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**The Fiscal Impact of the
California Global Warming
Solutions Act of 2006 on
California's Hospitals**

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Andrew Chang & Company, LLC

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**The Fiscal Impact of the
California Global Warming Solutions Act of 2006 on California's Hospitals
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**The Fiscal Impact of the
California Global Warming Solutions Act of 2006 on California's Hospitals
(Key Findings)**

- The increased electricity rates will cost patients \$290.8 million in cumulative inpatient and outpatient care expenses over the length of the implementation period, with a \$62.7 million cost in the year 2020.

The annual cost of programs associated with AB 32 in 2020 for inpatient Medical is nearly double the operating cost of the West Contra Costa Health Care District which services 300,000 individuals

- Additionally, the state of California will face \$9.6 billion in lost GSP by 2020 due to increased health care costs from AB 32 programs.
- Those include the loss of 16,000 jobs through 2020 would approximately offset the same job gains the health care and social assistance industries, such as family services, emergency relief, and vocational rehabilitation, made in the first half of 2012.
- As a result, California earnings in this area will decrease by approximately \$770.2 million by 2020, or more than the combined salaries of more than 14,300 employees in the health care and social assistance sectors.

1. Introduction

“The Fiscal and Economic Impact of the California Global Warming Solutions Act of 2006 on California’s Hospitals,” by Andrew Chang & Company, LLC is a white paper in a series detailing the 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 the healthcare sector, this report analyzes the total impact of increased electricity costs to inpatient care facilities, which includes hospitals, and outpatient care facilities, including long-term care facilities, primary care clinics, and specialty clinics.

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 details the impacts these policies will have on specific public and private agencies in the healthcare industry. This includes the impact of increased commodity costs, particularly electricity, on state hospitals, health care clinics, and other care facilities.

2. California's Health Care Sector

In 2008, there were over 6,900 licensed healthcare facilities in California with a total bed capacity of over 260,000. Of these facilities there are roughly 400 general acute care (GAC) hospitals, which are hospitals that provide timely treatment for severe injuries or illnesses. In 2007, the California Healthcare Foundation estimated that GAC hospitals discharged over 3 million inpatients and cared for 42 million outpatients, including more than 10 million emergency room visits.

In 2009, the health care industry in California employed more than 1.2 million people. Among the state's health care workforce, nearly 50% are employed in ambulatory settings, 30% in hospitals, and 20% in nursing or residential care facilities. California's largest health profession is nursing, with close to 300,000 actively licensed registered nurses (RNs) working in the state. In 2009, healthcare spending in California accounted for 12.2% of the state's economy.

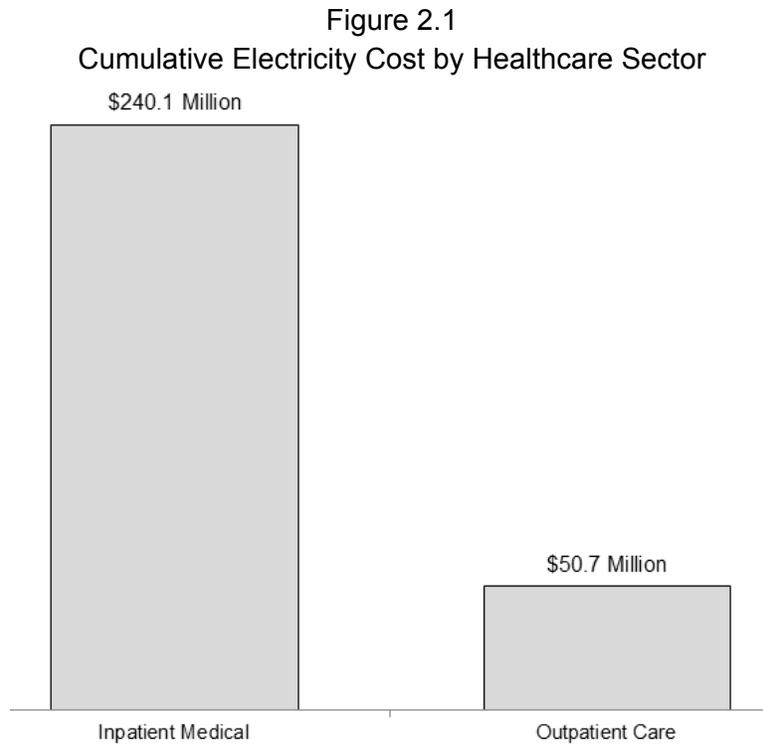
3. AB 32's Impact on California's Hospitals

AB 32 will increase the cost of electricity, transportation fuel and water for all consumers, including hospitals and health clinics. The electrical costs to each industry, particularly energy-intensive hospitals, could prove incredibly detrimental to the quality of healthcare for Californians as well as increase costs. The cumulative fiscal impact to the healthcare industry from 2012 to 2020 will be \$290.8 million, or the equivalent of 3,200 registered nurses or over 1,500 general internists.

