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**The Fiscal Impact of the  
California Global Warming  
Solutions Act of 2006 on  
San Diego's Local Government**

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July 2012

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**The Fiscal Impact of the California Global Warming Solutions Act of 2006  
on San Diego's Local Government  
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**The Fiscal Impact of the California Global Warming Solutions Act of 2006  
on San Diego's Local Government  
(Key Findings)**

**AB 32 will negatively impact San Diego area governments, specifically the City and County of San Diego, San Diego County Water Authority, and Oceanside School District, by \$80.0 million annually and \$262.5 million cumulatively by 2020.**

**Specifically:**

- AB 32 will reduce local tax revenue by \$59.1 million annually in 2020 and \$172.6 million cumulatively by 2020.
  - This is the equivalent of permanently closing the 36 branch library system, cutting 200 full-time police officers and 236 Deputy Sheriffs.
- At the same time local tax revenues decline, total local costs to these area governments for electricity and water will increase by \$20.9 million annually in 2020 and by \$89.9 million cumulatively by 2020, despite decreasing use of electricity and water (due to greater efficiency).
- San Diego City alone will face an additional \$2.0 million cost annually in 2020, the equivalent of 32 full-time police officers.
- San Diego County will have \$1.0 million in additional costs in 2020, the equivalent of 19 Deputy Sheriff's.
- Additional costs for local water districts due to electricity costs will reach \$17.7 million in the year 2020, which will most likely be passed onto residents with higher rates.

## 1. Introduction

“The Fiscal and Economic Impact of the California Global Warming Solutions Act of 2006 on San Diego’s local government,” by Andrew Chang & Company, LLC is a white paper which details precise impacts from the earlier “The Fiscal and Economic Impact of the California Global Warming Solutions Act of 2006” study of the total fiscal and economic impacts of AB 32 as it has been specified by the California Air Resources Board. In an effort to highlight the impacts to San Diego governments, this report quantifies some of the impacts of these impending policies to the City and County of San Diego, San Diego County Water Authority, and Oceanside School District.

The main report found that the cumulative GSP loss between 2012 and 2020 will be \$85 to \$245 billion between the Low and High Case. In the Optimistic Case, the total impacts to California consumers and the economy in the year 2020 are significant:

- Direct cost to California consumers is \$35.3 billion
- Net effect on Gross State Product is a 5.6 percent loss with 262,000 jobs lost
- \$7.4 billion in lost state and local revenue
- \$12.3 billion in lost statewide earnings
- Average family costs of over \$2,500 a year, in addition to over \$900 in lost annual family earnings

This report includes the impact of increased commodity costs (electricity and water) and lost local tax revenue from decreased economic activity.

## **2. AB 32's Impact on San Diego's Local Government**

AB 32 will increase the cost of commodities, including electricity, transportation fuel, and water, for all consumers, including local governments within San Diego County. Moreover, the economic slowdown caused by AB 32 will reduce the revenues to local governments. In this study, we examine some of the impacts to the City and County of San Diego, San Diego County Water Authority, and Oceanside School District. The City and County both provide public safety and fire protection services, parks, transportation infrastructure, while the County additionally provides health and human services, housing and community development, and environmental services. The Authority provides water wholesale to 24 local water districts in the County for retail sale to residents and businesses, and the Oceanside School District which provides educational services to nearly 20,000 students and employs more than 2,800 individuals.

The cumulative impact to these selected San Diego public entities from 2012 to 2020 will be \$262.5 million, or the equivalent of nearly the total annual expenditures on community services in San Diego County which includes County libraries, housing and community development, redevelopment, the Registrar of Voters, and managing County facilities, major maintenance projects, capital improvements, and fleet management. Table 2.1 details the additional costs and lost revenues resulting from AB 32.

