.82%	6
Professional, Scientific, and Technical Services	Architectural, Engineering, and Related Services	1.59%	7
Professional, Scientific, and Technical Services	Computer Systems Design and Related Services	1.33%	8
Professional, Scientific, and Technical Services	Advertising, Public Relations, and Related Services	1.19%	9
Professional, Scientific, and Technical Services	Scientific Research and Development Services	1.15%	10
Manufacturing	Transportation Equipment Manufacturing	1.15%	11
Professional, Scientific, and Technical Services	Other Professional, Scientific, and Technical Services	0.89%	12
Professional, Scientific, and Technical Services	Specialized Design Services	0.78%	13
Professional, Scientific, and Technical Services	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	0.64%	14
Professional, Scientific, and Technical Services	Legal Services	0.45%	15

**Table 13: Manufacturing and Professional, Scientific, and Technical Services Subsectors by Labor**

Sector	Subsector	% of Subsector Jobs (total SD Jobs)	Rank
Professional, Scientific, and Technical Services	Computer Systems Design and Related Services	1.91%	1
Manufacturing	Transportation Equipment Manufacturing	1.89%	2
Professional, Scientific, and Technical Services	Scientific Research and Development Services	1.88%	3
Professional, Scientific, and Technical Services	Advertising, Public Relations, and Related Services	1.76%	4
Professional, Scientific, and Technical Services	Architectural, Engineering, and Related Services	1.72%	5
Manufacturing	Computer and Electronic Product Manufacturing	1.25%	6
Professional, Scientific, and Technical Services	Management, Scientific, and Technical Consulting Services	1.10%	7
Professional, Scientific, and Technical Services	Legal Services	1.09%	8
Manufacturing	Miscellaneous Manufacturing	0.90%	9
Professional, Scientific, and Technical Services	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	0.89%	10
Manufacturing	Machinery Manufacturing	0.71%	11
Manufacturing	Chemical Manufacturing	0.70%	12
Manufacturing	Fabricated Metal Product Manufacturing	0.68%	13
Professional, Scientific, and Technical Services	Other Professional, Scientific, and Technical Services	0.64%	14
Professional, Scientific, and Technical Services	Specialized Design Services	0.14%	15

**Table 14: Manufacturing and Professional, Scientific, and Technical Services Subsectors by Labor and Wage**

Sector	Subsector	% of Subsector Jobs (total SD Jobs)	% of Subs	Sum	Rank
Manufacturing	Computer and Electronic Product Manufacturing	1.25%	3.64%	4.90%	1
Manufacturing	Chemical Manufacturing	0.70%	2.68%	3.38%	2
Manufacturing	Machinery Manufacturing	0.71%	2.62%	3.33%	3
Professional, Scientific, and Technical Services	Architectural, Engineering, and Related Services	1.72%	1.59%	3.30%	4
Professional, Scientific, and Technical Services	Computer Systems Design and Related Services	1.91%	1.33%	3.25%	5
Manufacturing	Transportation Equipment Manufacturing	1.89%	1.15%	3.03%	6
Professional, Scientific, and Technical Services	Scientific Research and Development Services	1.88%	1.15%	3.03%	7
Professional, Scientific, and Technical Services	Advertising, Public Relations, and Related Services	1.76%	1.19%	2.95%	8
Professional, Scientific, and Technical Services	Management, Scientific, and Technical Consulting Services	1.10%	1.85%	2.95%	9
Manufacturing	Miscellaneous Manufacturing	0.90%	1.82%	2.72%	10
Manufacturing	Fabricated Metal Product Manufacturing	0.68%	2.03%	2.72%	11
Professional, Scientific, and Technical Services	Legal Services	1.09%	0.45%	1.54%	12
Professional, Scientific, and Technical Services	Other Professional, Scientific, and Technical Services	0.64%	0.89%	1.53%	13
Professional, Scientific, and Technical Services	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	0.89%	0.64%	1.52%	14
Professional, Scientific, and Technical Services	Specialized Design Services	0.14%	0.78%	0.92%	15