The healthcare sector in California provides a wide range of services to their communities, such as primary care that takes place in community medical centers and emergency care. However, there are a range of services provided to the state: cardiology, occupational therapy, ophthalmological and dental care, neurology, anesthesiology, sleep services, speech therapy, psychology, prenatal care, and more. The healthcare sector contributes to the physical, mental, and emotional well-being of California through a variety of facilities, but each of these services is dependent on a reliable source of electricity to maintain daily operations or, in many cases, a 24-hour continuum of care.

A 2006 survey conducted by the California Energy Commission found that the healthcare industry accounted for approximately 6.8 percent of all electricity used in the state, and had an electrical intensity usage that ranked behind only food storage, restaurants, and refrigerated warehouses industries. The largest electricity end users in the healthcare industry driving these rates are interior lighting, ventilation, and cooling.

As seen in Figure 2.1, the annual costs for inpatient medical would be \$51.8 million in 2020, or \$240.1 million cumulatively between 2012 and 2020. Though on a smaller scale, outpatient care would also be affected with costs of \$10.9 million annually in 2020 and \$50.7 million in cumulative costs.

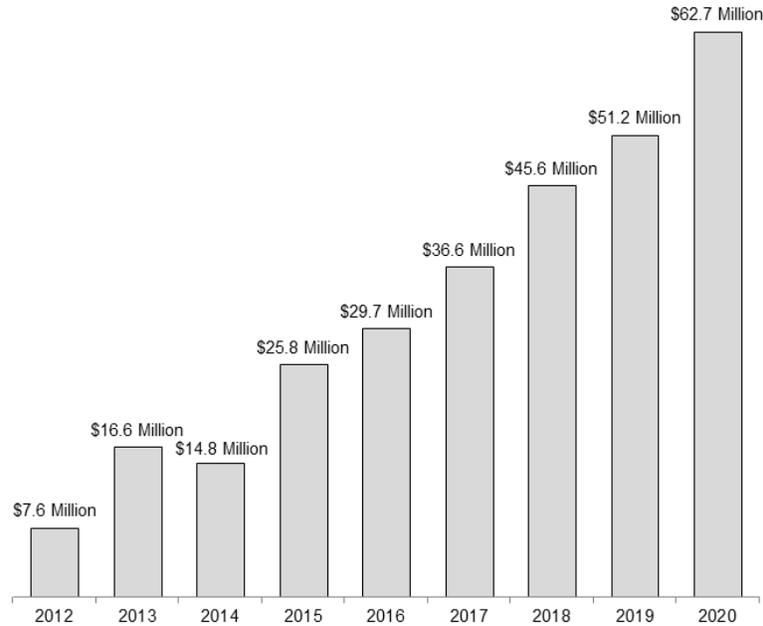


SOURCE: U.S. Department of Energy, "Table C13. Total Electricity Consumption and Expenditures for Non-Mall Buildings, 2003," Energy Information Administration, December 2006; Kaiser Family Foundation, "California: Total Hospitals, 2010," Kaiser State Health Facts, accessed July 2012; California Office of Statewide Health Planning and Development, "Facility Listings," June 30, 2012

The \$51.8 million annual cost in 2020 for inpatient Medical is more than the equivalent of the annual operating costs of 18 health care special districts across California. When looking at the cumulative cost of \$240.1 million, increased electricity prices would be nearly double the operating cost of the West Contra Costa Health Care District, which serves an estimated 300,000 individuals in the area. The District also operates Doctors Medical Center which has the distinction of being the only hospital in West Contra Costa County serving the general public and a critical component of the County's emergency medical services system.

In Figure 2.2, the annual additional cost for electricity in the industry rises to \$62.7 million in 2020, which is more than four times larger than annual research expenditures for all state hospital special districts.