Table 2.1  
Cumulative Additional Cost for Select Local Agencies

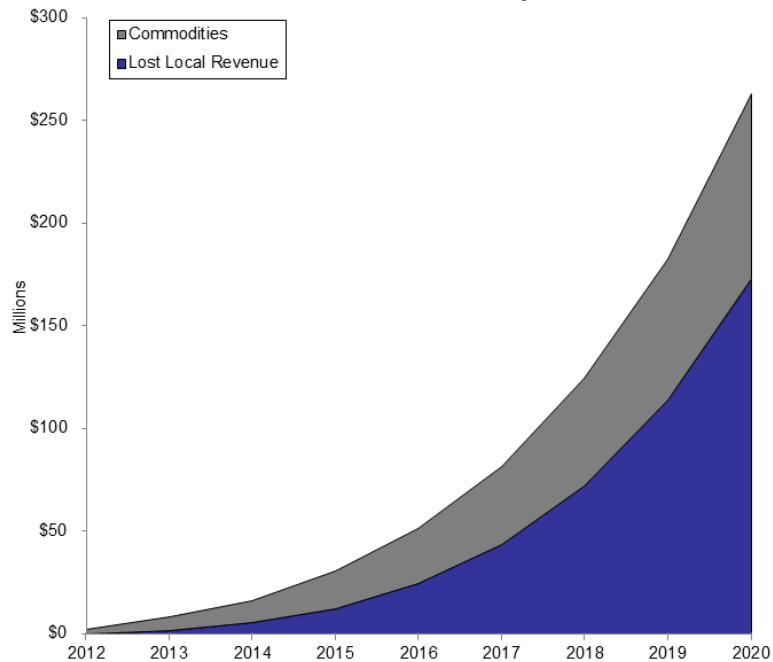
Agency	Electricity	Water	Total
Lost Tax Revenue	n/a	n/a	\$172.6 Million
Water Costs in San Diego Area	n/a	\$75.1 Million	\$75.1 Million
City of San Diego	\$9.4 Million	n/a	\$9.4 Million
County of San Diego	\$4.6 Million	n/a	\$4.6 Million
San Diego County Water Authority	\$0.4 Million	n/a	\$0.4 Million
Oceanside Unified School District	\$0.4 Million	n/a	\$0.4 Million
<b>Total</b>	<b>\$14.8 Million</b>	<b>\$75.1 Million</b>	<b>\$262.5 Million</b>

SOURCE: City of San Diego, Electricity Usage 2009-2011, accessed July 2012; County of San Diego, Electricity and Natural Gas Usage 2009-2011, accessed June 2012; San Diego County Water Authority, Electricity Usage 2009-2011, accessed June 2012; Oceanside Unified School District, Electricity and Natural Gas Usage 2011-12, accessed July 2012; Main Report, Appendix C, G

The cumulative costs for electricity to the City of San Diego will reach \$9.4 million by 2020, while the County of San Diego will bear cumulative costs amounting to \$4.6 million by 2020. The San Diego County Water Authority and Oceanside Unified School District will also bear approximately \$0.4 million each in additional electricity costs. The cumulative lost revenue is the largest cost driver at approximately \$172.6 million. Following that, the total cost of water in the San Diego area will increase by \$75.1 million cumulatively by 2020.

Though local agencies will face increased commodity costs, the most significant impact for San Diego-area public agencies will be a significant decrease in revenues, as shown in Figure 2.1.

Figure 2.1  
Cumulative Costs for Select San Diego Public Entities

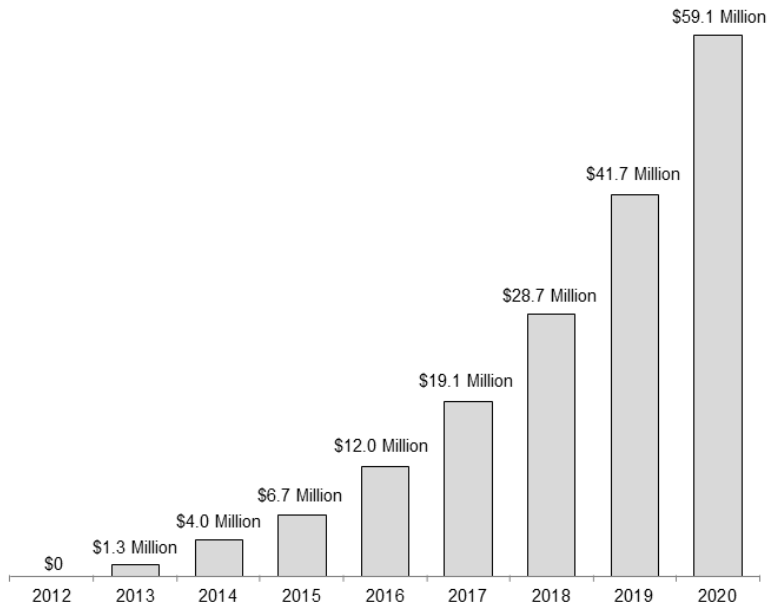


SOURCE: City of San Diego, Electricity Usage 2009-2011, accessed July 2012; County of San Diego, Electricity and Natural Gas Usage 2009-2011, accessed June 2012; San Diego County Water Authority, Electricity Usage 2009-2011, accessed June 2012; Oceanside Unified School District, Electricity and Natural Gas Usage 2011-12, accessed July 2012; Main Report, Appendix C, G

These lost tax revenues and increased electricity and water costs will affect the way that local agencies are able to operate. In particular, lost local revenue will have a dramatic effect on government operations across the County. The \$59.1 million annual impact in 2020 is roughly the annual equivalent of how much the County spends on child welfare services, and the cumulative impact of \$172.6 million is more than the County spent between 2011 and 2013 on capital expenditures such as land acquisition, County facility construction, park improvements, and community centers.