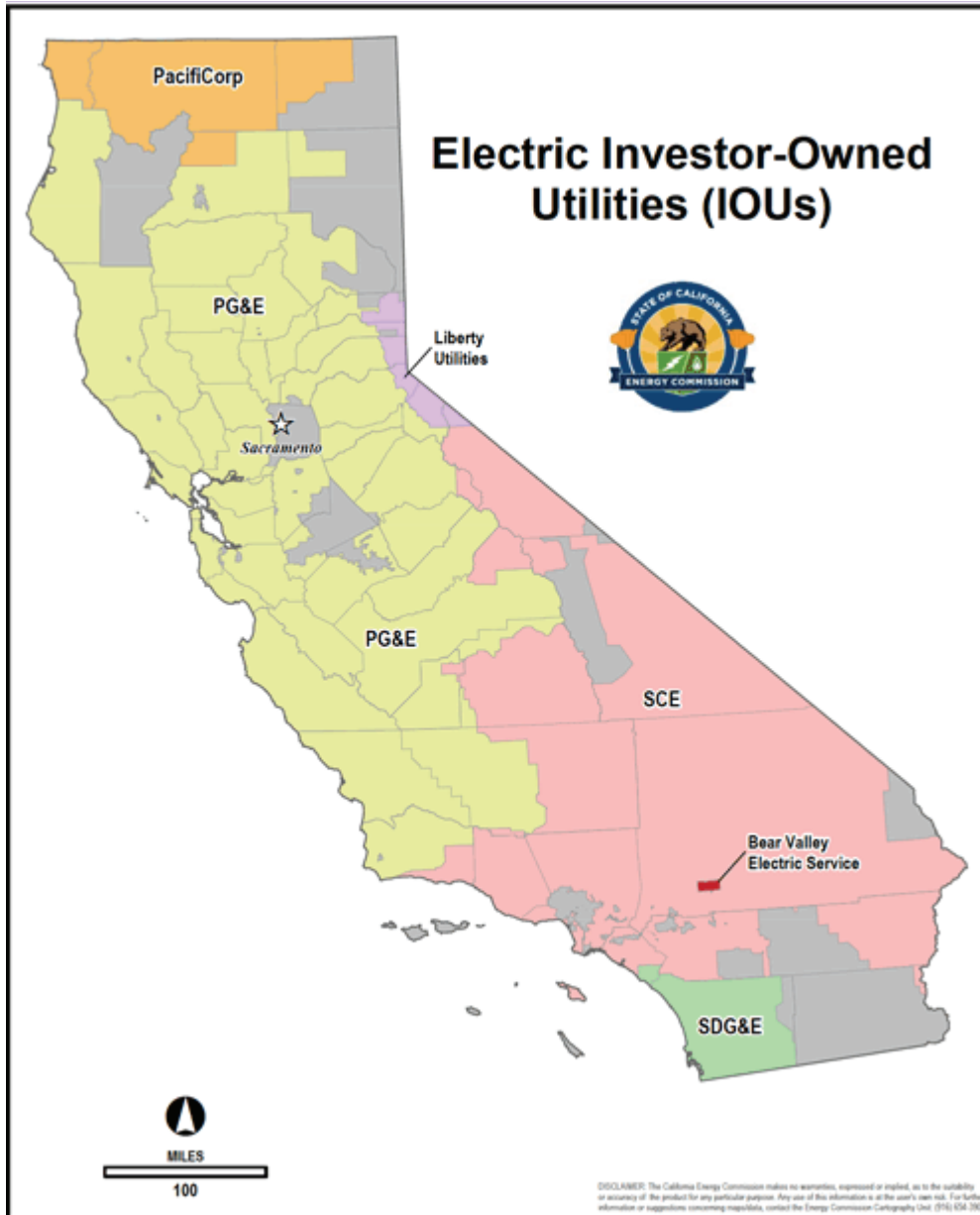
In the future, SDG&E can readily update the Excel file provided by the team with the latest reports by the Bureau of Economic Analysis for GDP figures and by the US Census Bureau for wage and direct labor information. This would allow for quick re-evaluation of the top economic contributors to SDG&E's service area over time, ensuring the enhanced EDR targets the highest economically contributing industries.

## *Appendices*

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## Appendix 2: Additional Figures and Tables

Figure 12: Map of California Investor Owned Utilities' Service Areas

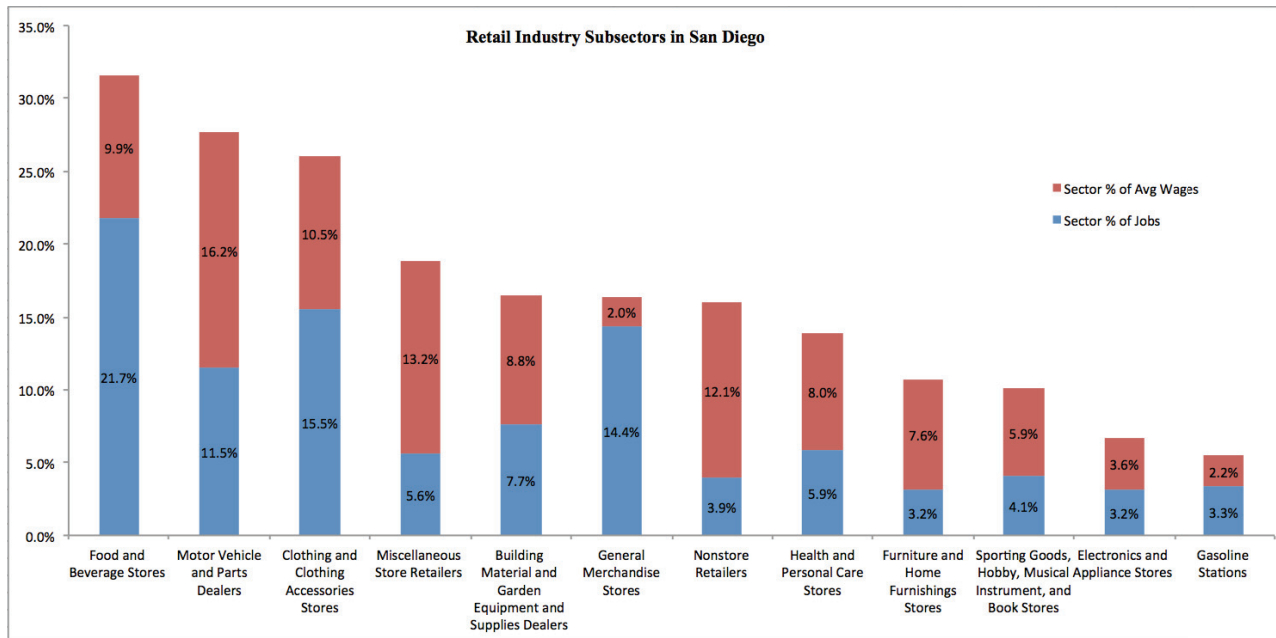


Source: California Energy Commission

Table 15: San Diego County Retail Trade Subsector Economic Indicators

3rd Digit NAICS Subsector	Sector % of Jobs	Sector % of Avg Wages	Rank of Subsector
Food and Beverage Stores	21.7%	9.9%	1
Motor Vehicle and Parts Dealers	11.5%	16.2%	2
Clothing and Clothing Accessories Stores	15.5%	10.5%	3
Miscellaneous Store Retailers	5.6%	13.2%	4
Building Material and Garden Equipment and Supplies Dealers	7.7%	8.8%	5
General Merchandise Stores	14.4%	2.0%	6
Nonstore Retailers	3.9%	12.1%	7
Health and Personal Care Stores	5.9%	8.0%	8
Furniture and Home Furnishings Stores	3.2%	7.6%	9
Sporting Goods, Hobby, Musical Instrument, and Book Stores	4.1%	5.9%	10
Electronics and Appliance Stores	3.2%	3.6%	11
Gasoline Stations	3.3%	2.2%	12