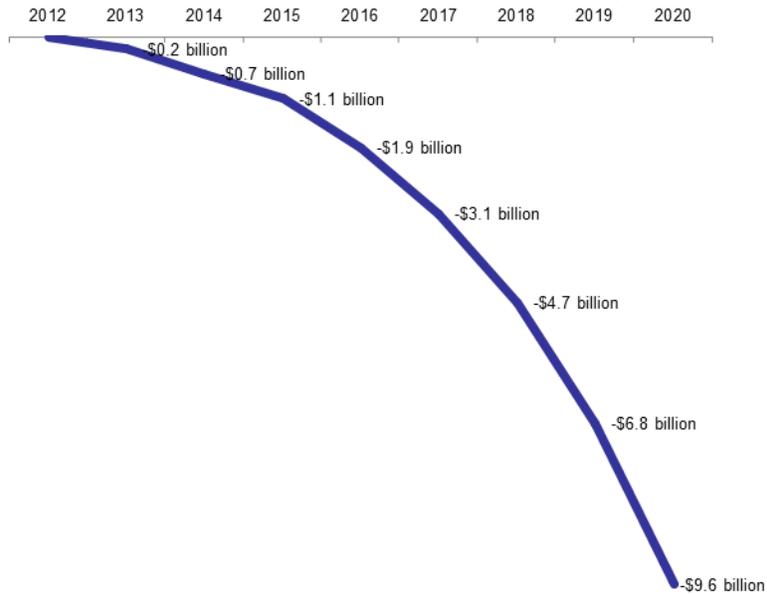
Figure 2.2
Annual Electricity Costs for Healthcare Industry



SOURCE: U.S. Department of Energy, "Table C13. Total Electricity Consumption and Expenditures for Non-Mall Buildings, 2003," Energy Information Administration, December 2006; Kaiser Family Foundation, "California: Total Hospitals, 2010," Kaiser State Health Facts, accessed July 2012; California Office of Statewide Health Planning and Development, "Facility Listings," June 30, 2012

Impacts to the healthcare industry will have a ranging impact on the California economy at large as well. A rippling effect from increased commodity costs and impacts to state and local revenues will lead to a 7.4 percent decrease in Gross State Product (GSP) in the health care and social assistance industrial category in 2020 from the 2011 industrial GSP. The total impact will be \$9.6 billion in the year 2020, which is the equivalent to the annual total healthcare spending of 1.5 million Californians.

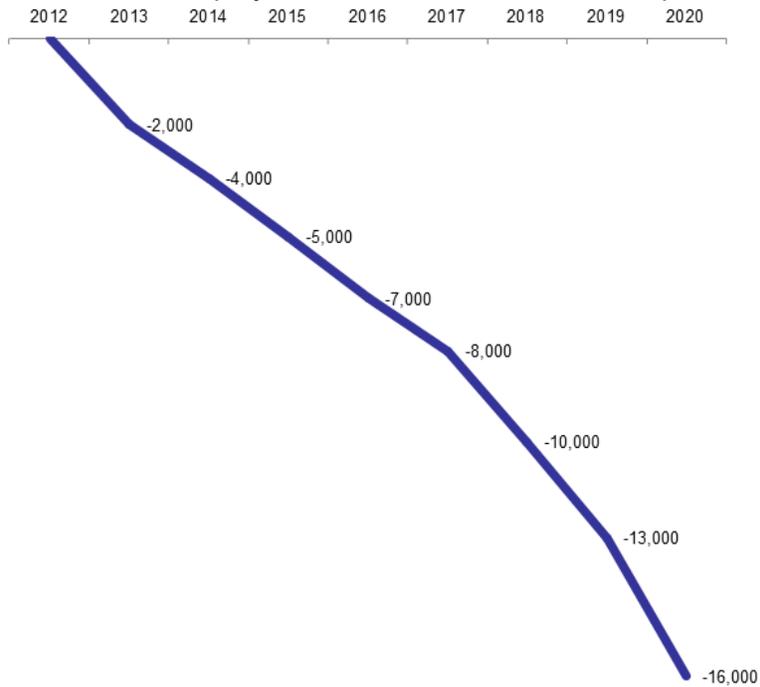
Figure 2.3
California GDP Lost From Healthcare Impacts



SOURCE: Main Report, Appendix C; U.S. Department of Commerce, "Gross Output by Industry," Bureau of Economic Analysis, December 13, 2011

The total impact on employment across the country will similarly be impacted. By 2020, employment across California will have decreased by over 16,000 jobs, or approximately offset the same job gains the health care and social assistance industry made in the first half of 2012. The decrease is roughly equivalent to more than 2,000 jobs a year lost.