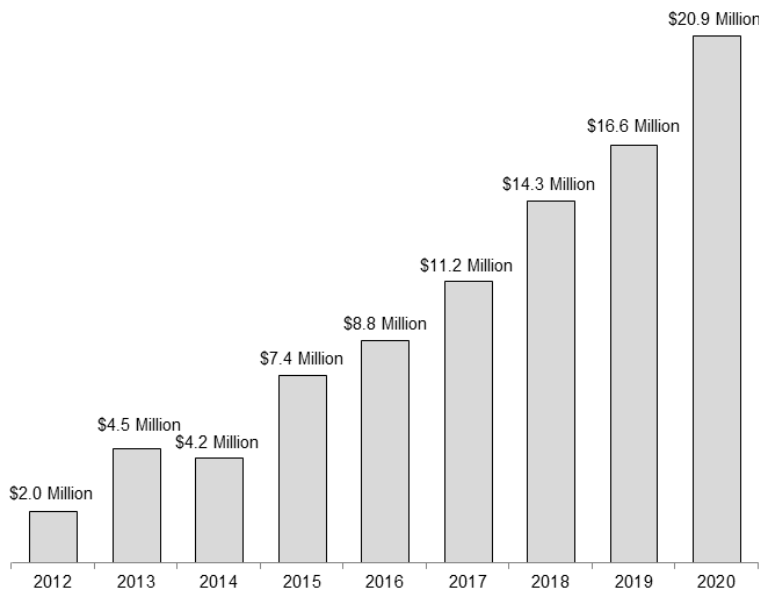
Figure 2.2  
Lost Tax Revenue of San Diego Public Entities



SOURCE: Main Report, Appendix C

Though comparatively smaller, the total increased energy and water costs for the selected local agencies represent a significant increase in the cost of operations. The impacts represent a net loss without any appreciable increase in service or benefit. The annual cost in 2020 of \$59.1 million is more than the annual total expenditures made by the City of San Diego for QUALCOMM Stadium operations and management.

Figure 2.3  
Annual Electricity Cost Increases for Selected Local Entities

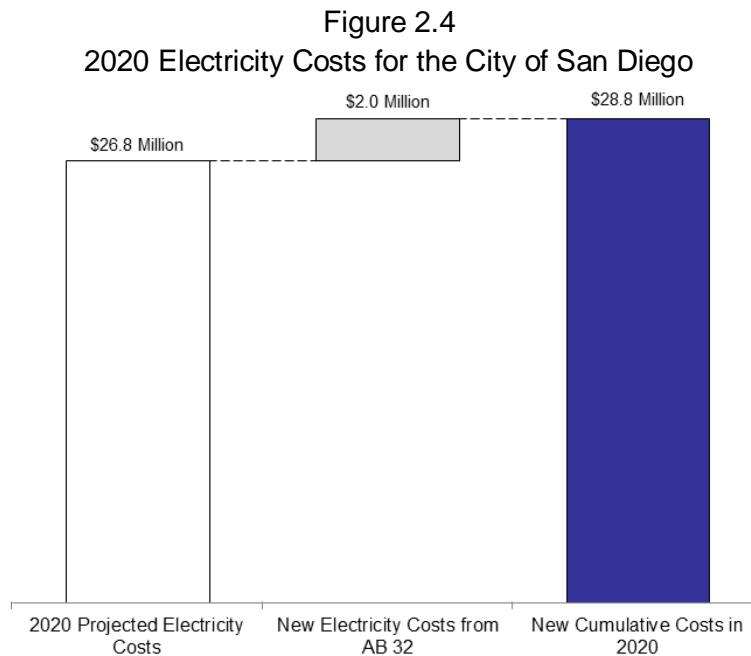


SOURCE: City of San Diego, Electricity Usage 2009-2011, accessed July 2012; County of San Diego, Electricity and Natural Gas Usage 2009-2011, accessed June 2012; San Diego County Water Authority, Electricity Usage 2009-2011, accessed June 2012; Oceanside Unified School District, Electricity and Natural Gas Usage 2011-12, accessed July 2012; Main Report, Appendix G

The City of San Diego benefits from varied industries, including tourism, high-tech manufacturing and search, international trade, and national defense. In addition, the City benefits from a highly favorable climate and more than 90 miles of shoreline, encouraging both their tourism and trade industries.