Figure 13: San Diego County Retail Trade Subsector Comparison



**Table 16: Orange County GRP Detail**

NAICS*	Industry	GRP (2013)	% of Total
11	Crop and Animal Production	\$ 29,992,824	0.11%
21	Mining, Quarrying, and Oil and Gas Extraction	\$ 42,955,300	0.16%
22	Utilities	\$ 835,614,792	3.18%
23	Construction	\$ 1,135,082,241	4.32%
31	Manufacturing	\$ 2,328,357,072	8.86%
42	Wholesale Trade	\$ 2,172,790,697	8.27%
44	Retail Trade	\$ 1,713,705,840	6.52%
48	Transportation and Warehousing	\$ 160,865,645	0.61%
51	Information	\$ 1,015,243,329	3.86%
52	Finance and Insurance	\$ 2,009,869,692	7.65%
53	Real Estate and Rental and Leasing	\$ 1,885,915,508	7.18%
54	Professional, Scientific, and Technical Services	\$ 2,511,898,369	9.56%
55	Management of Companies and Enterprises	\$ 358,780,520	1.37%
56	Administrative and Support and Waste Management and Remediation Services	\$ 1,211,931,337	4.61%
61	Educational Services	\$ 239,345,547	0.91%
62	Health Care and Social Assistance	\$ 2,043,474,884	7.78%
71	Arts, Entertainment, and Recreation	\$ 199,806,458	0.76%
72	Accommodation and Food Services	\$ 915,909,445	3.49%
81	Other Services (except Public Administration)	\$ 555,158,578	2.11%
90	Government	\$ 638,159,555	2.43%
	Other Non-Industries	\$ 4,276,041,416	16.27%

**Table 17: Manufacturing 6-Digit NAICS Code Industries**

6-Digit NAICS Code	Industry
311111	Dog and Cat Food Manufacturing
311119	Other Animal Food Manufacturing
311211	Flour Milling
311212	Rice Milling
311213	Malt Manufacturing
311221	Wet Corn Milling
311224	Soybean and Other Oilseed Processing
311225	Fats and Oils Refining and Blending
311230	Breakfast Cereal Manufacturing
311313	Beet Sugar Manufacturing
311314	Cane Sugar Manufacturing
311340	Nonchocolate Confectionery Manufacturing
311351	Chocolate and Confectionery Manufacturing from Cacao Beans
311352	Confectionery Manufacturing from Purchased Chocolate
311411	Frozen Fruit, Juice, and Vegetable Manufacturing
311412	Frozen Specialty Food Manufacturing
311421	Fruit and Vegetable Canning
311422	Specialty Canning
311423	Dried and Dehydrated Food Manufacturing
311511	Fluid Milk Manufacturing
311512	Creamery Butter Manufacturing
311513	Cheese Manufacturing
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
311520	Ice Cream and Frozen Dessert Manufacturing
311611	Animal (except Poultry) Slaughtering
311612	Meat Processed from Carcasses

311613	Rendering and Meat Byproduct Processing
311615	Poultry Processing
311710	Seafood Product Preparation and Packaging
311811	Retail Bakeries
311812	Commercial Bakeries
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
311821	Cookie and Cracker Manufacturing
311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour
311830	Tortilla Manufacturing
311911	Roasted Nuts and Peanut Butter Manufacturing
311919	Other Snack Food Manufacturing
311920	Coffee and Tea Manufacturing
311930	Flavoring Syrup and Concentrate Manufacturing
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
311942	Spice and Extract Manufacturing
311991	Perishable Prepared Food Manufacturing
311999	All Other Miscellaneous Food Manufacturing
312111	Soft Drink Manufacturing
312112	Bottled Water Manufacturing
312113	Ice Manufacturing
312120	Breweries
312130	Wineries
312140	Distilleries
312230	Tobacco Manufacturing
313110	Fiber, Yarn, and Thread Mills
313210	Broadwoven Fabric Mills
313220	Narrow Fabric Mills and Schiffli Machine Embroidery
313230	Nonwoven Fabric Mills
313240	Knit Fabric Mills
313310	Textile and Fabric Finishing Mills
313320	Fabric Coating Mills
314110	Carpet and Rug Mills
314120	Curtain and Linen Mills
314910	Textile Bag and Canvas Mills
314994	Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills
314999	All Other Miscellaneous Textile Product Mills
315110	Hosiery and Sock Mills
315190	Other Apparel Knitting Mills
315210	Cut and Sew Apparel Contractors
315220	Men's and Boys' Cut and Sew Apparel Manufacturing
315240	Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing
315280	Other Cut and Sew Apparel Manufacturing
315990	Apparel Accessories and Other Apparel Manufacturing
316110	Leather and Hide Tanning and Finishing