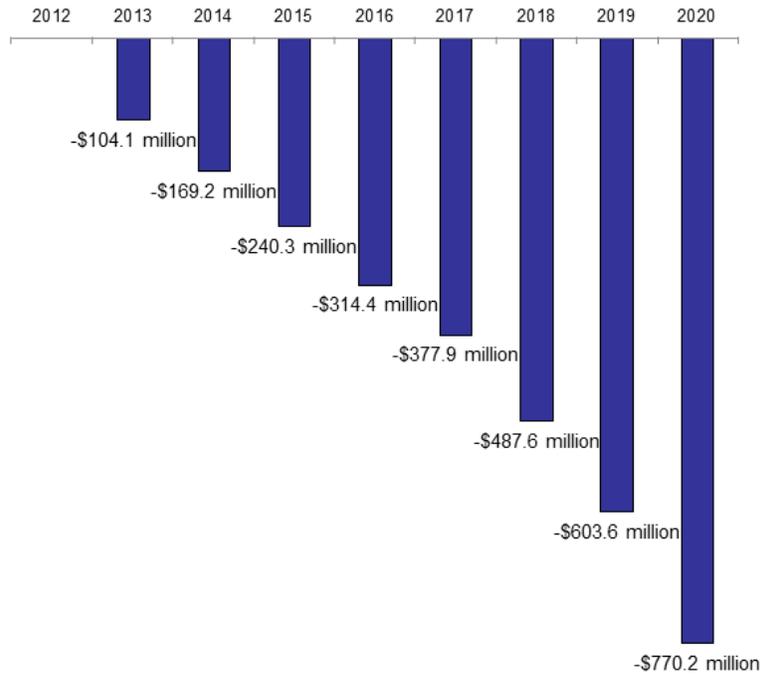
Figure 2.4
California Employment Lost From Healthcare Impacts



SOURCE: Main Report, Appendix C; U.S. Department of Commerce, "Gross Output by Industry," Bureau of Economic Analysis, December 13, 2011

By increasing the cost of commodities and reducing public agency revenues, earnings across California also stand to be affected. Earnings will decrease by \$770.2 million in 2020, or the equivalent of more than the combined salaries of more than 14,300 average employees in the health care and social assistance sector.

Figure 2.5
California Earnings Lost From Healthcare Impacts



SOURCE: Main Report, Appendix C; U.S. Department of Commerce, "Gross Output by Industry," Bureau of Economic Analysis, December 13, 2011

4. Conclusion

The increased cost of electricity will create a \$290.8 million cumulative impact to inpatient and outpatient care over the length of the implementation period, with a \$62.7 million impact in the year 2020. The state economy will also bear additional economic impacts when these increased costs are coupled with the significant decrease in state and local revenues from economic loss upon fully implementing AB 32.

The state of California will face \$9.6 billion in lost GSP by 2020, as well as over 16,000 lost jobs through the same period. The job loss would approximately offset the same job gains the health care and social assistance industry made in the first half of 2012. In addition, California earnings will decrease by approximately \$770.2 million by 2020.

**Appendix A:
Electricity Usage**

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Additional Electricity Cost per GWh ¹ (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	\$11,31 3.8
Inpatient Usage ² (in GWh)	5607.1	5466.9	5330.2	5197.0	5067.0	4940.4	4816.8	4696.4	4579.0
Outpatient Usage ³ (in GWh)	1183.5	1153.9	1125.1	1097.0	1069.5	1042.8	1016.7	991.3	966.5

¹ See Main Report, Appendix D

² U.S. Department of Energy, "Table C13. Total Electricity Consumption and Expenditures for Non-Mall Buildings, 2003," Energy Information Administration, December 2006; Kaiser Family Foundation, "California: Total Hospitals, 2010," Kaiser State Health Facts, accessed July 2012

³ U.S. Department of Energy, "Table C13. Total Electricity Consumption and Expenditures for Non-Mall Buildings, 2003," Energy Information Administration, December 2006; California Office of Statewide Health Planning and Development, "Facility Listings," June 30, 2012

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