The projected size of the City in 2011 was over 1.3 million people, with a median household income of more than \$70,000. With 36 libraries and nearly 40,000 acres of park land, the City provides services available to all of these San Diegans. The approximately 19,500 City employees work in departments that range from providing public safety to maintaining the San Diego Zoo.

However, as seen in Figure 2.4, the annual fiscal impact of \$2.0 million in 2020 from electricity costs alone is the equivalent of more than 32 full-time police officers, and the \$9.4 million cumulative impact of those electricity costs is more than the combined salaries of all librarians, assistants, and clerks in the City's library system. The increased cost of electricity in 2020 is the equivalent of a 7.0 percent increase in costs for the City annually.



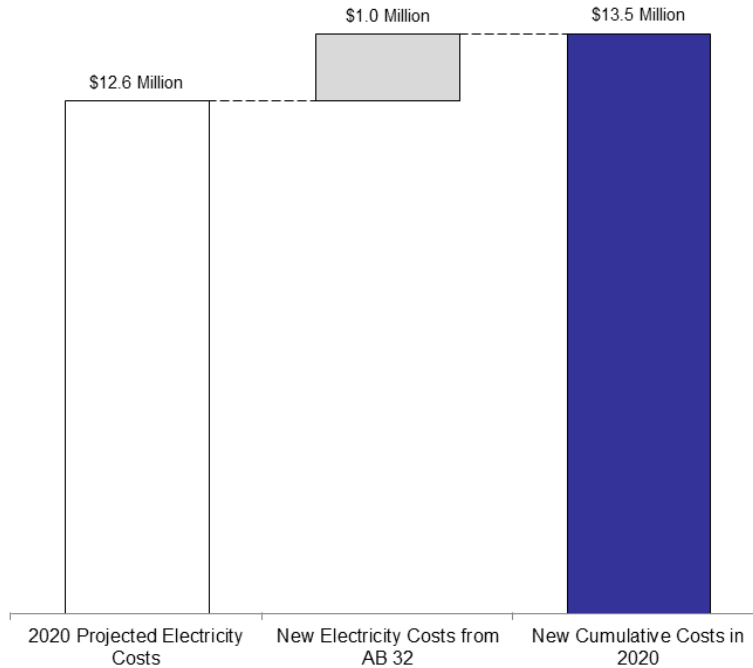
SOURCE: City of San Diego, Electricity Usage 2009-2011, accessed July 2012

Likewise, the County of San Diego will bear additional costs in its operations budget. The County has a population of nearly 3.1 million across 18 incorporated cities, and the County government employs more than 15,800 individuals. The Sheriff's Department is the chief law enforcement agency in the County, with approximately 3,800 employees providing general law enforcement, detention, and court services, as well as regional investigative support and tactical emergency response. In addition, law enforcement services are provided to 931,000 County residents, including those in nine contract cities.

The annual impact of \$1.0 million in 2020 is approximately the total capital amount increased in spending between 2010-11 and 2011-12 on replacing equipment at the Central Production Center and purchasing mobile data computers for patrol vehicles, and a 7.3 percent

increase over the business-as-usual electricity cost. The cumulative impact of \$4.6 million is more than the entire annual budget of the Office of the Sheriff, or the equivalent loss of 87 deputy sheriffs over the implementation period. Those losses would be the equivalent of 6.6 percent of all current County law enforcement services.

Figure 2.5  
2020 Electricity Costs for the County of San Diego



SOURCE: County of San Diego, Electricity and Natural Gas Usage 2009-2011, accessed June 2012

The San Diego County Water Authority purchases its water wholesale from Metropolitan Water District of Southern California and obtains water via long-term Colorado River water conservation and transfer agreements with other agencies. The Authority sells this water, more than 566,000 acre-feet in Fiscal Years 2009 and 2010, to its 24 member retail agencies across the region that provide retail water service to residents and businesses in San Diego County.

Though the authority will bear limited costs for increased electricity in its own operations, totaling \$0.4 million in cumulative additional electricity operating costs, water agencies in the County will bear an estimated \$17.7 million in annual water costs in 2020 that could be passed on to customers and \$75.1 million in cumulative costs over the implementation period.

These impacts are significant – the cumulative impact is more than the total annual operating expenses of the Helix Water District, which serves more than 263,000 individuals in the communities of La Mesa, El Cajon, Lemon Grove, and Spring Valley with 33,200 acre-feet of water. The annual impact of \$17.7 million is more than the two-year budgets of the Authority's engineering and public outreach and conservation departments, as well as the Colorado River Program, which is responsible for the oversight of the water transfer with the Imperial Irrigation District (IID) and construction of the All-American and Coachella Canal lining projects.