316210	Footwear Manufacturing
316992	Women's Handbag and Purse Manufacturing
316998	All Other Leather Good and Allied Product Manufacturing
321113	Sawmills
321114	Wood Preservation
321211	Hardwood Veneer and Plywood Manufacturing
321212	Softwood Veneer and Plywood Manufacturing
321213	Engineered Wood Member (except Truss) Manufacturing
321214	Truss Manufacturing
321219	Reconstituted Wood Product Manufacturing
321911	Wood Window and Door Manufacturing
321912	Cut Stock, Resawing Lumber, and Planing
321918	Other Millwork (including Flooring)
321920	Wood Container and Pallet Manufacturing
321991	Manufactured Home (Mobile Home) Manufacturing
321992	Prefabricated Wood Building Manufacturing
321999	All Other Miscellaneous Wood Product Manufacturing
322110	Pulp Mills
322121	Paper (except Newsprint) Mills
322122	Newsprint Mills
322130	Paperboard Mills
322211	Corrugated and Solid Fiber Box Manufacturing
322212	Folding Paperboard Box Manufacturing
322219	Other Paperboard Container Manufacturing
322220	Paper Bag and Coated and Treated Paper Manufacturing
322230	Stationery Product Manufacturing
322291	Sanitary Paper Product Manufacturing
322299	All Other Converted Paper Product Manufacturing
323111	Commercial Printing (except Screen and Books)
323113	Commercial Screen Printing
323117	Books Printing
323120	Support Activities for Printing
324110	Petroleum Refineries
324121	Asphalt Paving Mixture and Block Manufacturing
324122	Asphalt Shingle and Coating Materials Manufacturing
324191	Petroleum Lubricating Oil and Grease Manufacturing
324199	All Other Petroleum and Coal Products Manufacturing
325110	Petrochemical Manufacturing
325120	Industrial Gas Manufacturing
325130	Synthetic Dye and Pigment Manufacturing
325180	Other Basic Inorganic Chemical Manufacturing
325193	Ethyl Alcohol Manufacturing
325194	Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing
325199	All Other Basic Organic Chemical Manufacturing

325211	Plastics Material and Resin Manufacturing
325212	Synthetic Rubber Manufacturing
325220	Artificial and Synthetic Fibers and Filaments Manufacturing
325311	Nitrogenous Fertilizer Manufacturing
325312	Phosphatic Fertilizer Manufacturing
325314	Fertilizer (Mixing Only) Manufacturing
325320	Pesticide and Other Agricultural Chemical Manufacturing
325411	Medicinal and Botanical Manufacturing
325412	Pharmaceutical Preparation Manufacturing
325413	In-Vitro Diagnostic Substance Manufacturing
325414	Biological Product (except Diagnostic) Manufacturing
325510	Paint and Coating Manufacturing
325520	Adhesive Manufacturing
325611	Soap and Other Detergent Manufacturing
325612	Polish and Other Sanitation Good Manufacturing
325613	Surface Active Agent Manufacturing
325620	Toilet Preparation Manufacturing
325910	Printing Ink Manufacturing
325920	Explosives Manufacturing
325991	Custom Compounding of Purchased Resins
325992	Photographic Film, Paper, Plate, and Chemical Manufacturing
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing
326111	Plastics Bag and Pouch Manufacturing
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing
326121	Unlaminated Plastics Profile Shape Manufacturing
326122	Plastics Pipe and Pipe Fitting Manufacturing
326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing
326140	Polystyrene Foam Product Manufacturing
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
326160	Plastics Bottle Manufacturing
326191	Plastics Plumbing Fixture Manufacturing
326199	All Other Plastics Product Manufacturing
326211	Tire Manufacturing (except Retreading)
326212	Tire Retreading
326220	Rubber and Plastics Hoses and Belting Manufacturing
326291	Rubber Product Manufacturing for Mechanical Use
326299	All Other Rubber Product Manufacturing
327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing
327120	Clay Building Material and Refractories Manufacturing
327211	Flat Glass Manufacturing
327212	Other Pressed and Blown Glass and Glassware Manufacturing
327213	Glass Container Manufacturing
327215	Glass Product Manufacturing Made of Purchased Glass

327310	Cement Manufacturing
327320	Ready-Mix Concrete Manufacturing
327331	Concrete Block and Brick Manufacturing
327332	Concrete Pipe Manufacturing
327390	Other Concrete Product Manufacturing
327410	Lime Manufacturing
327420	Gypsum Product Manufacturing
327910	Abrasive Product Manufacturing
327991	Cut Stone and Stone Product Manufacturing
327992	Ground or Treated Mineral and Earth Manufacturing
327993	Mineral Wool Manufacturing
327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing
331110	Iron and Steel Mills and Ferroalloy Manufacturing
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
331221	Rolled Steel Shape Manufacturing
331222	Steel Wire Drawing
331313	Alumina Refining and Primary Aluminum Production
331314	Secondary Smelting and Alloying of Aluminum
331315	Aluminum Sheet, Plate, and Foil Manufacturing
331318	Other Aluminum Rolling, Drawing, and Extruding
331410	Nonferrous Metal (except Aluminum) Smelting and Refining
331420	Copper Rolling, Drawing, Extruding, and Alloying
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
331511	Iron Foundries
331512	Steel Investment Foundries
331513	Steel Foundries (except Investment)
331523	Nonferrous Metal Die-Casting Foundries
331524	Aluminum Foundries (except Die-Casting)
331529	Other Nonferrous Metal Foundries (except Die-Casting)
332111	Iron and Steel Forging
332112	Nonferrous Forging
332114	Custom Roll Forming
332117	Powder Metallurgy Part Manufacturing
332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)
332215	Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing
332216	Saw Blade and Handtool Manufacturing
332311	Prefabricated Metal Building and Component Manufacturing
332312	Fabricated Structural Metal Manufacturing
332313	Plate Work Manufacturing
332321	Metal Window and Door Manufacturing
332322	Sheet Metal Work Manufacturing
332323	Ornamental and Architectural Metal Work Manufacturing

332410	Power Boiler and Heat Exchanger Manufacturing
332420	Metal Tank (Heavy Gauge) Manufacturing
332431	Metal Can Manufacturing
332439	Other Metal Container Manufacturing
332510	Hardware Manufacturing
332613	Spring Manufacturing
332618	Other Fabricated Wire Product Manufacturing
332710	Machine Shops
332721	Precision Turned Product Manufacturing
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing
332811	Metal Heat Treating
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring
332911	Industrial Valve Manufacturing
332912	Fluid Power Valve and Hose Fitting Manufacturing
332913	Plumbing Fixture Fitting and Trim Manufacturing
332919	Other Metal Valve and Pipe Fitting Manufacturing
332991	Ball and Roller Bearing Manufacturing
332992	Small Arms Ammunition Manufacturing
332993	Ammunition (except Small Arms) Manufacturing
332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing
332996	Fabricated Pipe and Pipe Fitting Manufacturing
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
333111	Farm Machinery and Equipment Manufacturing
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
333120	Construction Machinery Manufacturing
333131	Mining Machinery and Equipment Manufacturing
333132	Oil and Gas Field Machinery and Equipment Manufacturing
333241	Food Product Machinery Manufacturing
333242	Semiconductor Machinery Manufacturing
333243	Sawmill, Woodworking, and Paper Machinery Manufacturing
333244	Printing Machinery and Equipment Manufacturing
333249	Other Industrial Machinery Manufacturing
333314	Optical Instrument and Lens Manufacturing
333316	Photographic and Photocopying Equipment Manufacturing
333318	Other Commercial and Service Industry Machinery Manufacturing
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing
333414	Heating Equipment (except Warm Air Furnaces) Manufacturing
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing
333511	Industrial Mold Manufacturing
333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing
333515	Cutting Tool and Machine Tool Accessory Manufacturing

333517	Machine Tool Manufacturing
333519	Rolling Mill and Other Metalworking Machinery Manufacturing
333611	Turbine and Turbine Generator Set Units Manufacturing
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing
333613	Mechanical Power Transmission Equipment Manufacturing
333618	Other Engine Equipment Manufacturing
333911	Pump and Pumping Equipment Manufacturing
333912	Air and Gas Compressor Manufacturing
333913	Measuring and Dispensing Pump Manufacturing
333921	Elevator and Moving Stairway Manufacturing
333922	Conveyor and Conveying Equipment Manufacturing
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing
333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing
333991	Power-Driven Handtool Manufacturing
333992	Welding and Soldering Equipment Manufacturing
333993	Packaging Machinery Manufacturing
333994	Industrial Process Furnace and Oven Manufacturing
333995	Fluid Power Cylinder and Actuator Manufacturing
333996	Fluid Power Pump and Motor Manufacturing
333997	Scale and Balance Manufacturing
333999	All Other Miscellaneous General Purpose Machinery Manufacturing
334111	Electronic Computer Manufacturing
334112	Computer Storage Device Manufacturing
334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing
334210	Telephone Apparatus Manufacturing
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
334290	Other Communications Equipment Manufacturing
334310	Audio and Video Equipment Manufacturing
334412	Bare Printed Circuit Board Manufacturing
334413	Semiconductor and Related Device Manufacturing
334416	Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing
334417	Electronic Connector Manufacturing
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
334419	Other Electronic Component Manufacturing
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
334514	Totalizing Fluid Meter and Counting Device Manufacturing
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
334516	Analytical Laboratory Instrument Manufacturing

334517	Irradiation Apparatus Manufacturing
334519	Other Measuring and Controlling Device Manufacturing
334613	Blank Magnetic and Optical Recording Media Manufacturing
334614	Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing
335110	Electric Lamp Bulb and Part Manufacturing
335121	Residential Electric Lighting Fixture Manufacturing
335122	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing
335129	Other Lighting Equipment Manufacturing
335210	Small Electrical Appliance Manufacturing
335221	Household Cooking Appliance Manufacturing
335222	Household Refrigerator and Home Freezer Manufacturing
335224	Household Laundry Equipment Manufacturing
335228	Other Major Household Appliance Manufacturing
335311	Power, Distribution, and Specialty Transformer Manufacturing
335312	Motor and Generator Manufacturing
335313	Switchgear and Switchboard Apparatus Manufacturing
335314	Relay and Industrial Control Manufacturing
335911	Storage Battery Manufacturing
335912	Primary Battery Manufacturing
335921	Fiber Optic Cable Manufacturing
335929	Other Communication and Energy Wire Manufacturing
335931	Current-Carrying Wiring Device Manufacturing
335932	Noncurrent-Carrying Wiring Device Manufacturing
335991	Carbon and Graphite Product Manufacturing
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing
336111	Automobile Manufacturing
336112	Light Truck and Utility Vehicle Manufacturing
336120	Heavy Duty Truck Manufacturing
336211	Motor Vehicle Body Manufacturing
336212	Truck Trailer Manufacturing
336213	Motor Home Manufacturing
336214	Travel Trailer and Camper Manufacturing
336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
336340	Motor Vehicle Brake System Manufacturing
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
336360	Motor Vehicle Seating and Interior Trim Manufacturing
336370	Motor Vehicle Metal Stamping
336390	Other Motor Vehicle Parts Manufacturing
336411	Aircraft Manufacturing
336412	Aircraft Engine and Engine Parts Manufacturing
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
336414	Guided Missile and Space Vehicle Manufacturing