The Oceanside Unified School District operates 23 school sites, including 16 elementary and 3 high schools, serving nearly 20,000 students in northwestern San Diego County and employs more than 2,000 individuals and 880 teachers. The total cumulative impact of \$0.4 million by 2020 is double the expected capital expenditures in the district in the 2012-13 Fiscal Year, or the loss of more than 10 entry-level teachers.

### **3. Conclusion**

The increased cost of energy and water coupled with the significant decrease in local revenues from economic loss upon fully implementing AB 32 will create a \$262.5 million cumulative impact to selected San Diego public entities over the length of the implementation period, including the City and County of San Diego, with a \$80.0 million impact in the year 2020. It will also reduce local tax revenues by \$59.1 million annually in 2020 and \$172.6 million cumulatively.

San Diego City will face an additional \$2.0 million cost annually in 2020 from electricity alone and San Diego County will have \$1.0 million in additional annual electrical costs in 2020. Additional costs for local water districts in the region due to rising electricity costs will reach \$17.7 million in the year 2020. Additionally, local school districts, like the Oceanside Unified School District, will bear increased commodity costs.

**Appendix A:  
Electricity Usage**

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additional Electricity Cost per GWh <sup>1</sup> (Real \$)	\$1,121.2	\$2,509.0	\$2,300.2	\$4,093.2	\$4,847.7	\$6,117.7	\$7,819.1	\$9,006.8	\$11,313.8
City of San Diego Usage <sup>2</sup> (in GWh)	218.8	213.4	208.0	202.8	197.8	192.8	188.0	183.3	178.7
County of San Diego Usage <sup>3</sup> (in GWh)	106.6	103.9	101.3	98.8	96.3	93.9	91.6	89.3	87.0
San Diego County Water Authority Usage <sup>4</sup> (in GWh)	10.1	9.9	9.6	9.4	9.1	8.9	8.7	8.5	8.3
Oceanside School District Usage <sup>5</sup> (in GWh)	9.3	9.0	8.8	8.6	8.4	8.2	8.0	7.8	7.6

<sup>1</sup> See Main Report, Appendix D

<sup>2</sup> City of San Diego, Electricity Usage 2009-2011, accessed July 2012

<sup>3</sup> County of San Diego, Electricity and Natural Gas Usage 2009-2011, accessed June 2012

<sup>4</sup> San Diego County Water Authority, Electricity Usage 2009-2011, accessed June 2012

<sup>5</sup> Oceanside Unified School District, Electricity and Natural Gas Usage 2011-12, accessed July 2012

## Appendix B: Water<sup>6</sup>

(All Dollars in \$2012 and \$Millions, Unless Otherwise Stated)

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Energy Usage from Identified Sources (GWh)	23,729	23,729	23,729	23,729	23,729	23,729	23,729	23,729	23,729
Total Water Usage (million acre feet)	41	41	42	42	42	43	43	42	44
Total Water from Identified Sources (million acre feet)	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
Divide Usage from Identified Sources for Project Energy Usage	÷								
Ratio Between Identified Sources and Usage	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7
Multiply Ratio with Energy Usage for Total Usage	x								
Total Energy Usage (GWh)	37,262	37,579	37,895	38,212	38,584	38,955	39,326	39,671	40,069
BAU Annual Average Cost of Electricity (\$/GWh)	\$84,418	\$85,509	\$86,764	\$87,560	\$87,982	\$88,481	\$88,850	\$89,597	\$90,580
Multiply Average Cost of Electricity by Usage	x								
<b>BAU Total Cost of Energy for Water (\$Millions)</b>	<b>\$3.1</b>	<b>\$3.2</b>	<b>\$3.3</b>	<b>\$3.3</b>	<b>\$3.4</b>	<b>\$3.4</b>	<b>\$3.5</b>	<b>\$3.6</b>	<b>\$3.6</b>
Scenario Annual Average Cost of Electricity (\$/GWh)	\$85,539	\$88,018	\$89,064	\$91,653	\$92,830	\$94,599	\$96,669	\$98,604	\$101,893
Multiply Average Cost of Electricity by Usage	x								
<b>Scenario Total Cost of Energy for Water (\$Millions)</b>	<b>\$3.2</b>	<b>\$3.3</b>	<b>\$3.4</b>	<b>\$3.5</b>	<b>\$3.6</b>	<b>\$3.7</b>	<b>\$3.8</b>	<b>\$3.9</b>	<b>\$4.0</b>

<sup>6</sup> See Main Report, Appendix G



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