336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
336510	Railroad Rolling Stock Manufacturing
336611	Ship Building and Repairing
336612	Boat Building
336991	Motorcycle, Bicycle, and Parts Manufacturing
336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing
336999	All Other Transportation Equipment Manufacturing
337110	Wood Kitchen Cabinet and Countertop Manufacturing
337121	Upholstered Household Furniture Manufacturing
337122	Nonupholstered Wood Household Furniture Manufacturing
337124	Metal Household Furniture Manufacturing
337125	Household Furniture (except Wood and Metal) Manufacturing
337127	Institutional Furniture Manufacturing
337211	Wood Office Furniture Manufacturing
337212	Custom Architectural Woodwork and Millwork Manufacturing
337214	Office Furniture (except Wood) Manufacturing
337215	Showcase, Partition, Shelving, and Locker Manufacturing
337910	Mattress Manufacturing
337920	Blind and Shade Manufacturing
339112	Surgical and Medical Instrument Manufacturing
339113	Surgical Appliance and Supplies Manufacturing
339114	Dental Equipment and Supplies Manufacturing
339115	Ophthalmic Goods Manufacturing
339116	Dental Laboratories
339910	Jewelry and Silverware Manufacturing
339920	Sporting and Athletic Goods Manufacturing
339930	Doll, Toy, and Game Manufacturing
339940	Office Supplies (except Paper) Manufacturing
339950	Sign Manufacturing
339991	Gasket, Packing, and Sealing Device Manufacturing
339992	Musical Instrument Manufacturing
339993	Fastener, Button, Needle, and Pin Manufacturing
339994	Broom, Brush, and Mop Manufacturing
339995	Burial Casket Manufacturing
339999	All Other Miscellaneous Manufacturing

**Table 18: Professional, Scientific and Technical 6-Digit NAICS Code Industries**

<b>6-Digit NAICS Code</b>	<b>Industry</b>
541110	Offices of Lawyers
541120	Offices of Notaries
541191	Title Abstract and Settlement Offices
541199	All Other Legal Services

541211	Offices of Certified Public Accountants
541213	Tax Preparation Services
541214	Payroll Services
541219	Other Accounting Services
541310	Architectural Services
541320	Landscape Architectural Services
541330	Engineering Services
541340	Drafting Services
541350	Building Inspection Services
541360	Geophysical Surveying and Mapping Services
541370	Surveying and Mapping (except Geophysical) Services
541380	Testing Laboratories
541410	Interior Design Services
541420	Industrial Design Services
541430	Graphic Design Services
541490	Other Specialized Design Services
541511	Custom Computer Programming Services
541512	Computer Systems Design Services
541513	Computer Facilities Management Services
541519	Other Computer Related Services
541611	Administrative Management and General Management Consulting Services
541612	Human Resources Consulting Services
541613	Marketing Consulting Services
541614	Process, Physical Distribution, and Logistics Consulting Services
541618	Other Management Consulting Services
541620	Environmental Consulting Services
541690	Other Scientific and Technical Consulting Services
541711	Research and Development in Biotechnology
541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)
541720	Research and Development in the Social Sciences and Humanities
541810	Advertising Agencies
541820	Public Relations Agencies
541830	Media Buying Agencies
541840	Media Representatives
541850	Outdoor Advertising
541860	Direct Mail Advertising
541870	Advertising Material Distribution Services
541890	Other Services Related to Advertising
541910	Marketing Research and Public Opinion Polling
541921	Photography Studios, Portrait
541922	Commercial Photography
541930	Translation and Interpretation Services
541940	Veterinary Services
541990	All Other Professional, Scientific, and Technical Services



**APPENDIX B**  
**LETTERS OF SUPPORT**



January 26, 2017

The Honorable Michael Picker  
President  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

RE: Economic Development Rate for San Diego

Dear President Picker:

The Commercial Real Estate Alliance of San Diego (CRASD) is pleased to support San Diego Gas & Electric's (SDG&E) proposal to establish an Economic Development Rate (EDR) to attract, retain and expand business in the San Diego region.

CRASD is one of 34 commercial associations of the National Association of REALTORS® (NAR). We are the umbrella organization for the NAR affiliate organizations which include the CCIM Institute (CCIM), Counselors of Real Estate (CRE), Institute of Real Estate Management (IREM), REALTORS® Land Institute (LI) and Society of Industrial and Office Realtors (SIOR) representing 200 commercial practitioners in San Diego.

SDG&E's proposal includes a Standard 12% EDR and an Enhanced 20 to 30 percent EDR. The Standard EDR will help incentivize businesses looking to move to the San Diego region. The Enhanced EDR will further target specific industries that fall under two priority segments that have high economic, employment and Gross Regional Product impact.

SDG&E's EDR proposal responds directly to the needs of the San Diego economy and the region's ability to be competitive against other states when attracting new and or keeping business. It will further make the San Diego region competitive with the San Francisco and Los Angeles regions that have had an EDR for several years.

CRASD is pleased to support SDG&E's EDR proposal and encourages your approval of this proposal.

Sincerely,

Brian Nelson  
2017 President, CRASD



**SCEDC**  
South County Economic  
Development Council

**Board of Directors**

*AKA American Open*

*AT&T*

*Bank of America*

*Border Fusion Group*

*Buchanan Ingersoll & Rooney, LLP*

*Comprehensive Training Systems*

*Colliers International*

*Cox Communications*

*DEITAC/CDT*

*Falcon Strategies*

*McMillin Companies*

*Mission Federal Credit Union*

*Neighborhood National Bank*

*O.A.P. Packaging, Inc.*

*Pacific Southwest Assoc. of Realtors*

*Public Consulting Group*

*Republic Services*

*San Diego Business Journal*

*San Diego Chamber of Commerce*

*San Diego Regional EDC*

*San Ysidro Health Center*

*SANDAG*

*Schwartz, Semerdjian, Cauley & Moot, LLP*

*Scripps Health*

*San Diego Workforce Partnership*

*SDG&E*

*Seacoast Commerce Bank*

*SeaWorld/Aquatica*

*South Bay Family YMCA*

*Southwestern College*

*Southwest Strategies*

*The Paul Company, LLC*

*Trilogy PR Group*

**Dignitary Council**

*City of Chula Vista*

*City of Coronado*

*City of Imperial Beach*

*City of National City*

*City of San Diego*

*County of San Diego*

*Port of San Diego*

February 22, 2017

The Honorable Michael Picker  
President  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

**RE: Economic Development Rate for San Diego**

Dear President Picker:

The South County Economic Development Council is pleased to support San Diego Gas & Electric's (SDG&E) application to establish an Economic Development Rate (EDR) which would support our region's ability to retain, expand and attract commercial and industrial business customers to the San Diego region.

SDG&E's EDR proposal aligns with San Diego's priority industries: Manufacturing, Life Science, Water Technology, Information and Communication Technology, and Defense. SDG&E worked closely with South County Economic Development Council to tailor their "Standard" and "Expanded" EDRs to include critical parameters that support direct employment and high economic impact to the region. Additionally, SDG&E's "green" incentive for eligible EDR customers supports our region's drought tolerance objectives by incentivizing customers who can demonstrate a 20 percent reduction in water consumption.

SDG&E's proposal would put San Diego on an even playing field with business customers in the Los Angeles and San Francisco regions who have had an EDR for several years.

The South County Economic Development Council is pleased to support SDG&E's EDR proposal and encourages your approval of this proposal.

Sincerely,

A handwritten signature in black ink, appearing to be 'Cindy Gompper-Graves', with a long horizontal flourish extending to the right.

Cindy Gompper-Graves  
President & CEO



## *San Diego East County Economic Development Council*

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February 17, 2017

The Honorable Michael Picker  
President  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

RE: Economic Development Rate for San Diego

Dear President Picker:

The East County Economic Development Council is pleased to support San Diego Gas & Electric's (SDG&E) proposal to establish an Economic Development Rate (EDR) to attract, retain and expand business in the San Diego region.

The SDG&E proposal includes a Standard 12 percent EDR and an Enhanced 20 to 30 percent EDR. The Standard EDR will help incentivize businesses looking to move to the San Diego region. The Enhanced EDR will further target specific industries that fall under two priority segments that have high economic, employment and Gross Regional Product impact.

The SDG&E EDR proposal responds directly to the needs of the San Diego economy and the region's ability to be competitive against other states when attracting new business. Economic development organizations have very few incentives to offer to firms interested in relocating to, or expanding in, California. In addition, the EDR will make San Diego region competitive with the San Francisco and Los Angeles regions that have had an EDR for several years.

For these reasons, the East County Economic Development Council is pleased to support SDG&E's EDR application and encourages your approval of this proposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Jo Marie Diamond". The signature is stylized and somewhat abstract, with overlapping loops and a long horizontal stroke at the end.

Jo Marie Diamond  
President and CEO

127 E Lexington Avenue  
El Cajon, CA 92020  
(619) 258-3670  
[www.eastcountyedc.org](http://www.eastcountyedc.org)



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February 22, 2017

The Honorable Michael Picker  
President  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

RE: Economic Development Rate for San Diego

Dear President Picker:

The San Diego North Economic Development Council is pleased to support San Diego Gas & Electric's (SDG&E) proposal to establish an Economic Development Rate (EDR) to attract, retain and expand business in the San Diego region.

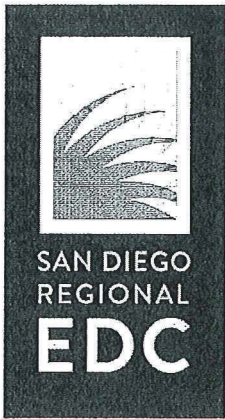
SDG&E's proposal includes a Standard 12% EDR and an Enhanced 20 to 30 percent EDR. The Standard EDR will help incentivize businesses looking to move to the San Diego region. The Enhanced EDR will further target specific industries that fall under two priority segments that have high economic, employment and Gross Regional Product impact.

SDG&E's EDR proposal responds directly to the needs of the San Diego economy and the region's ability to be competitive against other states when attracting new business. It will further make the San Diego region competitive with the San Francisco and Los Angeles regions that have had an EDR for several years.

The San Diego North Economic Development Council is pleased to support SDG&E's EDR proposal and encourages your approval of this proposal.

Sincerely,

Mike Cully  
Chief Executive Officer



February 23, 2017

The Honorable Michael Picker  
President  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Re: Economic Development Rate for San Diego

Dear President Picker:

San Diego Regional Economic Development Corporation is pleased to support San Diego Gas & Electric's (SDG&E) application to establish an Economic Development Rate (EDR) to attract, retain, and expand businesses in the San Diego region.

SDG&E's application includes a Standard 12 percent EDR and an Enhanced 20 to 30 percent EDR. The Standard EDR will help incentivize businesses looking to move to the San Diego region. The Enhanced EDR will further target specific industries that fall under two priority segments that have high economic, employment, and Gross Regional Product impact.

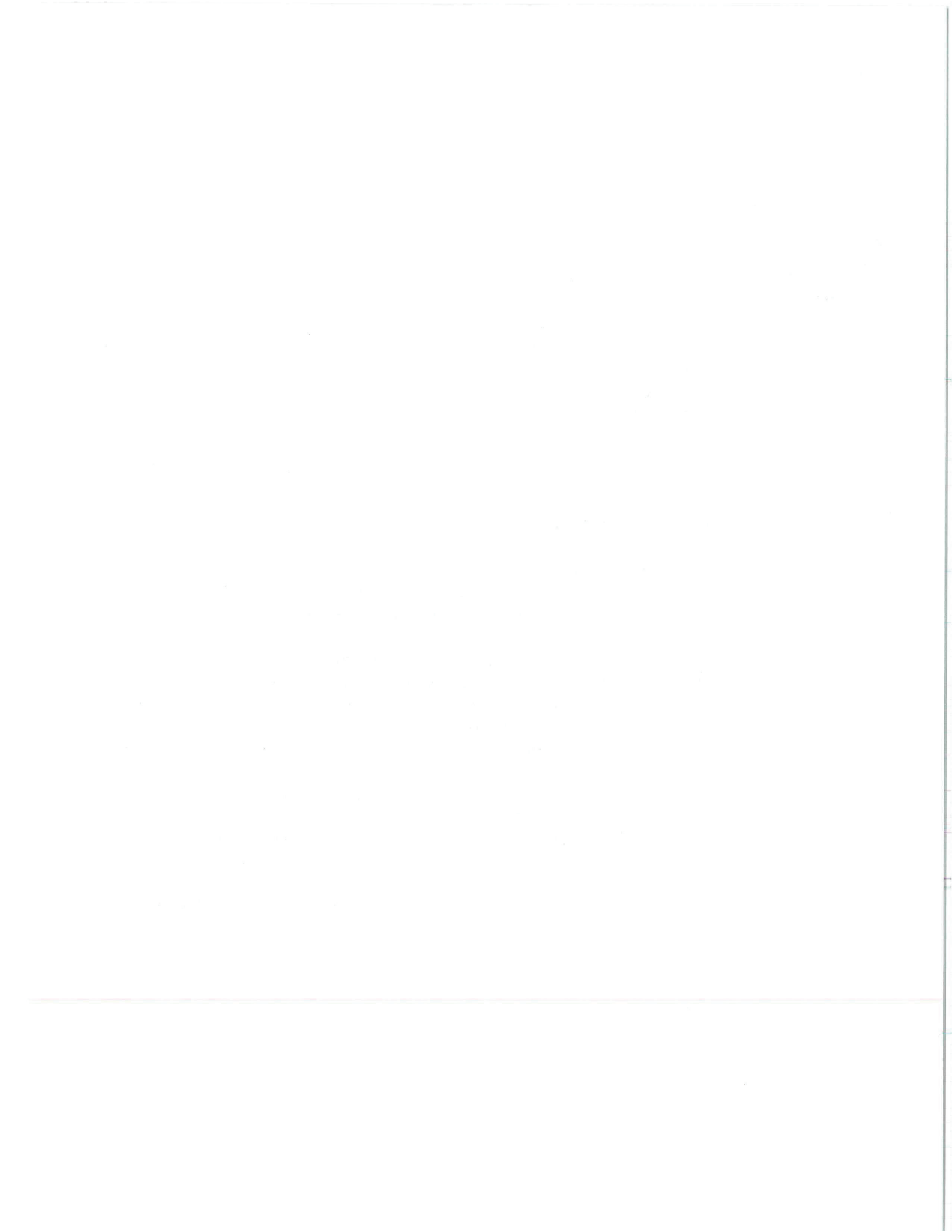
SDG&E's EDR application responds directly to the needs of the San Diego economy and the region's ability to compete with other states when attracting new businesses. It will help to make the San Diego region competitive with the San Francisco and Los Angeles regions that have had EDRs for several years.

San Diego Regional EDC encourages your approval of this proposal. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Cafferty", written over a horizontal line.

Mark Cafferty  
President & CEO







402 West Broadway, Suite 1000  
San Diego, CA 92101-3585  
p: 619.544.1300

[www.sdchamber.org](http://www.sdchamber.org)

February 15, 2017

The Honorable Michael Picker  
President  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

**RE: Support for San Diego Gas & Electric's Economic Development Rate Application**

Dear Mr. Picker:

The San Diego Regional Chamber of Commerce (Chamber) is pleased to support San Diego Gas & Electric's (SDG&E) application to establish two Economic Development Rates (EDRs) to attract, retain, and expand business in the San Diego region.

With approximately 2,500 members representing an estimated 300,000 employees, the Chamber is the largest nonprofit advocate for businesses in the San Diego region. We understand the importance of energy costs to the regional economy and to the efforts of our Chamber and many other organizations in San Diego to recruit, retain, and grow existing businesses.

SDG&E's proposed EDRs are thoughtful and carefully balanced, and respond directly to the needs of the economy of the San Diego region. In addition to the Standard 12-percent discounted EDR, the Enhanced 20-to-30-percent discounted EDR would target specific industries that have high economic, employment, and Gross Regional Product impact.

The Chamber is proud to support SDG&E's EDR application and looks forward to working with you on this important initiative. If you have questions or comments, please do not hesitate to contact Sophie Barnhorst, Policy Coordinator, at (619) 544-1314 or [sbarnhorst@sdchamber.org](mailto:sbarnhorst@sdchamber.org).

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Sanders'.

Jerry Sanders  
President & CEO  
San Diego Regional Chamber of Commerce



**INDUSTRIAL  
ENVIRONMENTAL  
ASSOCIATION**  
*Promoting Industry and  
Protecting the Environment*

February 22, 2017

The Honorable Michael Picker  
President  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

RE: Economic Development Rate for San Diego

Dear President Picker:

The Industrial Environmental Association (IEA) is pleased to support the application from San Diego Gas & Electric's (SDG&E) to establish an Economic Development Rate (EDR). IEA represents approximately 50 manufacturing related businesses in the San Diego region, accounting from more than 55,000 jobs in this area alone.

We believe the EDR represents a critically important tool for attracting, retaining and expanding businesses, particularly manufacturing. Your approval of this application will finally put San Diego on par with the San Francisco and Los Angeles regions of State that have enjoyed an EDR for several years now.

SDG&E's EDR proposal is uniquely designed to fit the needs of the San Diego economy and will enhance the region's competitive positioning versus other states when it comes to attracting new business.

IEA is pleased to support SDG&E's EDR proposal and we encourage your approval of this mechanism that will help San Diego, and California maintain our competitiveness on the national market.

Sincerely,

Jack Monger  
CEO